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Which Countries Does the World Talk About? An Examination of Factors That Shape Country Presence on Twitter

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This study investigates which countries were mentioned most on Twitter during 2013 and what factors—country attributes, communication and economic resources, and contexts—can explain country presence on Twitter. Tweet mentions from 210 countries were derived using full fire hose archival searches. We identify trends that differ from the patterns found in news flow literature. And the results suggest a new era of international communication via Web-based social networks. Although core and semiperiphery countries are mentioned more than periphery countries, mobile phone penetration and sociopolitical instability have reshaped the contours of country images, and only 28% of the 50 most-mentioned countries on Twitter were core countries. This study discusses the implications of evolving social media for traditional news media outlets, world politics, and international relations.

Keywords: Twitter, predictor of tweets, world system theory, mobile phone, country size, sociopolitical instability, news flow

Information about the world matters to people of the world. The extent to which a country is covered in the media—traditional or social—is extremely important on several dimensions. In the 20th century, communication scholars and policy makers focused on valence and volume of news about each part of the world on the traditional media (MacBride, 1980). Representation of countries in the media is pivotal to how the world is understood as well as to the external recognition and self-identity of a country within the world system (Masmoudi, 1979). Also relevant to this issue are the illustration and negotiation of power between countries and the corollary of public diplomacy. During the 1970s and 1980s, there were many ideas put forth for the creation of a system that ensures an even and fair coverage of countries in the media, although none of these ideas resulted in any tangible outcomes. By now, it is clear that not every country can be covered in the media—many factors prohibit this from happening (Chang, 1998; Golan, 2010; Wu, 1998). Therefore, some sort of selection, sifting, and distortion about the world is inevitable (Shoemaker & Reese, 2013).

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The development and subsequent diffusion of the Internet fueled high hopes among not only conscientious news professionals but concerned citizens worldwide. Relative to other forms of print and broadcast media, the Internet and Web-based communication were considered more efficient and democratic, especially given their almost unlimited space and relative ease to post, interact, and share information among netizens (White, 1997). Although the Internet remains far from an idealized agora or unified Habermasian public sphere, social media can transcend the dominance of the traditional gatekeepers and wholesale information brokers such as the Associated Press, Thomson Reuters, or other multinational or governmentally sponsored news agencies.

While many control mechanisms implemented by totalitarian and authoritarian regimes are still in place to block the creation, sharing, or retrieval of "sensitive information" (Taubman, 1998), some online platforms have demonstrated an ability to circumvent such controls, even if only briefly and noncontinuously (Groshek, 2010). Furthermore, online social media—Facebook, YouTube, and Twitter in particular—have become the major source of information for people all over the world, particularly during such far-reaching crises as the Arab Springs (Lotan et al., 2011). This trend is notably evident among the young generations who do not necessarily consume news about the world on a regular basis from other more traditional media outlets (Groshek & Han, 2011; Mitchell, Gottfried, & Matsa, 2015).

In addition to serving as a hub many people rely on for crucial information, social media is simultaneously the venue where netizens opine, highlight issues, and share their views about the world. It is feasible for marketers, policy makers, and world leaders to gauge what the world's citizens are thinking by collecting data from social media and mining the content to identify trends and patterns (Morozov, 2011). Given the incessant interest in the world's representation in the media, it would be conceptually rewarding to explore how often the world's Twitter users are thinking about each of the countries by examining the frequency of content created and posted explicitly about different countries.

Social media content is constantly monitored by private sectors and political entities worldwide—corporations, countries, and nongovernmental organizations all pay close attention to information posted and attitudes expressed on social media. This new medium has also become a critical channel for governments to anchor target audiences and amplify instrumental national messages and images (Khatib, Dutton, & Thelwall, 2012). However, most social media platforms are proprietary and not readily available to researchers even though it is extremely important to systematically examine the content generated on social media. Given social media's increasing influence on the young generation around the world and its unique role in international communication, it is imperative for communication researchers to investigate the social mediated world as well as the underlying forces of the coverage on social media. So far this realm is virtually unknown—thus, leaving a huge void in the existing literature.

Given the scenario, we set out to explore the most fundamental questions about the world's coverage under the new media context. What countries are mentioned most frequently in a popular platform of social network, Twitter? What are the predictors of mentions of countries in tweets? We believe these answers will shed light on the new era of international communication via social networks. The findings of our investigation on social media–yielded country coverage will have rich implications and ramifications for the media, world politics, and international relations. Since this research topic is a new

frontier, we base the following review of relevant literature on the determinants of country coverage in *traditional* media. It is our hope that a review of the usual suspects will assist our inquiry and result in fresh findings on social media.

Literature Review

The World in Traditional and Social Media

The Internet, along with related online and mobile technologies, generated high hopes for key information and content to flow more freely across national borders. The traditional barriers and hurdles for news to circulate worldwide, such as geographic distance (e.g., Chang, Shoemaker, & Brendlinger, 1987), limited news hole of print media, time constraint of broadcasters, and gatekeepers' influence (Peterson, 1981) on international news selection, matter much less with the Internet as the medium. Yet an earlier study comparing the news menu between print/broadcast media and their Web counterparts found a high similarity across media platforms (Gasher, 2007), dampening the hope of the Internet's potentially positive impact.

In addition, some studies (e.g., Garrett, 2009) indicate that social media can serve as echo chambers for the content produced by mainstream media. Authors of social media—perhaps due to limited resources and opinion-oriented mode—tend not to initiate their own endeavor for new topic discovery and to post their original content; rather, they pass the content from traditional media, particularly newspaper, on to the users in their network (Groshek & Clough Groshek, 2013). Given the aforementioned arguments, it is worth investigating whether the pattern of countries mentioned in Twitter mirrors the news menu that has been well investigated and documented in the literature; this menu contains the four categories of attributes of countries, communication resources, economic resources, and contextual factors.

Attributes of Countries

Given the lack of theories directly related to the prediction of social media mentions about the world, this article borrows the approach traditionally used by studies of international news flow. Although the mechanism of news coverage about countries differs from our discussion about countries on Twitter, the similarities are that the subject of the utterances centers on countries and that they are publicly communicated. Also, the determinants of news flow studies are related to the present investigation because attributes of a country may influence the decision making of gatekeepers. In the pre–social media era, editors and foreign correspondents could select and focus on countries they deemed important and newsworthy; in the social media era, individual users, similar to traditional news professionals, take on the role of gatekeepers and resort to their own judgments about countries when posting. Therefore, a country's *attributes* can be closely related to the volume of discussion about that country on Twitter, which include the country's population, geographic size, language, education level, demographic structure, former colonial background, and urbanization level. Some of these predictors may be shared with the literature of news flow, while others can be distinctly unique to the Web 2.0 function.

A country's population and physical size are two common features that influence its coverage and mention in the media. Several studies on international news (e.g., Dupree, 1971; Kariel & Rosenvall, 1984; Westerståhl & Johansson, 1994) found these two are positively related with coverage of foreign countries; other studies (e.g., Larson, 1979; Wu, 2003), using more rigorous regression analysis, did not yield consistent and significant findings of population and size. Cultural affinity is also a commonly cited characteristic of a country, whose shared language and colonial background with others may play a role in determining the discussion of countries in social media. News flow studies—for example, Dupree (1971) and Skurnik (1981)—found that countries within the same colonial group are more likely to cover one another. In the present study, we examine only tweets in English, which would logically make countries with English as one of their official languages or with British colonial background more likely to be covered in Twitter.

It is important for social media participants to obtain the needed literacy, computer knowledge, and specific online skills (Jenkins, 2009) to navigate the cyberspace and to discuss (in this case, to tweet) on any country. Therefore, a country's overall education level should be highly relevant to its online participation, which contributes to the volume of its mentions. Age is another demographic factor that can pertain to rate of social media participation; young populations were found to be avid users of new media (Lauricella, Cingel, Blackwell, Wartella, & Conway, 2014). A country's level of urbanization can be associated with many development indicators and the spread of new information (Schramm, 1964) as well as Internet access, which may merit a close look in the examination of any country's presence in social media.

Other country attributes that have been found in the news flow literature belong to Wallerstein's (1974) world systems theory and Galtung and Ruge's (1965) structural theory of foreign news, which essentially maintain that a country's echelon in the world can generate a profound influence on its media coverage. By incorporating the impact of world systems theory found in international news coverage (Chang, 1998) and the updated framework of core, semiperiphery, and periphery countries in the 21st century, our investigation of the structural influence in the social media arena can be theoretically fruitful. Specifically, it is conceptually meaningful to see whether social media actually transcends from the old news structure found by Chang (1998)—that is, the core countries are more likely than the semiperipheral and peripheral strata to be covered in Twitter.

Given this literature, it is logical for us to hypothesize that these eight country attributes can predict the volume of a country's mention in Twitter. Instead of listing every attribute, the following hypothesis should serve the function of research guidance.

H1: The attributes of a country (population, size, education, youth population, English language, British colonial background, urbanization, and standing in the world system) will positively predict the country's mention on Twitter.

Communication Resources

The literature of international news research identifies the impact of communication resources on how a country is represented in the media of other countries. For example, infrastructure preparedness and technological availability were attributed to facilitating transnational news flow (Larson, 1979, 1984). A higher number of international news agencies based in a country was found to increase the odds of that country being covered worldwide (Wu, 2000). Because Twitter is a platform upon which any user can start and follow a topic that pertains to a country and because people naturally care and talk more about their own countries, the sheer number of Twitter users with Internet access from a country can contribute to the volume of tweets about that particular country.

Given these reference points, communication resource factors such as access to the Internet and telecommunication penetration should be positively linked to social media use (Seo & Thorson, 2012). Additionally, with more social media activities taking place on mobile phones—particularly smart phones (Hwang & Park, 2013), the penetration rate of mobile phones in any country will be positively related to the extent to which that country is discussed on Twitter. Simply put, the more access people have to participate on Twitter, the more likely their country will appear on Twitter.

Another communication resource that may fundamentally outweigh the impact of technological resource is netizens' rights and freedom to participate in social media. Many countries use an assortment of means to censor, block, and intercept so-called sensitive information flowing in and out of their countries; others, like China and North Korea, ban Twitter entirely, and their netizens need to climb the Great Firewall or resort to other methods to participate. Given this, the level of communication freedom a country's citizens enjoys may be highly relevant to the salience of that country on Twitter. The rating of the freedom of the press from Freedom House, a nonprofit organization, may embody the kind of freedom netizens of any given country need. Therefore, based on our discussion about various communication resources, the following hypothesis was formulated.

H2: The communication resources of a country (telecommunication penetration, mobile phone penetration, Internet access, and freedom of the press rating) will predict the country's mention on Twitter.

Economic Resources

The development and subsequent diffusion of the Internet has not diminished the divide between the communication haves and have-nots in the world's countries. On the contrary, it has widened the gap, thus forming a digital divide in both use and access (Hargittai, 2004). For people to participate in social media, they need to be able to afford many services such as electricity, an Internet provider and/or telecommunication subscription, hardware (computer, tablet, or smart phone), and supporting software, all of which demand a certain level of economic resource of the users. Similar to the finding yielded from the news flow literature (Wu, 1998), a country's aggregate level of economic resources and income equality will directly influence its citizens' social media participation and subsequently lead to the presence of that country in social media. Therefore, the following hypothesis was formed to examine the impact of economic resources:

H3: The economic resources of a country (gross domestic product per capita, household income, Gini index, population below poverty, and unemployment) will predict the country's mention on Twitter.

Contextual Factors

A great variety of events can happen on any single day around the world. And what goes on occupies people's minds and prompts them to tweet. Just like news media's roving eye, Twitter participants can also be drawn to major events, disruptive incidents, or unexpected disasters that take place in different corners of the world. Therefore, the context in which tweets were retrieved and collected matters if we aim at generalizing the findings of the study. It is then imperative for us to consider the universe of events, accidents, and issues of world that took place in 2013 (our sample year).

However, it is virtually impossible to operationalize and collect all the contextual factors in a systematic fashion. The next best estimates are the indexes of political freedom, sociopolitical instability, and humanitarian crisis for each country to gauge the level of disruption, conflict, and significant incidents that took place. The level of political freedom in a country, for example, was found to be related to the level of terrorism (Abadie, 2005). The sociopolitical instability and humanitarian crises of a country can be deduced to the likelihood of conflicts and disasters that took place in 2013. In light of this reasoning, we hypothesize the following:

H4: The contextual factors embodied in a country's sociopolitical instability, political freedom, and humanitarian crisis will predict the country's mention on Twitter.

Given the fundamental shift of gatekeepers for international news in the social media context, the traditional information about the world's countries may or may not differ from the menu of traditional news media. The preference and judgment of Twitter participants may indicate a sharp departure from those of international reporters and editors who have been subject to different influence such as professional norms, media culture, and socialization (Shoemaker & Reese, 2013). It would be intriguing and conceptually rewarding to learn how the world is presented by the growing population of users online. Therefore, our inquiry leads to the following research question:

RQ1: What is the pattern of tweets about the world's countries? Which countries were mentioned most frequently on Twitter?

Because many studies have already predicted and explained the volume of mainstream mass media news across national borders, it would be conceptually rewarding to explore what the main predictors are for tweets about countries in the contemporary social media environment. This study investigates the most important and significant factors that can explain the volume of tweets about the countries in the world, which is an overarching and yet underexplored global issue. Our inquiry proceeded with the following empirical investigation.

Method

The study incorporates a broadly conceived data set with national-level values reported for nearly every country in the world during 2013. This data set includes a total of 210 countries where such data were available from a range of sources to examine the main dependent variable in the study: country presence on Twitter. The operationalization for this dependent variable and all related independent variables are as follows.

Country presence on Twitter was operationalized by a raw count of tweets that mention a given country (in its English-language form) during 2013. These data were generated by searching the complete history of Twitter through a commercial website, sifter.texifter.com, using the English-language name of every country in the sample from January 1, 2013, through December 31, 2013. For example, the search term *Spain* (not *España*) was entered for the year-long date range, and the Sifter application searched every undeleted tweet posted during this time frame and returned a detailed estimate of the number of times the word *Spain* appeared in tweets posted to Twitter. These estimates are produced with intent that all relevant tweets found can be purchased for download and are supplied through the social data vendor GNIP, which was recently acquired by Twitter as a means to distribute historical, "full fire hose" data, which contains 100% of tweets during the time frame rather than the selective data retrieved from the application programming interface that most services provide.

To expand this data collection,

> The application Sifter provides search and retrieve access to every undeleted tweet in the history of Twitter. Powered by Twitter-certified social data provider Gnip.com, users can submit "Gnip Historical PowerTrack" estimate requests using various query rules. When the query is done, Sifter generates an email estimating the approximate number of tweets responsive to the query and the cost to execute the retrieval. (Sifter, n.d.)

Thus, the data collected here examined every tweet produced on the time line identified for nearly every country in the world to calculate the number of times each country was mentioned. This variable was constructed not from a random sample of Twitter data for the dates selected through a public application programming interface portal; rather, every single tweet—about 500 million tweets are produced and circulated on a daily basis. The total number of tweets each country received during 2013 was the primary dependent variable of the study.

The independent variables came primarily from the official site of the U.S. Central Intelligence Agency (cia.gov). Values were entered for geographic size, percent of the population ages 15 to 24, median age, educational expenditures, official languages, past colonial background, urbanization percentage, gross domestic product per capita, percentage of population under the poverty line, wealth distribution as a Gini coefficient, and unemployed youth ages 15 to 24. Media variables included the number of mobile telephone users and number of Internet users from this same data source. Additional predictor variables from other sources include the following.

Information about a country's political freedom was downloaded from the nonprofit organization Freedom House and input as a measure of democratic rule. Measures of sociopolitical instability as weighted in a scale of assassinations, general strikes, guerrilla warfare, government crises, purges, riots, revolutions, and antigovernment demonstrations were entered from Databanks' Cross-National Time-Series Data Archive (databanksinternational.com). Humanitarian crises and natural disaster counts were drawn from the International Disaster Database produced by the Centre for Research on the Epidemiology of Disasters (emdat.be/database).

One final component of national characteristics was derived from world systems theory. Introduced only as a categorical and explanatory variable, this item was used to position countries as existing within the world system as core, semiperiphery, or periphery countries (Wallerstein, 1974). This structure is based on the strength of governments and economic systems in which "core economies (high wages, high profits, capital-intensive) are bound in a lopsided exchange with the periphery economies (low wages, low profits, and labor-intensive)" (Burkhart & Lewis-Beck, 1994, p. 903) that can stifle both economic and democratic growth outside of the core countries. Operationalization of country identification was the result of synthesizing two comprehensive works that proceeded at the global scale.

The first, by Chase-Dunn, Kawano, and Brewer (2000), evaluated national integration in the world system from 1795 to 1995. The second (Babones, 2005) examined the mobility of countries between the three levels from 1975 to 2002. Though there was high degree of similarity between the categorization systems (indeed, the core countries nearly perfectly overlapped), Babones' addendums were incorporated with those of Chase-Dunn, Kawano, and Brewer to form a more updated categorization system that remained historically informed.

Findings

The result from the searches of each of the countries during the entire year for 2013 through the full Twitter fire hose generated a total of 1,165,829,000 tweets—an average of 5,551,566.67 (*SD* = 11,130,011.73) tweets per country for the 210 countries included in this study. The results observed here clearly indicate that the picture of the world on Twitter, illustrated in Figure 1 and available in dynamic online format at http://bit.ly/1759YbE, looks dramatically different from the traditional news menu that has previously been reported from a long-standing world systems perspective.

Considering RQ1, from the top countries (see Table 1), it is readily apparent that a wide range of countries were prominent on Twitter. Four populous and economically dynamic Asian countries—Indonesia, China, Japan, and India—were on the list of 10 most mentioned countries. The only traditional Western powers among the 10 most frequently tweeted are the United States and France. From an impressionistic and visual standpoint, many unexpected countries appear on this most tweeted country list: Venezuela, Jordan, Mexico, Bahrain, and Cuba provide some examples of surprising findings, as do Nigeria, Ecuador, and the Philippines—all of which were mentioned more times on Twitter in 2013 than the United Kingdom, for example.

It is also important to note that of the 50 most tweeted-about countries, 18 (36%) were semiperiphery countries; the same percent comprised 18 periphery countries; and just 14 (28%) were core countries. This particular finding, situated from full fire hose access to the full year of 2013 tweets, seems at odds with the existing literature about news flow and country presence and image from the world systems perspective. Even if these findings are not perfectly generalizable to all social media, they are nonetheless indicative of how imperative it is for communication researchers to examine more deeply and systematically to uncover the underlying forces of social media content production and sharing.

Table 1. The Fifty Most Mentioned Countries on Twitter in 2013.

Country	Number of tweets	World system position
Indonesia	77,402,000	Semiperiphery
United States	73,731,000	Core
Venezuela	48,484,000	Semiperiphery
China	44,157,000	Semiperiphery
Japan	39,030,000	Core
Jordan	35,691,000	Periphery
France	35,094,000	Core
India	35,073,000	Semiperiphery
Mexico	31,215,000	Semiperiphery
Canada	29,747,000	Core
Argentina	28,541,000	Semiperiphery
Australia	27,782,000	Core
Syria	26,647,000	Periphery
Brazil	25,544,000	Semiperiphery
Chile	22,557,000	Semiperiphery
Colombia	21,755,000	Periphery
Malaysia	21,321,000	Semiperiphery
Bahrain	20,767,000	Periphery
Cuba	20,434,000	Periphery
Egypt	19,667,000	Periphery
Spain	18,730,000	Core
Italy	16,903,000	Core
Pakistan	16,288,000	Periphery
Israel	15,302,000	Core
Thailand	14,265,000	Semiperiphery
Turkey	13,894,000	Semiperiphery
Russia	13,318,000	Core
Iran	13,158,000	Semiperiphery
Singapore	11,980,000	Semiperiphery
Germany	11,937,000	Core
Georgia	11,910,000	Periphery
Ireland	11,447,000	Core

Nigeria	10,953,000	Periphery
Philippines	9,716,000	Periphery
Portugal	9,498,000	Core
Ecuador	9,040,000	Periphery
Kuwait	8,330,000	Periphery
United Kingdom	8,225,000	Core
Kenya	7,669,000	Periphery
Iraq	7,366,000	Periphery
Qatar	6,882,000	Semiperiphery
Uruguay	6,671,000	Semiperiphery
Mali	6,563,000	Periphery
Peru	6,247,000	Periphery
South Africa	6,008,000	Semiperiphery
Greece	5,437,000	Core
Jamaica	5,373,000	Semiperiphery
Paraguay	5,125,000	Periphery
Panama	5,109,000	Semiperiphery
Ghana	5,045,000	Periphery

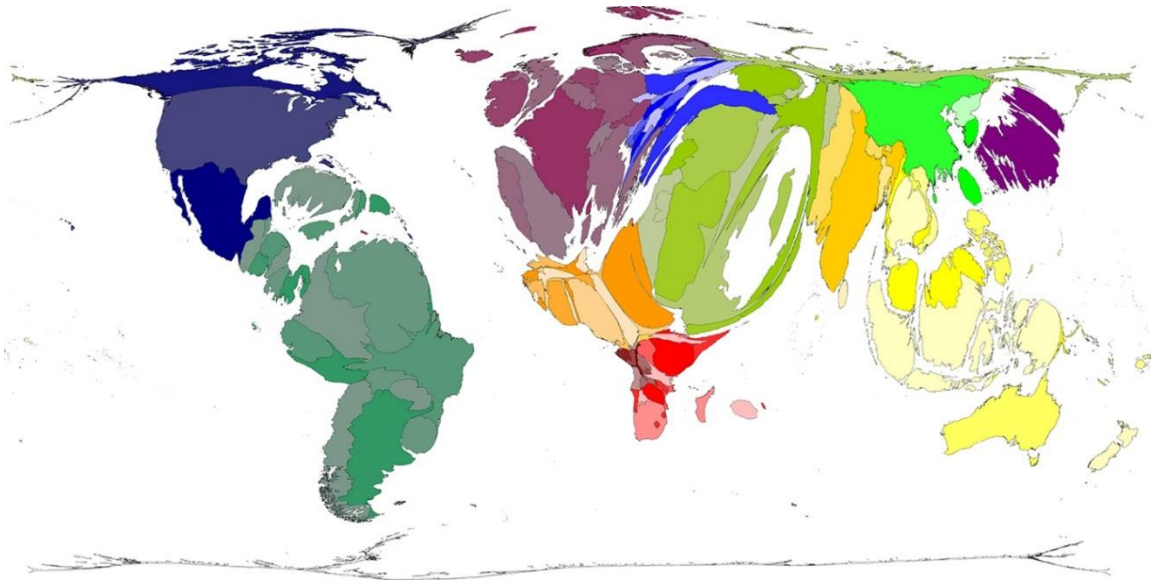

Figure 1. The world on Twitter: Countries resized by number of Twitter mentions (in English) for 2013.

To text our hypotheses, we conducted a correlation analysis, which resulted in a matrix that showed the extent to which several attributes of a country matter greatly on Twitter. The countries that are more populous (r = .497, p < .001), are geographically larger (r = .487, p < .001), have a higher median age (r = .150, p < .05), and have a higher percentage of urbanization (r = .237, p < .001) were mentioned more on Twitter. The access factors of the Twitter platform are also positively related to country share of tweets, which is evident by the positive correlations with the diffusion of mobile phones (r = .573, p < .001) and landline phones (r = .592, p < .001) and numbers of Internet users (r =.206, p < .05). Two other significant variables include the number of social and political crises (r =.218, p < .001) and humanitarian crises and natural disasters (r =.267, p < .001). Only one negative correlation reached statistical significance: the percentage of the population ages 15 to 24 (r = −.140, p < .05), which suggests that being on Twitter is not something that should be assumed only of youth populations.

Considering our tweets were limited in that only countries' English-language names were collected and analyzed, we were concerned with the issue of representativeness of all countries. To further examine this factor—if countries that have English as one of their official languages are mentioned in more tweets (H1)—an independent samples t test was carried out. This test resulted in a finding that nearly supports the inverse of the assumption that English-language countries would be more mentioned in English on Twitter. The average number of tweets for the 140 countries in the data set that do not have English as an official language was 6,016,600, greater than the average 4,621,500 tweets that mentioned the 70 countries that have English as an official language. Although the average difference of 1,395,100 did not reach statistical significance (t_{208} = 0.856, p = 0.393), it nevertheless provides a clear indication that language considerations and the influx of technological dependency that are situated within a sociocultural process of adoption and innovation are not bounded to previously dominant contours. In other words, people are tweeting about and identifying countries using their English language moniker to an extent that it is not relevant whether a country registers English as one of its official languages.

To investigate further and provide more specificity and explication for identifying the factors that influence the presence of countries on Twitter, all independent variables collected from the data sources previously reported were taken into consideration and modeled in a hierarchical ordinary least squares regression model with the number of tweets for each country as the dependent variable. Due to the fact that population and the number of cell phone users and number of landlines were highly correlated (and created a multicollinearity issue), the population and landline factors were dropped from the model. The results of all significant factors from the best fit and most suitable regression model are summarized in Table 2, where in the final block it can be observed that only geographic size, world system position (being core or semiperiphery country), number of sociopolitical crises, and number of mobile phone users were statistically and significantly related to a country being more tweeted about, all other factors under consideration held constant.

If we base our hypothesis testing solely on each predictor block's contribution (R^2 change and its significance level) to the final regression model, then H1, H2, and H4 should be supported, while H3, the block of economic resources, should be rejected. A country's attributes, communication resources, and contextual factors affect how much that country is mentioned (in English) on Twitter, though individual predictors in the attributes and resources blocks vary in their level of net contribution. These results do

not necessarily upend the traditional determinants of information flows, however. Given that relatively few predictors significantly explain increased Twitter activity per country—and that the mobile telephone diffusion variable was relatively the most powerful predictor—as well as the finding that social and political crises positively predict country mentions on Twitter suggest a potentially unique construction of information flows. This emerging pattern about countries' representation differs from that previously held by mass media and power relations stemming from world system or even media system dependency theories.

Table 2. Hierarchical Regression Analysis of Country Mentions on Twitter in 2013.

Predictor variables	Block 1	Block 2	Block 3	Block 4
Geographic size	.37***	.30***	.29***	.15#
% of population ages 15–24	.02	−.01	−.05	−.02
Median age	.07	.05	.05	.01
Education expenditures	−.01	.02	.03	.05
Former British colony	.12	.09	.09	.05
English official language	−.07	−.03	−.06	−.03
Urbanization of population	.08	.10	.08	.11
Core country	.26**	.28**	.28**	.28**
Semiperiphery country	.34***	.32***	.29***	.19*
Political freedom		.11	.10	.10
Sociopolitical crises		.15#	.16*	.13#
Humanitarian events and natural disasters		.12	.12	−.12
Gross domestic product per capita			−.01	.05
Population below poverty line			−.02	.01
Gini index			.10	.11
Unemployed youth ages 15–24			−.04	.02
Mobile telephone diffusion				.47***
Internet penetration				−.09
R^2	.41	.46	.47	.52
Adjusted R^2	.36	.39	.37	.43
R^2 change	.41	.05	.01	.06
Significance of change	.00	.04	.90	.01

Note. Beta coefficients, pairwise deletion.

# $p < .10$. * $p < .05$. ** $p < .01$. *** $p \leq .001$.

Nonetheless, it is important to note that in these models, in all instances both core and semiperiphery countries were statistically significantly more mentioned on Twitter than were periphery countries, which were excluded as a baseline to avoid a perfect collinearity with the other binary world system theory variables. When interpreting these results, one should note that the significance of core and semiperiphery countries as more tweeted about than periphery countries may be in part a statistical artifact that the majority (162) of countries are categorized as periphery countries principally on the basis of historically informed classifications.

Discussion and Conclusion

This study extends the traditional inquiry of national representation in the media and examines which countries are more salient on Twitter and which factors can help explain why certain countries are more noticeable on the highly popular social network site. We examine the contemporary and transformative media phenomenon of microblogging and update a historically important and informative theoretical framework of world systems theory. The finding that the most prominent countries on Twitter are dramatically different from those regularly reported on and expected from the traditional media is a significant indicator that social media can present a distinct "world" to the world. This phenomenon not only challenges the dominance of Western media conglomerates on the representation of various countries but shifts the worldviews of those—predominantly young—social media users.

This finding also introduces rather profound implications for a great number of stakeholders. Countries, for one, not only need to pay attention to their portrayal on traditional print and broadcast media, they should also extend their attention to the discourse that is taking shape on a host of social media channels—including, but not limited to, Twitter. The lessons for public diplomacy practitioners to take away from this study are likewise important and vital to consider. On the other hand, users of social media ought to be keenly aware of the different pictures of the world the interactive platform delivers for them. Despite the free, more democratic facade, it is too early to conclude whether the socially mediated world is closer to the reality in terms of comprehensiveness, depth, importance, and engagement than the one presented by traditional news media such as broadcasters, magazines, and newspapers.

Although the issue of an information gap between the covered countries and the neglected ones may remain, evidence from this study—at least on the surface—suggests that social media production and content have diminished the dominance heretofore observed in core countries from a world systems perspective. Indeed, the role of online social media in cultivating increased levels of national visibility has taken on additional importance as the Internet fulfills an increasingly central role in political mobilization (Gurevitch, Coleman, & Blumler, 2009). As witnessed during the Arab Spring and the Umbrella movement and all the social movements that ensued, this trend has become evident as the distance between citizens and political involvement diminishes through increasingly participatory media and unexpected large-scale events, and mobilizations can highlight and focus international attention to a specific country for a period of time.

Just as other media technologies such as newspapers and television structured political campaigns, knowledge, and interaction (Postman, 1985), online media are reshaping political perception,

participation, and engagement worldwide. The institutionalized political impact of the Internet being both more accessible and socially interconnected with culturally relevant content, however, has yet to be analyzed thoroughly across countries. For example, the fact that Indonesia is one of the top Twitter participants in the world (Hubbard, 2013) can translate not only to the country's prominence in tweet mentions but to other sociopolitical consequences domestically and internationally. The discoveries of this study contribute to a better understanding by identifying not only which countries are most prominently tweeted about but why that may be the case and how user-generated social network-based coverage may look like in the future. Therefore, the findings of this study may serve as a springboard for future investigations.

In sum, this study set out to explore the predictors of tweet volume of each country, but the valence and aspects of those tweets have not been examined. In other words, the need to further investigate the details and nuances of tweets remains—whether the mention of a country is positive, negative, or mixed; what aspects of the country are invoked and emphasized in social media; and, above all, whether the tweets about different parts of the world contain correct, misleading, or false information. These are the shortcomings of the present study and can provide direction for future studies.

Another potential research agenda of Twitter mentions is whether and to what extent the volume drives real-world change. It would be interesting to examine whether the heavily discussed countries (either in a negative or positive light) lead to more attention among the world's leaders and whether globally intertwined issues such as climate change and drug trafficking can result in more cooperation and collaboration among the countries. As a global medium, Twitter does have a lot of potential capacity toward facilitating the dialogue of concerned citizens and improving current conditions.

The world as we know it has not been created equal, especially in the media (Chang, 1998). The findings of this study indicate the possibility that a less hierarchical version of the world can be represented on Twitter. This is a welcome finding. It does not, however, take into consideration exactly which individuals around the world read those tweets and what effects they might generate. And therein lies the crux of inquiries such as these—content alone cannot prove effects, but it can demonstrate dramatic social shifts in content production and circulation. At this juncture, existing effects should no longer be unlikely but the norm, and recent events from the Arab Spring to Occupy movements have shown a transformed world order. This study signals that fact, and it begins to estimate the factors that are shaping the presence of countries in social media coverage.

This article is the first to explain the variation of tweets about countries. Given the lack of existing theories directly pertaining to this topic, and as a starting point for developing theories for social media mentions about the world, this article borrowed the approach traditionally used by studies of international news flow. Although the mechanism of news coverage about countries differs from our discussion about countries on Twitter, the similarities are that the subject of the utterances is on countries and that they are publicly communicated. As such, this study adopted the following four categories of predictors that have traditionally been analyzed in earlier investigations of international news coverage: country attributes, communication resources, economic resources, and contextual factors.

As a starting point for theory development, this study has analyzed direct predictors of country-related tweets. Its findings are partially consistent with the world system framework in that a country's size matters. However, whereas size in the context of world system theory has traditionally referred to the country's share of the world economy, size in the context of Twitter country mentions highlights the importance of geographical size. If the mention of a country is carried out to a large extent by the people of that country, this finding suggests the existence of a level field with respect to country coverage in social media. Countries with larger geographical size receive more coverage irrespective of their economic power.

One explanation for this might lie in the mode of communication itself and the costs of entry for communicators. In the case of Twitter, the mode of communication is electronic, and the threshold of entry for communicators can be as simple as a smart phone with a data plan, which is in contrast to the entry for traditional news, which consists of establishing complex organizations with multiple locations, multiple employees, and prohibitive overheads. This ease of access and low cost of entry for Twitter communicators is facilitated by the fact that cell phone technology has become widely accessible in emerging countries, where the communication mode has progressed far beyond the traditional wire infrastructure. Added to that is the continuously declining costs of cell phone devices and Internet access fees.

The importance of these technological factors in Twitter country mentions is highlighted by our finding that a country's cell phone penetration is significantly correlated with the volume of tweets, even when controlling for a host of relevant factors. Compared to the findings of country coverage in traditional news, the overall results of this study suggest that the new platform may have brought on a democratization effect with respect to country mentions.

A few limitations of this study need to be mentioned. We only used tweets in English language to investigate; tweets in other major languages are equally important and should be included in future studies to elevate validity level. In addition, for a better understanding of country representation in social media, other platforms such as Facebook, Instagram, and YouTube merit scholars' attention. This study is only a start for examining country image in the social media arena.

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