

Emerging media and press freedoms as determinants of nonviolent and violent political conflicts, 1990–2006

the International
Communication Gazette
0(0) 1–22

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DOI: 10.1177/1748048516682139

journals.sagepub.com/home/gaz



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Abstract

Using aggregate-level data, this study compares instances of intrastate political conflict that occurred in both nonviolent and violent forms. Specifically, analyses presented in this study examine the relationships that exist between diffusion rates of emerging media and enhanced press freedoms in countries that experienced differing types of conflicts from 1990 through 2006. Through a series of analytic models, the results observed here indicate that higher levels of emerging media and press freedoms are better predictors of nonviolent—as opposed to violent—conflict. Findings from this study thus bridge an important gap in the literature between communication and political science research in establishing linkages between emerging media technologies and press freedoms and their interconnections with nonviolent and violent political conflict. Implications for related interdisciplinary fields are discussed.

Keywords

Comparative politics, democratic change, emerging media, nonviolent conflict, press freedom, violent conflict

Introduction

As information and communication technologies (ICTs)—namely mobile phones and internet resources—have morphed through social media platforms for sharing and coordinating, they have come to fill an increasingly important and intricate role in modern political conflicts and social movements (Castells, 2012; Howard

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and Hussain, 2013). The magnitude of influence that social media has had in initiating, sustaining, and resolving conflicts remains a central feature of an ongoing debate in policy, academic, and popular arenas. As evidenced by the increasing restrictions and surveillance practices (Sandle, 2014), political institutions and officials certainly view the rapid diffusion of mobile phone and online access as potentially threatening and dangerous to the existing social order (Kedzie, 2002; Suarez, 2006).

Related to the long-standing tension between access and control implicit in communicative technologies, previous studies have shown that when compared to violent uprisings, nonviolent regime-challenging conflict is quicker and more successful at ousting dictators and foreign occupiers and is more likely to lead to democratic governance (Celistino and Gleditsch, 2013; Chenoweth and Lewis, 2013; Chenoweth and Stephan, 2011). In the study reported here, instances of major violent and nonviolent campaigns were compared over a period of 17 years where online and mobile media became increasingly publicly available and press freedoms waxed and waned.

By examining the conflicts with maximalist stated goals (i.e., campaigns that sought regime change, openly opposed occupation, or pursued greater self-determination), it is possible to gain a closer and more nuanced insight into structural linkages of emerging media technologies from an historical perspective. The results of this study can therefore contribute not only a baseline for additional research but also a framework to examine contemporary theorizing and future conflict events that are taking place in environments that are becoming more and more media saturated.

The (non)violent political conflict, collective action, and media milieu

Research on civil wars now represents an important—and growing area of political science scholarship. The justification is notable, for example as Blattman and Miguel (2010) wrote, ‘Civil wars and conflicts arguably inflict more suffering on humanity than any other social phenomenon’ (p. 47). Indeed, in the last 50 years, the majority of nation-states in the world have experienced internal armed conflict, with one-third of these conflicts escalating into civil war (Blattman and Miguel, 2010). The most common correlates of civil war derived from aggregate-level studies suggest that civil wars occur in poor countries, countries that are vulnerable to negative income shocks (Collier and Hoeffler, 2002), have weak state institutions, mountainous terrain, and lightly populated peripheral regions (Fearon and Laitin, 2003).

From this background, research on regime-challenging nonviolent conflict was either grouped together with violent conflict or discounted as less effective. Recent research suggests, however, that it is fruitful to study these phenomena separately and comparatively (Celestino and Gleditsch, 2013; Chenoweth and Lewis, 2013; Chenoweth and Stephan, 2011). Indeed, a growing body of evidence now indicates

that nonviolent conflict strategies are more effective and swift than violent means in bringing about regime change, antioccupation, and/or self-determination campaigns. Chenoweth and Stephan (2011) were among the first researchers to argue for the separation of violent and nonviolent conflict pertaining to regime-challenging campaigns, and their research went on to suggest that nonviolent campaigns were more successful in achieving stated goals than violent campaigns. Additional work has gone on to suggest that contributing factors to this trend include states' control of violent tactics and means (i.e., access to weapons and perceived legal use of force) as compared to citizens, and the global diffusion of knowledge about nonviolent strategies and effectiveness that is facilitated through increased prevalence of, and access to media (Schock, 2005; Zunes et al., 1999).

Along these lines, one of the defining characteristics of an observable nonviolent campaign is the initial surge of protest participants at the beginning of the public display of dissent that must also take place in media content. To this point Chenoweth and Stephan wrote, 'The moral, physical, informational, and commitment barriers to participation are much lower for nonviolent resistance than for violent insurgency' (2011: 346–347). As such, nonviolent resistance techniques are likely more effective than violent means due to, at least in part, the lower costs of participation, which enables larger numbers of contributors and 'seriously challenge[s] autocratic governments directly or inspire[es] challengers to stage coups, and may help promote transitions to democracy' (Celistino and Gleditsch, 2013: 387).

Of course, communication scholars have long pronounced the democratic importance of a free and flourishing media system in a country as not only a product of but also stimulus for democracy (Groshek, 2011; Nisbet et al., 2012). In this sense, press freedoms run straight to the heart of democratic theory, in which an informed and engaged populace is a fundamental proposition, and a free media system is essential to a functional democratic state (Esser and D'Angelo, 2006; Habermas, 1989; Lipmann, 1922; Norris, 2000; Waisbord, 1996). Media content within the framework of the 'fourth estate' is expected to raise public awareness on matters of social and political concern and thereby cultivate effective public deliberation (Esser and D'Angelo, 2006; Habermas, 1989; Mill, 1859; Norris, 2000; Waisbord, 1996).

As related directly to this study, freer and more developed media systems may theoretically assist peaceful political change (Groshek, 2012). These peaceful transitions in environments of higher media saturation are partially due to the increased accessibility of information, which enriches the public sphere. In addition, the systemic flexibility of democracies has been shown to permit and absorb sociopolitical instability (Groshek, 2009) that may contribute to greater democratization. While sociopolitical instability may have deleterious implications for economic growth, the general framework of free trade in democratic systems of governance has shown a positive and significant impact on economic progress (Feng, 1997; Persson and Tabellini, 2006).

In various capacities, the less centralized and diminished hierarchies of online and mobile media content production and sharing platforms often facilitate information distribution regarding the performance and vulnerability of the empowered government (Castells, 2007, 2012; Howard and Hussain, 2013). Yet along these lines, Pierskalla and Hollenbach (2013) found support for new ICTs in lowering the organization barrier of collective action, and using spatially disaggregated data they found a positive relationship between proximity to mobile phone signals and likelihood of violent conflict in Africa, which of course illustrates not all uses of emerging media technologies are necessarily pro-social.

Furthermore, in building on that work, Bailard (2015) focused on ethnic groups and found support for mobile phones diffusion to actually *increase* the likelihood of ethnic violent conflict with the government in certain states between 2007 and 2009. That work suggests that higher levels of mobile phone coverage in an ethnic group's territory increased the likelihood of that group engaging in organized political violent conflict, and one of her main theoretical propositions is that mobile phones lower communication costs, which thus reduce organizational costs associated with *violent* collective action.

Yet as media systems become more complex and diffuse, the more central the role such media play in information dispersion to the public (DeFleur and Ball-Rokeach, 1989; Groshek, 2011) and owing to the nature of media itself, it would be imprudent to assume uniform media effects across wide-ranging cultural contexts. In the case of the study reported here, while not all nonviolent conflict is inherently democratizing, many nonviolent actions can be understood as an effort to acquire more rights and liberties. Thus, nonviolent conflicts in this study are related to the reported 'demand for democracy' outlined by Nisbet et al. (2012). Specifically, the analyses reported here therefore are situated to examine certain traits that may be crucial in democratic transitions. Building from the communication costs and benefits that were a main component of Olson's (1965) seminal work on collective action, this study further develops a framework to examine communication and information sharing technologies in sociopolitical dynamics.

Within the body of work on collective action, Bimber et al. (2005) recently updated Olson's key concepts to reflect the contemporary emerging media environment and emphasized several areas where online and mobile media technologies reduce information and organization costs and augment collective action potential. As reported by Bimber et al. (2005) there, ICTs help reduce costs of gaining information about interested parties and public goods. In addition, these emerging media greatly reduce costs of creating and distributing messages while enhancing the efficiency and lowering the costs of coordinating collective action.

The ability of any given group to organize collective action largely depends on cost-effective communication and information dispersion within the group as well as for new member recruitment. To this point, Bimber et al. wrote,

The need to accumulate resources in order to bear the costs of acquiring information about interests, the costs of distributing messages, and the labor and material costs of

coordination are diminished substantially under certain circumstances by the availability of new technologies. (2005: 374)

One of the more straightforward examples of regime-challenging collective action is when Filipino citizens were shown to have used text messaging to help spur mass protests and end the reign of then-Philippine President Joseph Estrada in 2001 (Shirky, 2011). Put somewhat briefly, once the Philippine Congress dismissed evidence of corruption by Estrada during his impeachment trial, Filipino individuals sent millions of text messages throughout the country that called for collective action against Estrada. The quick and inexpensive text messages helped organize and mobilize over one million people to converge on downtown Manila, at which point the Philippine Congress overturned its decision and effectively ended the Estrada presidency. While Shirky (2011: 1) wrote that ‘Estrada himself blamed “the text-messaging generation” for his downfall,’ the evidence to that claim is anecdotal and lacking empirical analysis.

Indeed, though there is wide-ranging discussion and debate, the relationship between the rapid diffusion of internet and mobile phone access as it relates to nonviolent political conflict, data-driven analyses are lacking. In one of the more detailed and empirical works on the subject, Howard and Hussain (2013) argued that such ICTs are having an important impact in Arab countries, including pro-democracy movements that are connecting online, engaging the youth, and challenging censorship practices in the Middle East and North Africa (MENA) region. Their analyses presented evidence of the cross-border contagion impact of social media by mapping regional solidarity in the pro-democracy movements and their principal conclusions suggested that social media were necessary but not sufficient to bring about democratic change in the Arab countries.

Somewhat similarly, Groshek (2009, 2011, 2012) has found that the diffusion of media technologies is crucial to cultivating increased sociopolitical instability, which also demonstrated a positive relationship to democratic growth. Still, there are a multitude of social, economic, international, and domestic political forces that converge to hold or agitate power in any given society. Importantly, any given empowered government must maintain the compliance and support of the people (Sharpe, 1973), and higher governmental control over the media ownership and content assists in information control in a society, which is believed to contribute to public acquiescence to those in power (Castells, 2007). However, as media systems become more complex and more information channels emerge through technological innovation, maintaining control over information flows becomes a more involved and ongoing endeavor.

Numerous studies have found an overarching positive relationship between emerging media and social movements (Garrett, 2006; Groshek, 2009, 2010, 2011, 2012; Howard and Hussain, 2013). This research has broadly demonstrated that online and mobile media provide an opportunity and platform to influence the dynamics of political communication. Specifically, emerging media can increase participation levels in sociopolitical deliberations and events by reducing costs of

disseminating information, promoting group identity, and creating communities that were previously inaccessible due to spatial and temporal limitations (Bennett and Segerberg, 2013; Garrett, 2006; Shirky, 2008). Moreover, by fundamentally renegotiating the way in which individuals send and receive information and communicate with each other, emerging media possess the potential to elevate public discourse, political engagement (Garrett et al., 2012), and possibly political action.

In developing countries, heavier internet users are typically younger, more educated, and generally live in urban areas such as capital cities and are more politically active than average citizens (Howard and Hussain, 2013). Studies have shown how such socially conscious and politically active individuals can use emerging media to communicate, amplify grievances and civil rights desires, and organize collective action with speed and efficiency (Breuer and Groshek, 2014; Meraz and Papacharissi, 2013). The ability to ‘spread the word’ and gain the attention of audiences increases the chances that a nonviolent activity will gain supporters. Due to the collective action-enhancing capabilities that emerging media afford users, it is logical that when comparing nonviolent and violent conflict, higher levels of emerging media and press freedoms should not only be interconnected but also conducive to cultivating and sustaining nonviolent conflict for political change.

Moreover, a growing body of evidence suggests that the community sphere provided by the emerging media strengthens social bonds and allows individuals with common grievances to communicate and organize (Castells, 2012; Rainie and Wellman, 2012; Shah et al., 2002). Considering the empirical work and theoretical propositions reported here, the following hypotheses regarding nonviolent conflict, press freedoms, and emerging media were posed:

H1: Countries with higher levels of internet and mobile phone diffusion demonstrate a positive relationship to freer media systems.

H2: Countries with fully or partially free media systems have a greater likelihood of nonviolent political conflict campaigns than countries with not free media systems.

H3: Countries with higher levels of internet and mobile phone diffusion demonstrate a positive relationship to instances of nonviolent political conflict campaigns.

Methods

For the purposes of this study, the focus was strictly on major instances of violent (civil wars and armed conflict) and nonviolent campaigns (sustained popular resistance) that sought regime change, antioccupation, or self-determination. The principal explanatory factors modeled in the analyses reported here were diffusion levels of emerging media (in this case internet and mobile phones) as well as press freedoms in countries that experienced instances of major nonviolent and violent campaigns at some point between 1990 and 2006.

The units of analysis for data collection were the years and the states of the (non)violent conflict campaigns. Data for dependent, independent, and control variables were collected from several agencies including nonviolent and violent campaigns and outcomes (NAVCO 2.0), Freedom House, the United Nations, the World Bank, Polity, and Banks' Cross-Polity Time-Series Database.

Though there are limitations to aggregated national-level measures, many organizations collect and maintain reliable global data suitable for cross-national analyses for the explicit purpose of mapping global trends (Van Dijk, 2005). Moreover, diffusion of communication technologies research has demonstrated that ICTs spread at similar rates in a variety of countries (Livingstone, 2003; Rodgers, 2003), which indicates that an important contribution to the body of knowledge can be derived from cross-national time-series analyses pertaining to the diffusion of ICTs when modeling and controlling for the appropriate variables.

For the purposes of this study, we use the term 'media systems' to describe the environment of overall press freedoms for each nation-state as rated by Freedom House, which situate press freedoms within the prevailing media systems. While the internet and any restrictions placed on its use are part of the Freedom House ratings, mobile phones are not. Nonetheless, due to the important messaging and information exchange capabilities of mobile phones, and the fact that mobile phones can be used to access the internet, these indicators were included in analyses. Due to a lack of data availability, traditional media indicators of television, radio, and print diffusion were not included in this study, and we recognize the limitations that extend from this common omission (cf., impose constraints on our models).

NAVCO 2.0

These data were compiled from the work of Chenoweth and Lewis (2013). Put briefly, the NAVCO data identify campaigns ranging from 1945 to 2006, defined as 'a series of observable, continuous, purposive mass tactics or events in pursuit of a political objective' (p. 416) with start and end dates, which are then classified as being primarily nonviolent or violent. Nonviolent campaigns are identified from existing lists and an expert survey, and violent campaigns from existing data on wars, namely the Correlates of War data and Peace Research Institute of Oslo civil conflicts data. Nonviolent campaigns are coded as equal to one, and violent campaigns are rated as zero. In the NAVCO 2.0 data, the key metric used here as the main dependent variable of interest signifies whether or not the campaign was predominately nonviolent or violent, and this measure remains static across years of the campaign.

Internet and mobile phone diffusion

These variables were from the World Bank and included the years 1990–2006 where internet and mobile phone data were measured by penetration rate by

country on a per capita (100 people) basis. In few instances where that data were not readily available, data were entered from the Banks' Cross-Polity Time-Series Database. Missing variables were imputed when it was clear (as in prior years) that diffusion rates were approximately zero. A simple additive scale was applied to the analyses in order to accommodate the most variance, while still accounting for instances in which many individuals may have access to both a mobile phone and the internet on devices that may or may not be mobile. We apply the term 'emerging media' throughout the analyses to reference this variable, where internet and mobile phone diffusion were combined.

Press freedom

The Freedom House organization maintains a comprehensive data set that ranks media independence on a global scale. The cross-national index analyzes events in each country over the course of a calendar year and assesses the degree of print, broadcast, and internet freedom in every country in the world. Each year each country in the data set receives a rating of Not Free (NF), Partially Free (PF), or Fully Free (FF). From these rankings, a set of binary variables were created and coded such that in one 'fully free' variable, those 'fully free' countries were set to equal one and all other countries assigned a score of zero. The same was carried out for the second, 'partially free' binary variable, where 'partially free' countries were coded as one and all others to zero.

These binary rankings were combined into one binary measure where countries ranked as 'not free' were assigned a value of zero and those that were designated as 'fully' or 'partially' free numerically represented with the value one. This approach effectively sets countries with 'not free' media systems as a useful baseline to compare countries with 'fully' or 'partially free' media systems while also avoiding perfect multicollinearity.

The cross-national Freedom House data ratings on international press freedoms have the same limitations that exist for all aggregate level data. And while Freedom House has been criticized for attempting to assign numerical ranking to concepts that may be better suited for qualitative exploration rather than quantitative ratings, these data have been used in many leading studies (Egorov et al., 2009; Rod and Weidmann, 2015; Warren, 2014) previously. Thus, these data were considered most suitable and reliable for the type of cross-national analyses conducted here, which have been shown to provide important insights that complement other types of research in contributing to the body of knowledge (Van Dijk, 2005).

Democracy

The 'Polity 2' score that was used here to operationalize relative autocracy and democracy levels 'is a multi-component historically informed measure of fair political competitiveness, formalized constraints on the abuse of power, and citizens' ability to freely exercise civil liberties that is drawn from the Polity IV database to

model national-level democracy' (Groshek and Bachman, 2014: 22). These scores have been applied in similar research previously (see Groshek, 2010; Gurr and Associates, 1978) and come from the Polity IV database, which models national-level democracy with scores ranging from -10 (full autocracy) to $+10$ (full democracy).¹

Income (gross domestic product (GDP) per capita)

This study used the cross-national GDP per capita figures from the World Bank database, except in few circumstances where that data were not available. In those instances, the same GDP per capita figures from Banks' Cross-Polity Time-Series Database were substituted. Any remaining missing data points were imputed with country-level averages of figures for the years immediately before and after missing data points.

Urbanism

Population density—or urbanism—figures of how geographically and physically proximate citizens are to one another (see Groshek, 2009) were, in this study, derived from World Bank data. These figures are based solely on population density per square kilometer and do not take into account other infrastructure factors, such as fixed landline telephones. Even with this limitation, this variable still roughly approximates spatially based physical networks of contact and information sharing.

Population

Overall population figures were collected and input from the World Bank database, which were input without adjustment in order to add another control and to optimize regression models. As with other data streams, rare instances of missing data were supplemented with the same basic population measure from the Banks' Cross-Polity Time-Series Database.

Time

In addition to yearly data on instances of campaigns and countries, time was modeled with binary operators for certain periods of time. Since capturing time with singular yearly binaries may overspecify analyses, this study modeled time by operationalizing it into approximations of 5-year time periods. Namely, period one ranges from 1990 to 1995 and captures sociodemographic shifts in the 'third democratic wave' (Valenzuela et al., 2012). Period two incorporates years 1996–2001 and models the dot-com boom and initial emergence of online and mobile technologies. The timeframe of 2002 onward in this study more or less encapsulates web 2.0 and the formation of the popularization of social media platforms.

Region

In order to effectively model state-specific effects, regional dummy variables were created here, following the identifications outlined by Groshek (2009: 124). Specifically, categorizations were based largely on 'distinctions in the Polity IV database country coding procedure, which generally identified countries geographically' but also on the basis of geography, history, and religion (Kedzie, 1997) in the event countries, such as those from the Middle East/North Africa region, could be distinguished from other geographical regions.

Findings

Before reporting explicitly on hypothesis testing, this study began by first examining the instances of nonviolent and violent conflict over time. These conflicts were plotted in relation to combined counts of FF and PF media systems as well as increases in the diffusion of mobile phone and internet access. As summarized in Figure 1, it is clear that the total number of conflicts has declined from 1990 through 2006 while emerging media diffusion rates have risen dramatically. Though these findings are perhaps unsurprising, it is nonetheless interesting to observe that while violent conflict has decreased overall, it has still been more frequent than nonviolent conflict in every year considered here, and in most years violent conflict is more than twice as frequent as nonviolent conflict.

In addition, the relative distribution of free or not free media systems within these conflicts over time remained reasonably consistent across years, though, has had a general downward trend. Here, the overall average for all years indicated that 51.5% of all conflicts took place in states with either FF or PF media systems. In 1991, this figure was at its highest, with 66.0% of all conflict states featuring media systems that were FF or PF. Within this data set, the lowest percentage of conflict states with FF or PF media systems was the year 2000, when 40.9% had such media systems.

From this point, the prevalence of emerging media diffusion was examined in countries with FF or PF media systems compared to countries with a NF media system, there was a statistically significant difference ($t(441.08) = 2.37, p = .02$, equal variances not assumed). In this analysis, the prevalence of emerging media was far greater, on average ($M = 10.57, SD = 28.76$) in countries with FF or PF media systems than the average diffusion ($M = 5.79, SD = 16.56$) of internet and mobile media in countries with NF media systems. This finding provides support for Hypothesis 1 that expected countries with higher levels of internet and mobile phone diffusion to demonstrate a positive relationship to freer media systems.

Building on these findings, countries that have FF or PF media systems were compared against those counties with media systems that are NF for the occurrence of nonviolent and violent political conflict campaigns. Here, countries with NF media systems had violent conflict in 83.3% of 258 instances, compared to 66.8% of countries with FF or PF media systems that had violent, as opposed to nonviolent, political conflict. This difference in percent distributions was

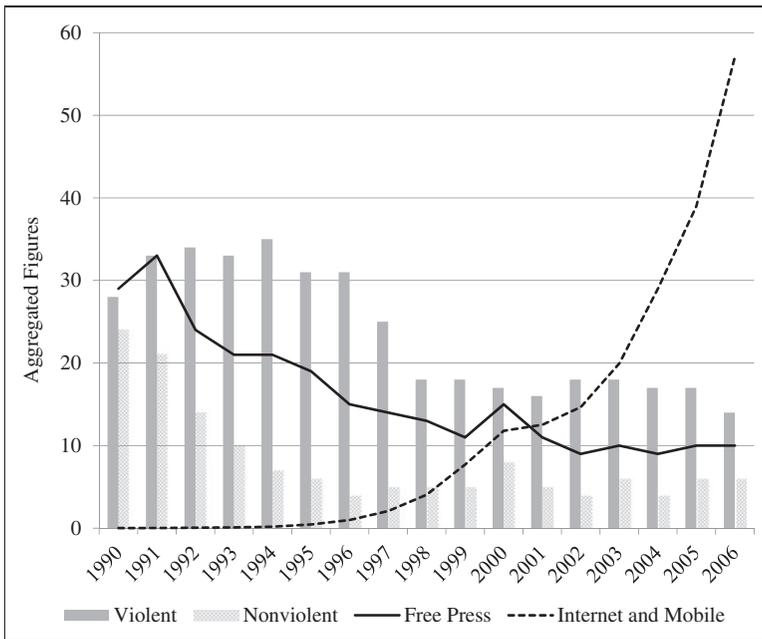


Figure 1. Instances of nonviolent and violent conflict campaigns per year in relation to combined counts of fully and partially free media systems and levels of emerging media diffusion over time. Note: Conflict and free press figures are summed instances per year. Internet and mobile phone rates are combined and per 100 citizens. Chi-square indicated statistically significant differences between nonviolent and violent conflict over time (χ^2 (df: 16) = 27.52, $p = .036$) but found no statistically significant difference in the relative distribution free or not free media systems within these conflicts over time (χ^2 (df: 16) = 11.22, $p = .796$). Analysis of variance (ANOVA) indicated the overall increase in emerging media ($F(16, 162.87) = 7.03$, $p < .001$) diffusion was statistically significant (equal variances not assumed).

statistically significant (χ^2 (df: 1) = 19.30, $p = .000$) and forms a basis of support for Hypothesis 2. Indeed, 33.2% of countries with FF or PF media systems had nonviolent political conflict, which is more than double the relative 16.7% of countries with NF media systems that experienced nonviolent political conflict.

Still, while the rapid growth in the accessibility of mobile and internet technologies during this time was seemingly related to an overall decline in conflict overall, violent conflict remained more common than nonviolent conflict even as enormous technological advances have taken place. This relationship was explored further and there were actually no statistically significant differences between combined internet and mobile phone ($t(541) = 0.85$, $p = .40$) diffusion rates when compared across countries with nonviolent versus violent conflict. Indeed, though not statistically significant, internet and mobile phone access was actually higher in countries with violent ($M = 8.63$, $SD = 25.37$), as opposed to nonviolent ($M = 6.68$, $SD = 17.13$), conflicts. These results do not support the proposition advanced in

Hypothesis 3 that countries with higher levels of internet and mobile phone diffusion should demonstrate a positive relationship to instances of nonviolent political conflict campaigns.

Before moving on to more advanced hypothesis testing, correlation analyses identified additional support for Hypothesis 1, with a statistically significant and positive (but weak) correlation between higher levels of internet and mobile phone diffusion and freer media systems ($r = 0.10$, $p = .02$). There was also a positive and statistically significant, albeit again, weak correlation between FF and PF press systems with conflict ($\Phi = 0.19$, $p = .000$), which reflects general support for Hypothesis 2. There was no significant relationship overall between nonviolent conflict and emerging media diffusion ($r = -0.04$, $p = .398$) as suggested by Hypothesis 3. Of course bivariate correlations, such as these findings that are summarized along with other variables in Table 1, do not address issues of time and space, or control for other germane factors in deciphering relationships under investigation. Thus, a more rigorous series of regression models were derived to more explicitly analyze the propositions hypothesized in this study.

Here, in a set of fixed-effects logistic regressions, the relationships that shape intrastate conflicts were examined with multiple independent variables that controlled for a host of germane characteristics that have been relied upon in previous studies. The results from these analyses serve to more fully report the relationship between emerging media technologies, press freedoms, and the coalescence of intrastate conflict as it developed into either violent and nonviolent campaigns over the course of this 17-year time period in 77 countries where instances of conflict were observed by Chenoweth and Lewis (2013).

To begin this round of analysis, when considering H1 and if countries with higher levels of internet and mobile phone diffusion demonstrate a positive

Table 1. Bivariate correlation matrix for observed variables.

Pearson's r							
	1	2	3	4	5	6	7
1. Conflict	–	–0.036	0.190***	0.004	–0.073	–0.077	–0.105*
2. Internet and mobile		–	0.101*	0.317***	0.725***	0.088*	–0.026
3. Full/partial free media			–	0.623***	0.256***	0.092*	0.213***
4. Democracy				–	0.399***	0.117**	0.262***
5. Income					–	–0.067	–0.073
6. Urbanism						–	0.259***
7. Population							–

^aNote: Correlation coefficients (Pearson's r) reported using pairwise deletion, except in the cases of dichotomous by dichotomous calculations (where Φ is reported).

* $p < .05$, ** $p < .01$, *** $p < .001$.

relationship to freer media systems, a binary logistic regression was modeled. This model considered and set out to explain factors that shape the distribution of countries with FF and PF media systems as compared to those countries with NF media systems. In order to avoid multicollinearity but still introduce important fixed-effects controls to the analyses, the MENA region was excluded because it had the greatest percentage of NF countries reported and thereby set a useful baseline.² Likewise, the time period 2002–2006 was excluded as it showed the highest percentage of countries with NF media systems.

In this regression model that examined which factors shape the existence of FF and PF media systems, it was shown that increased online and mobile access was not positively related to freer media systems. In fact, this model showed a significant and negative relationship where higher levels of emerging media were actually related to lower levels of press freedom ($\beta = -0.051, SE = 0.01, p < .001$). While this finding may seem counterintuitive, when the predicted free media values of the logistic regression model are plotted in relation to the distribution of internet and mobile phone diffusion, it is clear that many countries with relatively high levels of emerging media still are likely to have NF media systems.

Moreover, in fitting this regression a majority of countries had either a FF or PF media system. Across the timeframe considered here, internet and mobile diffusion was very low—or even nonexistent—in some campaign years, especially from 1990

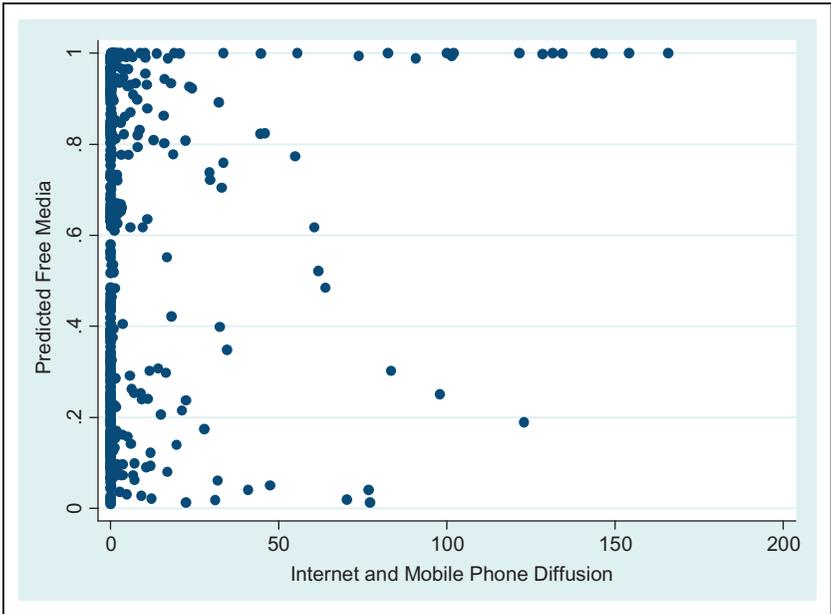


Figure 2. Predicted fully and partially free media values in relation to internet and mobile phone diffusion across all countries and years.

through 1995. Coupled with the fact that the relative frequency of FF or PF media systems actually declined over the three time periods modeled here, the decreased likelihood of internet and mobile phone diffusion predicting media freedom is contextualized to the extant conditions of countries in this sample. These results are summarized visually in Figure 2.

In order to avoid complicating the directionality of the relationship being investigated across the hypotheses posed here, conflict itself was excluded as a predictor variable in this model, but a number of other variables nonetheless indicated a statistically significant relationship. Specifically, higher levels of democracy ($\beta = 0.222$, $SE = 0.028$, $p < .001$), income ($\beta = 0.001$, $SE = 0.000$, $p < .001$), and urbanism ($\beta = 0.003$, $SE = 0.001$, $p < .05$) were associated with FF or PF media systems. Of these variables, only democracy had an appreciable impact on the likelihood of a country having a freer media system in a given year, with the odds ratio indicating every one-unit increase in democracy meant a FF or PF media system was 1.25 times more likely than a NF media system.

There were also a number of statistically significant regional—South America ($Exp(\beta) = 10.67$), sub-Saharan Africa ($Exp(\beta) = 5.09$), Russia and satellite states

Table 2. Logistic regression for HI—Predicting fully and partially free media systems.

Variables	β	SE	$Exp(\beta)$
Internet and mobile phone diffusion	-0.051***	0.014	0.950
Democracy	0.222***	0.028	1.248
Income	0.001***	0.000	1.001
Urbanism	0.003*	0.001	1.003
Population	0.000	0.000	1.000
North America (omitted)	-	-	-
South America	2.368***	0.669	10.677
Europe	0.576	0.780	1.780
Sub-Saharan Africa	1.628**	0.542	5.094
Russia and satellite states	1.617**	0.587	5.037
Asia	2.244***	0.570	9.435
Australia and Oceania	3.236***	0.774	25.436
Middle East and North Africa (omitted)	-	-	-
1990–1995	0.648	0.427	1.911
1996–2001	-0.133	0.443	0.876
2002–2006 (omitted)	-	-	-
Constant	-2.871***	0.671	0.057

Note: Coefficients are unstandardized. $N = 500$. Pseudo $R^2 = 0.428$.

* $p < .05$, ** $p < .01$, *** $p < .001$.

($Exp(\beta) = 5.04$), Asia ($Exp(\beta) = 9.44$), Australia and Oceania ($Exp(\beta) = 25.44$)—but not timeframe variables. A full summary is presented in Table 2.

In examining both H2 and H3, another logistic regression was modeled, in this case to examine how freer media systems and emerging media diffusion may contribute to the cultivation of nonviolent political conflict. Similar steps were taken in this model to avoid multicollinearity and fixed-effects controls to the analyses. Here, the Australia and Oceania region was excluded, as was the time period 1996–2001, on the basis that these state and time factors showed the greatest percentages of violent political conflicts (North America was again omitted due to a lack of variance). This model demonstrated two key findings that supported both H2 and H3.

In terms of Hypothesis 2, countries that have FF or PF media systems had a positive and statistically significant relationship ($\beta = 2.092$, $SE = 0.330$, $p < .001$) to the frequency of nonviolent political conflict. Indeed, countries with free media systems were shown here to be 8.10 times more likely to have had nonviolent political conflict campaigns than countries with media systems that are NF.

Table 3. Logistic regression for H2 and H3—Predicting nonviolent political conflicts.

Variables	β	SE	$Exp(\beta)$
Fully or partially free media systems	2.092***	0.330	8.101
Internet and mobile phone diffusion	0.020*	0.010	1.021
Democracy	-0.012	0.029	0.988
Income	0.000***	0.000	1.000
Urbanism	-0.008***	0.002	0.992
Population	0.000	0.000	1.000
North America (omitted)	-	-	-
South America	-0.625	0.864	0.535
Europe	3.809***	0.928	45.105
Sub-Saharan Africa	1.228	0.710	3.413
Middle East and North Africa	1.096	0.790	2.992
Russia and satellite states	2.020**	0.731	7.535
Asia	1.325	0.695	3.764
Australia and Oceania (omitted)	-	-	-
1990–1995	0.306	0.304	1.358
2002–2006	0.484	0.426	1.623
1996–2001 (omitted)	-	-	-
Constant	-2.698***	0.762	0.067

Note: Coefficients are unstandardized. $N = 500$. Pseudo $R^2 = 0.233$.

* $p \leq .05$, ** $p < .01$, *** $p < .001$.

When considering Hypothesis 3, a similar statistically significant relationship was observed ($\beta = 0.020$, $SE = 0.010$, $p \leq .05$) such that countries with higher levels of internet and mobile phone were more likely to predict nonviolent political conflicts. Here, the odds ratio suggested that for every one-unit increase in combined internet and mobile phone diffusion, the likelihood of nonviolent political conflict increased by 1.021 times. While not overwhelming figures, it is worth noting that the media variables were the only key independent variables (and not fixed-effects operators) to show appreciable positive or significant relationships.

Much like the previous model, there were also statistically significant regional variables, in this case Europe ($Exp(\beta) = 45.11$), Russia and satellite states ($Exp(\beta) = 7.54$), and Asia ($Exp(\beta) = 3.76$ [$p = .056$]). There were no significant timeframe operators, and this model is summarized in full in Table 3.

Discussion and conclusion

Nonviolent resistance has important implications for democratic transitions, particularly those that are facilitated and played out on a hybrid of social and mass media outlets. Celistino and Gleditsch (2013) found that nonviolent protests are more likely to lead to democratic transitions than violent conflict, which were more likely to see autocratic regimes resurface. The success of nonviolent conflict is due, in part, to the division of power and increased motivation to bring elites to the bargaining table as a result of nonviolent protests. Similarly, previous work has shown that nonviolent campaigns are more likely than violent campaigns to produce higher levels of democracy in the countries in which they occur (Chenoweth and Stephan, 2011).

While a variety of explanations exist, some of the better defended positions outline that the infrastructure of the state is not destroyed through the course of a war, nor is the population decimated and many do not have to endure losing family and friends. These factors contribute to smoother democratic transitions and lower probabilities of backsliding into autocracy (Celistino and Gleditsch, 2013; Chenoweth and Stephan, 2011; Karatnycky and Ackerman, 2005). In addition, nonviolent campaigns have been shown to be more efficient processes, lasting an average of 3 years while violent campaigns last on average 9 years (Chenoweth and Stephan, 2014).

The study reported here empirically analyzed whether emerging media and press freedoms were predictors of nonviolent conflict rather than violent conflict. Like most macro-level studies, this study has certain limitations, such as not being able to strongly infer results to each individual campaign the ways and magnitude that emerging media were used, or exactly how media freedom shaped coverage. Research is often limited by data and this project was not an exception. Aggregate level, cross-national data attempts to provide generalizations into global trends that may differ greatly at the individual level, and the results here should be interpreted as such. Nevertheless, many international organizations

collect dependable data that can provide important insight into global currents (Van Dijk, 2005).

The results of the hypotheses tested were generally supported, with the exception of internet and mobile phone diffusion predicting higher level of media freedom. Still, the relatively advanced statistical analyses presented here demonstrated evidence that increased levels of emerging media and press freedoms are positively related to countries experiencing major nonviolent resistance campaigns instead of violent campaigns. These are important findings for the relatively underdeveloped research stream of comparing the aggregate correlates of nonviolent and violent conflicts.

Indeed, while much of the debate over whether new ICTs are tools of liberation for the population or for repression by autocratic governments have been based on anecdotal observations, some research is beginning to add needed nuance. The majority of previous scholarship has generally tended toward positioning online and mobile technologies as liberating and increasing participatory behaviors (Boulianne, 2015), but others (Rod and Weidmann, 2015) have found support for the suppression technology argument. Specifically, in their analyses, Rod and Weidmann (2015) found that democratic shifts occurred more in countries with lower levels of ICT penetration countries than in countries with higher penetration rates.

Comparatively speaking, in the study reported here, with observations from an earlier point in time, higher levels of combined internet and mobile phone diffusion positively predicted the likelihood of the conflict being nonviolent. These findings are consistent with the expectations of the collective action and communication technologies literature (see Garrett, 2006). This study thus presents more evidence that aligns with the argument that participation barriers are much lower for nonviolent conflict than for violent conflict, and emerging media contribute to further lowering the participation costs of nonviolent conflict by helping organizers and dissenters communicate, spread information, and share grievances (Bennett and Segerberg, 2013; Bimber et al., 2012). Through previous studies and the results reported here, these factors may help to facilitate a nonviolent campaign to gain and maintain supporters, which contributes to the impact that the campaign has in influencing the controlling regime or foreign power.

Higher levels of emerging media being more related to nonviolent conflict than violent conflict imply, at least in part, that nonviolent conflicts commonly occurred in nondemocratic countries with higher levels of emerging media. This finding is especially important because nonviolent campaigns were more likely to meet their campaign objectives than violent conflict and led to higher rates of observable democracy.

In addition, having a FF or PF media system was especially noteworthy in that it increased the likelihood of nonviolent conflict, which aligns with both freedom of expression and general democratic theories. Enhanced press freedoms, which serve as a reasonable proxy for societal freedom of expression overall, allow for the

likelihood of the controlling government to be questioned, corruption exposed and discussed, and differing policy goals considered. In addition, in the instance of popular protest challenging the government, a freer media system would allow the coverage of that protest and for the amplification of dissenting voices, enhancing the chances that the protest would grow in size and strength. This openness would also serve the purposes of an armed conflict, but the participation costs of a nonviolent conflict are much lower than for violent conflict. In other words, due to not needing weaponry or requiring individuals to resort to violence against others, the moral and financial obligations are much lower for participating in a nonviolent campaign than a violent campaign.

At the societal level, the findings reported here suggest substantial but not deterministic media effects (Livingston, 2011; Rosenau and Johnson, 2002). The simple existence of enhanced communication tools in a society does not guarantee that individuals will use these outlets to deliberate, educate, and organize. To be sure, these findings are not advocating media development explicitly. Rather, this study highlights a linkage between emerging media and more peaceful political change, and identify that media freedoms seem to be of noticeably greater importance to the likelihood of such change. Much like previous periods of innovation such as the printing press, the telegraph, telephone, radio, and television, media eventually reflect what those who produce and use the content engage them to be.

Arguing the positive and negative implications of communication technologies is asking to argue the characteristics of human nature itself, though the trajectory of internet and mobile phone diffusion in conjunction with institutionalized media freedom does altogether tend toward nonviolent political conflicts. In short, through these two mediated factors of media diffusion and freedom, individuals can use these technologies to acquire and produce information and communicate with each other regarding sociopolitical grievances and thereby enhance the probabilities of collective nonviolent action.

The findings brought forward in this study bridge an important gap between communication and conflict scholars. The civil wars research in political science commonly omits media variables, in no small part due to the lack of complete cross-national data sets. This analysis thereby raises the profile of emerging media and press freedom variables for consideration among conflict scholars. Relative to other variables, the results observed here clearly suggest that including emerging media and press freedoms as principle components of understanding conflict typology provides greater understanding of the complex sociopolitical environments in which nonviolent and violent conflict evolve and resolve.

In future research it will be beneficial for researchers to continue to piece together characteristics that distinguish nonviolent and violent conflict. Advancing this knowledge has important implications for future policies, democracy advocacy, and the well-being of societies in general. Much of the research cited here indicates that compared to violent conflict, nonviolent conflict has been more successful in ousting authoritarian regimes or foreign occupying powers, and is more likely to produce transitions toward democracy. The development of this line

of scholarship could very well help to shape nonviolent resistance and lower the occurrences of civil wars, which has been shown in this study to be positively related to increased levels of emerging media diffusion and press freedoms. Perhaps most importantly, what this study illustrates is the central importance of media considerations to broader conflict research, and how pivotal media access and freedoms can be in instances of political conflict and change.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. As Polity values do not exist for all years considered here for Palestine and Lebanon, national freedom values from Freedom House were converted to match the Polity scale distribution and substituted.
2. North America was also excluded as a regional operator because it had no variance and therefore would produce biased estimations.

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