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To cite this article: Maria Eirini Papadouka, Nicholas Evangelopoulos & Gabe Ignatow (2016) Agenda setting and active audiences in online coverage of human trafficking, *Information, Communication & Society*, 19:5, 655-672, DOI: [10.1080/1369118X.2016.1139615](https://doi.org/10.1080/1369118X.2016.1139615)

To link to this article: <http://dx.doi.org/10.1080/1369118X.2016.1139615>



Published online: 05 Feb 2016.



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Agenda setting and active audiences in online coverage of human trafficking*

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ABSTRACT

Online news platforms and social media increasingly influence the public agenda on social issues such as human trafficking. Yet despite the popularity of online news and the availability of sophisticated tools for analyzing digital texts, little is known about the relations between news coverage of human trafficking and audiences' reactions to and interpretations of such coverage. In this paper, we examine journalists' and commenters' topic choices in coverage and discussion of human trafficking in the British newspaper *The Guardian* from 2009 to 2014. We use latent semantic analysis to identify 11 topics discussed by both journalists and readers, and analyze each topic in terms of the degree to which journalists and readers agree or disagree in their topic preferences. We find that four topics were preferred equally by journalists and commenters, four were preferred by journalists, and three were preferred by commenters. Our findings suggest that theories of 'agenda setting' and of the 'active audience' are not mutually exclusive, and the scope of explanation of each depends partly on the specific topic or subtopic that is analyzed.

ARTICLE HISTORY

Received 17 October 2015

Accepted 28 December 2015

KEYWORDS

Human trafficking; online news; agenda setting; active audience; topic models; latent semantic analysis

1. Introduction

Human trafficking, driven in part by economic globalization (Danailova-Trainor & Belser, 2006), is considered to be one of the fastest growing and most lucrative criminal enterprises in the world. In 2000 the United Nations Convention against Transnational Organized Crime represented the main international instrument in the fight against transnational organized crime (United Nations, 2000). However, this was not the first time where the issue of human trafficking was discussed in the international scene. In September 1995, the United Nations held the fourth World Conference on Women in Beijing, China. At this meeting clear guidance was provided and certain actions were introduced including the enforcement of international conventions on human trafficking and slavery, and the setting of effective law enforcement and of institutions aiming to eliminate trafficking in both national and international level. Moreover, educational and rehabilitation programs were implemented in order to inform society and to support the medical and psychological needs of the human trafficking victims.

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*This paper is a further development of a paper first presented at the 2015 American Sociological Association annual meeting in Chicago, IL, at the Section on Communication, Information Technology and Media Sociology paper session.

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In parallel to these efforts, the United Nations and other international nongovernmental organizations began to focus on raising public awareness of human trafficking as a global social problem, and national civil society organizations have followed suit (e.g. Aronowitz, 2009, p. 147).

For most citizens the news media are the only source of information and opinion on human trafficking. As a consequence, national and international media play critical ‘agenda setting’ and ‘gatekeeping’ roles (Ghanem, 1997, p. 5) in raising public awareness, even though media coverage of human trafficking is often criticized for being limited, inconsistent, and distorted. Wallinger (2010, p. 15) has shown that human trafficking incidents are reported by the media only when news editors evaluate them as ‘newsworthy’. As a result, media coverage of human trafficking focuses narrowly on trafficking for the purposes of sexual exploitation (Chang & Kim, 2007; Marchionni, 2012; Pajnik, 2010) to the exclusion of many other forms of trafficking. Also, even this monolithic equation of human trafficking to sexual exploitation can be easily affected and even distorted by the ongoing debates on voluntary versus coerced sex working, especially in this current era where many countries have accepted, legalized or decriminalized sex working by promoting the volunteer sex workers rights (Immordino & Russo, 2015; Jahic & Finckenauer, 2005; Limoncelli, 2010; Marchionni, 2012).

Before the rise of the Internet, the public agenda on human trafficking was generally set by legacy news outlets such as large-circulation newspapers and network television (Ghanem, 1997; Gulati, 2011). But the ‘we write, you read’ doctrine of modern journalism (Deuze, 2003) began to be challenged in the 1990s by the ‘public’, ‘participatory’, ‘civic’, or ‘citizen journalism’ movement (Domingo et al., 2008; Haas, 2005, 2007; Thurman, 2006; Thurman & Lupton, 2008). Today online news platforms and social media allow readers to play an active role in setting the public agenda on a wide variety of social issues (Hermida et al., 2011).

Despite the accessibility of online news and sophisticated methods for analyzing news content, little is known about the relations between news coverage of human trafficking, readers’ reactions to such news coverage, and the public discussions that result from interactions between journalists and their readers. The goal of the present study is thus to examine similarities and differences in how human trafficking is discussed by journalists and their readers. We examine journalists’ and readers’ topic choices in coverage of, and discussion on, human trafficking in the British daily newspaper *The Guardian*, collecting a large sample of articles and comments on human trafficking published between 2009 and 2014 and applying latent semantic analysis (LSA) to identify the most salient topics of discussion. We analyze these topics quantitatively to determine which topics are preferred equally by journalists and commenters and which are preferred by either journalists or commenters. We find four topics that were preferred equally by journalists and commenters, four that were preferred by journalists, and three that were preferred by commenters. Our findings suggest that that convergence and divergence depend on the topic under discussion and therefore the theoretical frameworks of ‘agenda setting’ and the ‘active audience’ work rather complementary, depending on the specific topic and subtopic being analyzed.

2. Agenda setting and the active audience

Theories of news agenda setting (McCombs, 1997; McCombs & Shaw, 1972) and of the active audience (Liebes & Katz, 1986) are two of the most prominent approaches in

research on how news and public opinion influence one another. One of the main assertions of agenda-setting theory is that ‘what the media find important, or salient, is what the public finds important’ (Marchionni, 2012). In different words, agenda setting is the selective coverage of topics that leads the public to perceive some issues as more important than others regardless of their inherent newsworthiness (Wanta, Golan, & Lee, 2004; Wu & Coleman, 2009). A second aspect of agenda setting theory is known as ‘second-level agenda setting’, which is the idea that the mass media not only tell people *what* to think about certain issues but also *how* to think about them (McCombs & Shaw, 1993). Second-level agenda setting surpasses the effect of relative salience of an issue and examines the two dimensions of the portrayal of that issue: its substance and affectivity (Coleman, McCombs, Shaw, & Weaver, 2009; Wu & Coleman, 2009). Kiouisis, Mitrook, and Wu’s (2006) study of media coverage of political candidates’ news releases in shaping the salience of political issues and candidate images during the 2002 Florida gubernatorial elections includes examples of both types – or levels, of agenda setting.

Only a few studies have examined how news media set the public political agenda regarding human trafficking (Gulati, 2011; Johnston, Friedman, & Shafer, 2014; Marchionni, 2012; Pajnik, 2010), and to our knowledge there have been no studies of how audiences respond to media coverage of human trafficking.

The second major approach to studying the interaction of the news and public opinion is the ‘active audience’ approach. Public opinion on social issues is not only shaped by mass media but can also influence the agenda of the media and politics (Burstein, 2003; Dalton, 2013; Page & Shapiro, 1983; Van Aelst & Walgrave, 2011). Recent studies have disputed the view that public opinion is formed via passive consumption of media information; media that study researchers in particular have identified the active presence of audiences through their responsive and interpretive analysis of the meanings of media products (Hermida et al., 2011; Liebes & Kats, 1986). Hermida suggests that journalists themselves perceive audiences as ‘active recipients ... somewhere between passive receivers and active creators of content’ (Hermida et al., 2011, p. 17). This perception is enhanced by the journalists’ expectation that users will even participate in the news spreading, especially in this current era of global media and online social platforms. Therefore, audiences support their role of ‘active recipients’ by observing newsworthy events and spreading the news afterwards by applying their personal filter (Hermida & Thurman 2007; Hermida et al., 2011).

Recent technological advances allow citizens with internet access to not only actively interpret and interact with web-based content, but also to broadcast their own interpretations of events (Domingo et al., 2008; Thurman, 2008). The result is ‘user-generated content’ (UGC), the ‘product of active internet contributors, who put in a certain amount of creative effort which is created outside of professional routines and platforms’ (Van Dijck, 2009, p. 41). One popular form of UGC is the comment fields that accompany many newspaper articles published online. Graham and Wright (2015) found that debates in *The Guardian*’s ‘below the line’ comment fields in articles on the Copenhagen Climate Change Summit topic were often intensely deliberative, and that these comment fields had a recognizable impact on climate change journalism. Commenters often challenged articles’ content while providing new ideas and arguments (Graham & Wright, 2015, p. 17). Yet despite their popularity and apparent significance, research on news article comment fields has so far been very limited.

3. Predictions

In this article we examine the topics discussed in articles covering the issue of human trafficking and their respective ‘below the line’ comment fields in order to identify points of convergence and divergence. The study is guided by the following research questions:

- (1) What are the main topics discussed by both journalists and readers on the issue of human trafficking?
- (2) Are there topics on which journalists and readers converge? If so, what are these topics?
- (3) Are there topics on which journalists and readers diverge? If so, what are these topics?

The goal of our study is to determine whether, and how, the subject of human trafficking is approached differently by journalists and commenters. Deriving predictions from agenda setting and active audience theories is relatively straightforward. Starting from two seemingly contrasting theories, the agenda setting theory that implies that journalists’ topic preferences will be reflected in the topic preferences of their readers; theories of the active audience suggest that this will not necessarily be the case, and that readers’ preferred topics will diverge from those of journalists. The theories are not mutually exclusive, of course, in that it is primarily journalists and editors who decide on article topics, and audiences’ interpretations and comments are secondary. But we may learn about where each theory is most applicable by examining the relative degree of journalist-audience convergence and divergence across topics. Thus we analyze the topic preferences of journalists and readers simultaneously.

4. Data

Our data are from the British newspaper *The Guardian* for the period 2009–2014. We chose *The Guardian*, a British national daily newspaper, because it is a major international paper with an especially large portion of web readers from overseas (78% in 2004). For comparison, *The New York Times* received approximately 30% of its web readers from overseas, the Huffington Post around 20%, and the Washington Post around 17% in 2004 (Mayes, 2004; Thurman, 2007). This is indicative of the access of and potential comment’ contribution from people from all over the globe on issues raised by *The Guardian* that have both national and international focus. Until recently *The Guardian*’s circulation was approximately 39 million readers, the majority of whom were online readers (Thurman, 2007, p. 8). It was one of the first newspapers to add a comment fields section, and today *The Guardian*’s comments sections contain arguably the most extensive debates among leading international newspapers (Jönsson & Örnebring, 2011; Ruiz et al., 2011). *The Guardian* also offers open access to readers, allowing readers to both read full articles and comment without registering. As a consequence *The Guardian* was the only major newspaper that provided us with sufficient data to perform statistical analysis of journalist and reader topic preferences on human trafficking.

To analyze topics discussed by both journalists and readers, we concentrated on articles published between 2009 and 2014 that included more than three comments. We collected our data from late 2014 through early 2015 in order to explore the discussion between the

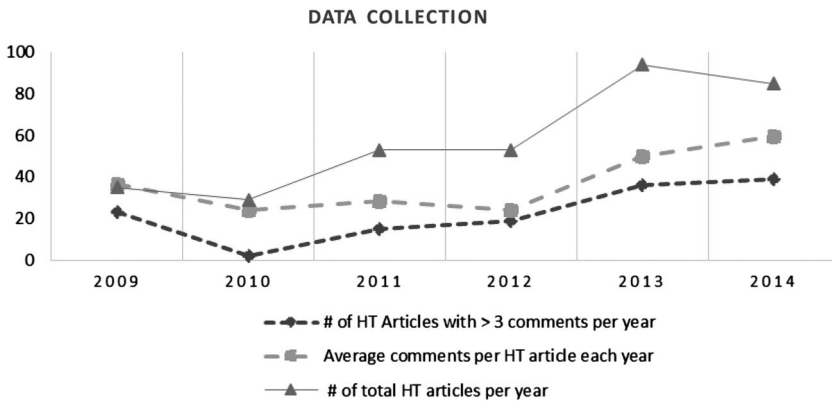


Figure 1. Articles and comments collected.

journalists' most recent news stories on human trafficking and their readers' corresponding comments. In addition, for reasons related to our topic extraction methodology, we excluded articles with few comments (three or fewer).

We used the *GuardianR: Guardian API Wrapper* (Bastos & Puschmann, 2013) in order to construct our data set. The output of the R terminal returned a total of 349 articles, with a total of 195 articles that allowed readers' comments in the webpage. Out of these, 134 articles contained more than three comments in their comment section and were therefore included in our data set. Some of the final sample of 134 articles included well over 100 comments, but because online discussions often change focus and become fragmented after a few comments (Lu, Duan, Wang, & Zhai, 2010), we included only comments that appeared on the first results page, with one scroll-down, ordered oldest-first. This strategy yielded 134 articles with 6644 corresponding comments, with an average of 22 articles with more than three comments per year and an average of 37 comments per article in 2009, 24 comments per article in 2010, 28 in 2011, 24 in 2012, 50 in 2013, and 60 in 2014 (Figure 1).

Following best practices of text analytics, in order to improve the effectiveness of topic extraction, we split the original articles and reader comments into paragraphs, based on our observation that paragraphs generally cover one main topic each. To avoid biasing the topic extraction process, we kept the original paragraph structure as it appears in the published articles and the posted comments. The 134 articles produced 2399 article paragraphs, and the 6644 comments produced 10,030 comment paragraphs, for a total of 13,329 paragraphs.

5. Method

To determine journalists' and commenters' topic preferences, we applied topic modeling to our final corpus of 13,329 article and comment paragraphs. Topic modeling is a text-mining methodology that has recently caught on with a wide range of researchers in the humanities and social sciences. Up to this day, a widely applied research method in social sciences, which is also preferred in most of the studies on articles published in mass communication journals, is content analysis. However, topic modeling approaches such as

LSA and other automated techniques are increasingly replacing the initial reading and coding, two labor-intensive steps in the content analysis process, mainly because of their flexibility to encompass and analyze large text corpora that can exceed a billion documents at times (Chuang et al., 2014). Topic modeling involves automated procedures for coding collections of documents into sets of meaningful categories which represent the main topics being discussed in the texts. Because algorithms can do this coding with minimal human intervention, topic modeling is more inductive than most other approaches to text analysis (DiMaggio, Nag, & Blei, 2013). Instead of using predefined codes or categories derived from theory, researchers using topic modeling begin by specifying the number of topics they wish to find, and then use software to identify the specified number of topics based on either underlying probability distributions or patterns of explained variance. Topic modeling software then returns rank-ordered sets of words being used in each topic and provides an accounting of the distribution of those topics across the document collection (Steyvers & Griffiths, 2007).

Topic models assume that meanings are relational (Saussure, 1959), and that the meanings associated with a topic of conversation can be understood as a set of word clusters. Topic models treat documents as what linguists call a 'bag of words', capturing word co-occurrences regardless of syntax, narrative, or location within a document (Cai, Mei, Han, & Zhai, 2008). A topic can be thought of as the cluster of words that tend to come up in a discussion, and therefore to co-occur more frequently than they otherwise would, whenever the topic is being discussed. Topic models are, therefore, effective at uncovering meaning at the discourse or corpus level but not particularly effective for uncovering meaning within individual documents.

There are two main approaches to topic modeling. In the first, probabilistic topic modeling, the most widely used algorithm is Latent Dirichlet Allocation (LDA). Introduced by Blei and his colleagues in 2003 (Blei, Ng, & Jordan, 2003), LDA is based on the idea that every document within a document collection addresses a mixture of topics (or themes) that the author intended to discuss. Each topic is defined as a specific probability distribution over all observed words in the document collection, such that words that are strongly associated with the document's dominant topics have a higher chance of being included within the document. The objective of topic modeling is to find the parameters of the LDA process that has generated the final document or document collection, a process referred to as 'inference' in the LDA literature. Among the outputs of the inference is a set of per-word topic distributions associating a probability with every topic-word pair and a similar set of per-topic document distributions describing the probability of choosing a particular topic for every specific document.

A second topic modeling approach is LSA. LSA extracts concepts from observed patterns of word usage in a collection of documents. LSA was first introduced as a distinct information retrieval technique for library indexing (Dumais, 2004; Manning, Raghavan, & Schütze, 2008) and recently emerged as a topic extraction approach (Evangelopoulos, Zhang, & Prybutok, 2012). It is based on the similarity of meanings of words appearing in documents or passages (Foltz, Kintsch, & Landauer, 1998) and presents words and documents using vector space modeling that compiles textual data into a term-by-document matrix. The term-by-document matrix shows the weighted frequency of terms in order to represent the documents in the term space. The extraction of topics in LSA is based on the statistical technique of singular value decomposition (SVD), which is

closely associated with factor analysis, and represents terms and documents in a space of principal factors (Berry, Dumais, & O'Brien, 1995; Deerwester, Dumais, Landauer, Furnas, & Harshman, 1990; Landauer, 2002). LSA employs truncated singular value decomposition, a unique form of SVD which modifies term frequencies to include only terms of great importance in order to highlight underlying dimensions of the data.

To analyze comments in journalists' and commenters' discussions of human trafficking, we apply LSA using SAS Enterprise Miner (SAS EM). We chose LSA over LDA for LSA's considerably faster execution time (a few minutes as opposed to many hours), LSA's unique solution and reproducibility of the results (LSA always produces the same solution given the same data, as opposed to the slightly variable solutions produced in LDA), and the availability of free commercial software for LSA (SAS EM is available free of charge for academic research through the SAS on Demand for Academics program).

Our LSA analysis closely follows the steps outlined in Evangelopoulos et al. (2012); Kulkarni, Apte, and Evangelopoulos (2014), and Winson-Geideman and Evangelopoulos (2013). Based on the LSA attribute of assessing commonalities within a collection of data, the article and comment paragraphs were reduced to a series of terms and documents loading on factors that were then translated into 11 topics. Our collection of 13,329 article and comment paragraphs were first converted into a tabulation of term occurrences called a Vector Space Model (Salton, 1975). To ensure the accuracy of our language usage patterns and to avoid any computational inefficiencies, we excluded trivial English words (e.g. *the*, *and*, and *of*) as well as obviously irrelevant terms (e.g. first names, *Thai fish industry*, *Jennifer*, *fishmeal*, *fish*, *Croydon*, and *Davies*). We then condensed the terms through the process of linguistic stemming, representing for instance the terms *trafficking*, *trafficked*, *traffic* etc. by the stemmed term *traffic*.

To promote low-frequency terms and discount high-frequency terms, we transformed the term frequencies using a variant of the commonly used term frequency-inverse document frequency transformation, where the raw term frequency of term x in paragraph j , tf_{xj} , is replaced by $w_{xj} = tf_{xj} * idf_x$, where $idf_x = \log_2(N/n_x)$, N is the total number of abstracts in the collection (here $N = 8794$), and n_i is the total frequency of term x in the entire collection of abstracts (Winson-Geideman & Evangelopoulos, 2013, p. 258).

We next used SAS EM to extract 11 topics (an arbitrarily chosen manageable number) from our document collection. The topics emerged in the form of multiple descriptive terms accompanied by the paragraphs related to each topic. We coded the 11 topics by combining the quantitative results of the terms weights as produced by SAS EM and the qualitative method of multiple readings and consensus among the researchers after reading each topic's accompanying paragraphs, as suggested in conventional content analysis (Hsieh & Shannon, 2005, p. 1279). We continued our analysis by performing a chi-square test for independence to identify whether article paragraphs and comment paragraphs have similar or different distributions across the 11 topics. We then applied the iterative consensus-building algorithm created by Winson-Geideman and Evangelopoulos (2013). Using this algorithm, we gradually eliminated the rows (appeared topics) that contributed to column dependence so as to achieve a unification of the columns in the contingency table. When an optimal set of rows, which portrays column independence while keeping the number of rows at a maximum, is achieved, the algorithm follows the locally optimal choice at each repetition so as to avoid possible overload from the full

Table 1. Emerged topics.

Topic	Label	Descriptive terms	Article paragraphs	Comment paragraphs
T01	Sex workers and paid sex	+sex, +worker, +sex worker, +sex industry	309	1161
T02	HT as modern slavery	+slavery, +slave, modern, +human, +labor	320	709
T03	Police reaction to trafficking in children	+police,uk, +know, +find, +child, +home	375	528
T04	Gender relations in HT	+woman, +man, +prostitute,+prostitution, +sell, +know	347	1228
T05	Opinion about the article	+article, +good, +read, +comment, +point	31	830
T06	Workers and forced labor	+work,+pay, +labor, +force,+worker, uk,+pay	300	1047
T07	Human rights in HT	+right, +human, +human right, +government, +abuse	200	578
T08	Generalizations on how people perceive/act toward HT	+people, +want, +know, +job, +live	195	1269
T09	Government and charity response to HT	+government, +project, +poppy, +support, +charity	231	430
T10	Prostitution	+prostitution, +government, +law, +force, +illegal, +prostitute	206	980
T11	HT victims	+traffic,+human,+victim,uk,+woman	785	1270
		Total	3299	10,030

Note: HT, human trafficking.

Table 2. Chi-square tests for independence.

Topic	Label	Observed		Expected		chi-sq component
		Articles	Comments	Articles	Comments	
T01	Sex workers and paid sex	309	1161	363.833	1106.17	10.982
T02	HT as modern slavery	320	709	254.683	774.32	22.261
T03	Police reaction to trafficking in children	375	528	223.497	679.50	136.479
T04	Gender relations in HT	347	1228	389.821	1185.18	6.251
T05	Opinion about the article	31	830	213.102	647.90	206.795
T06	Workers and forced labor	300	1047	333.390	1013.61	4.444
T07	Human rights in HT	200	578	192.559	585.44	0.382
T08	Generalizations on how people perceive/act toward HT	195	1269	362.348	1101.65	102.710
T09	Government and charity response to HT	231	430	163.601	497.40	36.899
T10	Prostitution	206	980	293.541	892.46	34.694
T11	HT victims	785	1270	508.624	1546.38	199.573
	Sum	3299	10,030	3299	10,030	761.469

Table 3. Topics preferred equally by journalists and commenters.

Topic	Label	Observed		Expected		Chi-square component
		# of article §	# of comment §	# of article §	# of comment §	
T01	Sex workers and paid sex	309	1161	328.7	1141.3	1.519
T04	Gender relations in HT	347	1228	352.2	1222.8	0.098
T06	Workers and forced labor	300	1047	301.2	1045.8	0.006
T07	Human rights in HT	200	578	174.0	604.0	5.021
	SUM	1156	4014	1156	4014	6.644

Notes: # of article §, number of article paragraphs. The expected article counts were computed based on the null hypothesis of independence between articles and comments, as part of the chi-square test calculations of the iterative process. With a chi-square statistic equal to 6.644 ($df = 3, p = .0841$), a set of topics that were equally preferred by both sources was identified.

enumeration of all possible solutions (Cormen, Leiserson, & Rivest, 1996). We used this technique to identify three clusters of topics: (1) topics preferred equally by journalists and commenters, (2) topics preferred by journalists, and (3) topics preferred by commenters (Tables 1–3).

6. Results

After extracting the 11 topics, we compiled a topic-by-document source contingency table (Table 1). We analyzed the cross-tab results with a chi-square test for independence. Testing for independence of rows and columns, a chi-square value equal to 761.469 ($df = 10$, $p < .0000$) indicated a significant degree of dependence between topics, articles, and comments (Table 2). We calculated each topic's contribution to the chi-square statistic and found that topic 5, 'Opinion about the article', was the most polarizing topic, with a chi-square contribution component of 206.795. We removed that topic and repeated the chi-square test on the remaining nine-by-two table. Since the test was significant again, we identified the next topic that contributed most to distribution differences, and continued this way until we reached a subset of topics that have no difference in preference between journalists and commenters (Table 3).

6.1. Topics preferred equally by journalists and commenters

The analysis revealed that four main topics were preferred equally by journalists and commenters: (1) Sex workers and paid sex; (2) Gender relations in human trafficking; (3) Workers and forced labor; and (4) Human rights in human trafficking (Table 3).

6.1.1. Sex workers and paid sex

This topic was discussed by both journalists and commenters. Discussion focused excessively on the distinction between 'voluntary' and 'involuntary' sex work. Both readers and journalists mentioned about the necessity of a clear identification of the different types of sex working and how these may or may not be coerced. For example, one commenter suggests:

There are two types who are sex workers: those who are there because they genuinely chose to be and those who were coerced. Respect their choice or not, the former have made a choice and should be protected and regulated. (C0675)

Within academia the discussion on voluntary versus involuntary sex work has not yet reached a consensus: several scholars argue that coercion cannot function as a distinguishing factor between the types of sex working (coerced vs voluntary) since, as they claim, all acts of sex working are necessarily exploitative and involuntary (Gulcur & Ilkcaracan, 2002; Jeffreys, 1999; Kelly, 2003). The opponents of this notion assert that individuals can voluntarily participate in the global sex industry and can only be considered as trafficking victims when they are forced to work in sexual servitude (Busza, 2004; Murray, 1998). Others, such as Doezenia (1998, 1999, 2002), argue that this division has allowed international organizations that seek to abolish prostitution to deny voluntary sex workers their human rights.

6.1.2. Gender relations

Numerous scholars suggest there is division in terms of the gender inequities involved in the human trafficking process: women and girls are the vast majority of the victims of most human trafficking activity, while men appear to be the victimizers or ‘the clients’ (Brysk & Choi-Fitzpatrick, 2012; McCarthy, 2014). Dowler and his colleagues have identified gender as an important ingredient in the portrayal of any type of crime through the following paradox: media frequently consider female victims responsible for their victimization while at the same time trying to present them as ‘innocent, virtuous and honourable’ (Dowler, Fleming, & Muzzatti, 2006, p. 841). Thus it is not surprising that both journalists and commenters discussed gender relations when discussing human trafficking.

6.1.3. Workers and forced labor

Even though some scholars argue that media underrepresent stories about labor trafficking on the basis that they are not as marketable as are stories about sex trafficking (Haynes, 2006, p. 355), our analysis found that both journalists and commenters discussed forced labor resulting from human trafficking.

6.1.4. Human rights in human trafficking

Human trafficking is often discussed by scholars, governments and civil society organizations as a human rights violation. The emergence of the particular topic by both journalists and commenters reflects their concerns about the conceptualized framework of human trafficking. As Gallagher argues, a human rights-based approach when discussing the issue of human trafficking highlights the importance of formulating policies and programs whose main focus and objective is the promotion and protection of rights (2001, p. 173).

6.2. Topics preferred by journalists

We found that four topics were preferred by journalists more than commenters (Table 4), including: (1) human trafficking victims; (2) police reaction to child trafficking; (3) government and charity response to human trafficking; and (4) human trafficking as modern slavery.

6.2.1. Human trafficking victims

Many scholars have noted the media’s preference for portraying crime victims (e.g. Greer, 2007; Höijer, 2004), and our analysis showed that indeed journalists discuss trafficking victims, particularly women, children, and workers, more so than commenters do. Numerous scholars have identified the media’s preference on portraying stories of

Table 4. Topics preferred by journalists.

Preferred article topics		Observed		Expected	
		# of article §	# of comment §	# of article §	# of comment §
T11	HT victims	785	1270	508.6	1546.4
T03	Police reaction to trafficking in children	375	528	215.3	687.7
T09	Government and charity response to HT	231	430	157.2	503.8
T02	HT as modern slavery	320	709	234.4	794.6
	Sum	1711	2937	1115.5	3532.5

Note: # of article §, number of article paragraphs.

crime victims (Greer, 2007; Höijer, 2004). The discussion on the topic of trafficking in children and human trafficking victims confirms the general notion that media place an inordinate focus on the vulnerability of the victims and on crimes that include elements regarding sex, sexuality, and gender (Haynes, 2006).

6.2.2. Police reaction to child trafficking

This was the only topic where actions of law enforcement were presented and were connected to the specific type of trafficking in children. Journalists discussed about the police's performance in identifying incidents of human trafficking, and specifically of child trafficking. Media often report on proactive police activity so as to promote the image of the police as effective and efficient investigators of crime (Surette, 1998). However, when it comes to human trafficking, findings suggest that the numbers of human trafficking cases identified by the police are low. This could be partially attributed to agency leaders who do not perceive trafficking as a problem in their community, and to a lack of training and guidance to prepare officers to identify and investigate these cases (Farrell, McDevitt, & Fahy, 2010, p. 225).

6.2.3. Government and charity responses to human trafficking

The third topic discussed by journalists expanded on how governments, and the British government specifically, respond to human trafficking. In the UK the passage of the Sexual Offences Act (2003) and the Asylum and Immigration Act (2004) expanded the definition of trafficking, increased the maximum penalty for sex trafficking and increased the effectiveness of law enforcement agencies (Gulati, 2010). These and other government acts brought human trafficking into the spotlight for the *Guardian's* journalists.

6.2.4. Modern slavery

Guardian's journalists discuss human trafficking as a form of modern slavery. As Wasileski and Miller claim: 'Describing human trafficking as modern-day slavery constitutes influential and evocative wording that draws rapid attention to the need for the public and governments to act to end it' (Wasileski & Miller, 2012). Consequently, the emergence of this topic indicates that journalists approach the subject with some awareness on human trafficking current practices.

6.3. Topics preferred by commenters

Three topics were preferred by *The Guardian's* commenters (Table 5), including: (1) *opinion about the article*; (2) *how people perceive and/or act toward human trafficking*; and (3) *Prostitution*. The *opinion about the article* topic makes sense because online news comments are generally produced by the most opinionated readers (see Lee, 2012; Lee & Jang, 2010), and we also observed that many commenters began their comments with some kind of general opinion about the article.

The second topic preferred by *The Guardian's* readers involved generalizations about *how people perceive and/or act toward either human trafficking or prostitution*. This topic involves ethical and quasi-philosophical discussions of human nature and of evil (see Weitzer, 2007).

Table 5. Topics preferred by commenters.

Preferred comment topics		Observed		Expected	
		# of article §	# of comment §	# of article §	# of comment §
T05	Opinion about the article	31	830	213.1	647.9
T08	Generalizations on how people perceive/act toward HT	195	1269	324.5	1139.5
T10	Prostitution	206	980	254.1	931.9
	Sum	432	3079	791.8	2719.2

Note: # of article §, number of article paragraphs.

The third topic preferred by commenters was related to *Prostitution*. It is since 1800 that traffic in human beings stood for the procurement of persons against their will by using force, deceit, or drugs for the purpose of prostitution (Walkowitz, 1992, p. 247). The same notion follows today's practices of human trafficking as well. The current United Nations' definition specifically clarifies that the purpose of exploitation as the main element in human trafficking practices shall include, at minimum, the exploitation of the prostitution of others (United Nations definition). This is an interesting result when considering the fact that the topic of *Sex workers & paid sex* was emerged both in the journalists and readers' preferred topics of discussion while the topic of *Prostitution* was mainly discussed by the readers. This could be indicative of the readers' understanding of the conceptual distinction between prostitution and sex working: prostitution is just one form of sex work while sex work may refer to a variety of practices such as striping, phone sex or pornography for example (Ditmore, 2011; Farley, 2006).

7. Discussion and conclusions

Online news platforms and social media play a major role in setting the public agenda on the issue of human trafficking, which is an underreported crime that is a low priority for authorities in many countries (Laczko & Gramegna, 2003). Because little is known about the relations between news coverage of human trafficking and audiences' reactions to and interpretations of such coverage, in this paper we have examined journalists' and commenters' topic choices in coverage of and discussions about human trafficking. We used LSA to identify 11 topics discussed by both journalists and readers of *The Guardian* and analyzed each topic in terms of the degree to which journalists and readers converge or else diverge in their topic preferences.

We found that overall there were more topics on which journalists and readers diverged (7) than converged (4). The four topics that were preferred equally by journalists and commenters were *Sex workers & paid sex*; *Gender relations in human trafficking*; *Workers and forced labor*; and *Human rights in human trafficking*. The perhaps more interesting findings were that *Guardian* commenters did not prefer to discuss *victims* of human trafficking, not even in an equal level with the journalists (Haynes, 2006) despite the scholars' assertions on how popular are the stories related to the victimization of vulnerable groups of people (Haynes, 2006). Also, the distinction between the topics of *prostitution* and *sex work and paid sex*, and the further discussion of voluntary versus involuntary sex work, indicates a need for researchers to perhaps pay more attention to specific conceptual definitions used by the public and journalists.

Taken as a whole these results suggest that neither of the two theoretical approaches of ‘agenda setting’ and the ‘active audience’ can on their own adequately explain the discussion between *The Guardian*’s journalist and commenters. There were some topic discussions that were better explained by ‘agenda setting’ (the four converging ones) and some that are better explained by an ‘active audience’ approach. In the case of *The Guardian*, journalists and their editors set the agenda about online discussions on human trafficking, and this agenda setting is reflected in the four discussion topics that were preferred equally by journalists and readers. But this agenda setting was limited, as readers preferred to discuss three topics that were not preferred by journalists, and readers did not prefer to discuss four other topics that were preferred by journalists. Theories of active audiences help us to understand these seven topics (or subtopics within the topic of human trafficking). The two theories are of course not mutually exclusive: journalists do set the agenda for public discussions of human trafficking, but audiences can actively and creatively interpret what they are reading, and through comment platforms potentially change the direction of the discussion and the content that is read by a large numbers of viewers.

There are several limitations of the present study that should be mentioned. The fact that the analysis is based only on *The Guardian* limits the generalizability of our findings. Our results might have been different if we had analyzed articles and comments from a different newspaper or if we had included multiple online newspapers. Our analysis is also limited to the years 2009–2014. The landscape might have been different in the addition of articles from other years. As a follow-up study, it would also be interesting to examine whether journalists in 2015 covered topics raised by commenters in previous years. A recent case study examining the influence of Facebook audience participation on the news agenda revealed a positive correlation between stories discussed on the Rachel Maddow Show’s Facebook page and the subsequent airing of stories on television (Jacobson, 2013). An analysis along these lines could also provide some insight into whether and to what extent there is any ongoing dialogue between journalists and commenters on the topic of human trafficking. Finally, from the present study, there were a number of articles excluded either because they did not allow comments on the respective webpage (154 articles), or because they did not have sufficient number of comments to be included in our data set (61 articles that had only 0–3 comments). It will be interesting in the future to examine the emerged topics from both of these categories, given that a larger data set from more years and/or multiple newspaper sources will be added.

Still, at a minimum, our present study demonstrates that topic extraction tools can be used for research on media coverage of crime, and in this case specifically on the relations between media coverage of human trafficking, readers’ reactions to this coverage, and the discussions that result from online interactions between journalists and their readers. Also, the exploration and identification of how human trafficking is portrayed by the media, and how the public perceives and reacts to these depictions, provides a significant platform of information that can assist in formulating cohesive human trafficking policies. Farrell and Fahy’s (2009) research on public frames on human trafficking and policy responses in the USA, showed that public framing of trafficking has changed over time so as to reflect the political prioritization of each period. At the same time, the frames through which problems are portrayed and understood shape the related policy responses. Therefore, when human trafficking was framed as a humans rights issue in the 1990s in the USA, policies were found to be supportive of the victims of human trafficking, whereas at the

turn of the century and even more so after 9/11 human trafficking was redefined as a ‘crime problem with national security implications’ which demanded criminal justice and national security responses (Farrell & Fahy, 2009, p. 623). Taking it a step further, the introduction of the active audience’s participation, as analyzed in our study, shows how the examination of the discussion between journalists and audiences has the potential to redefine the public perception on the types of human trafficking, clarify the differences among them and draw attention to the necessity of different policy reactions to each of the human trafficking types and the – often conflated with the human trafficking issues – voluntary prostitution and sex working.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

- Aronowitz, A. A. (2009). *Human trafficking, human misery: The global trade in human beings*. Westport, CT: Praeger Publishers.
- Bastos, M. T., & Puschmann, C. (2013). *GuardianR: Guardian Api wrapper*. London: CRAN. Retrieved from <http://cran.r-project.org/web/packages/GuardianR/>
- Berry, M. W., Dumais, S. T., & O’Brien, G. W. (1995). Using linear algebra for intelligent information retrieval. *SIAM Review*, 37(4), 573–595.
- Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent Dirichlet allocation. *Journal of Machine Learning Research*, 3, 993–1022.
- Brysk, A., & Choi-Fitzpatrick, A. (Eds.). (2012). *From human trafficking to human rights: Reframing contemporary slavery*. Philadelphia: University of Pennsylvania Press.
- Burstein, P. (2003). The impact of public opinion on public policy: A review and an agenda. *Political Research Quarterly*, 56(1), 29–40.
- Busza, J. (2004). Sex work and migration: The dangers of oversimplification-a case study of Vietnamese women in Cambodia. *Health and Human Rights*, 7(2), 231–249.

- Cai, D., Mei, Q., Han, J., & Zhai, C. (2008, October 26–30). Modeling hidden topics on document manifold. In *Proceedings of the 17th ACM conference on information and knowledge management (CIKM) Napa Valley, CA* (pp. 911–920). New York, NY: ACM.
- Chang, G., & Kim, K. (2007). Reconceptualizing approaches to human trafficking: New directions and perspectives from the field(s). *Stanford Journal of Civil Rights and Civil Liberties*, 3(2), 1–28. Retrieved from <http://ssrn.com/abstract=1051601>
- Chuang, J., Wilkerson, J. D., Weiss, R., Tingley, D., Stewart, B. M., Roberts, M. E., ... Heer, J. (2014, December). *Computer-assisted content analysis: Topic models for exploring multiple subjective interpretations*. Conference on Neural Information Processing Systems (NIPS), Workshop on Human-Propelled Machine Learning, Montreal, Canada.
- Coleman, R., McCombs, M., Shaw, D., & Weaver, D. (2009). Agenda setting. In T. Hanitzsch & K. Wahl-Jorgensen (Eds.), *Handbook of journalism studies* (pp. 147–160). New York, NY: Routledge.
- Cormen, T. H., Leiserson, C. E., & Rivest, R. L. (1996). *Introduction to algorithms*. Cambridge, MA: The MIT Press. 329–355.
- Dalton, R. J. (2013). *Citizen politics: Public opinion and political parties in advanced industrial democracies*. Los Angeles, CA: CQ Press.
- Danailova-Trainor, G., & Belser, P. (2006). *Globalization and the illicit market for human trafficking: An empirical analysis of supply and demand*. International Labour Office InFocus Programme on promoting the declaration on fundamental principles and rights at work. Retrieved July 4, 2015, from http://natlex.ilo.ch/wcmsp5/groups/public/—ed_norm/—declaration/documents/publication/wcms_081931.pdf
- Deerwester, S. C., Dumais, S. T., Landauer, T. K., Furnas, G. W., & Harshman, R. A. (1990). Indexing by latent semantic analysis. *Journal of the American Society for Information Science*, 41(6), 391–407.
- Deuze, M. (2003). The web and its journalism: Considering the consequences of different types of newsmedia online. *New Media & Society*, 5(2), 203–230.
- DiMaggio, P., Nag, M., & Blei, D. (2013). Exploiting affinities between topic modeling and the sociological perspective on culture: Application to newspaper coverage of US government arts funding. *Poetics*, 41(6), 570–606.
- Ditmore, M. H. (2011). *Prostitution and sex work*. Santa Barbara, CA: Greenwood.
- Doezema, J. (1998). Forced to choose: Beyond the voluntary vs. forced prostitution dichotomy. In K. Kempadoo & J. Doezema (Eds.), *Global sex workers: Rights resistance and redefinition* (pp. 34–50). New York, NY: Routledge.
- Doezema, J. (1999). Loose women or lost women? The re-emergence of the myth of white slavery in contemporary discourses of trafficking in women. *Gender Issues*, 18, 23–50.
- Doezema, J. (2002). Who gets to choose? Coercion consent and the UN 92 trafficking protocol. *Gender & Development*, 10(1), 20–27.
- Domingo, D., Quandt, T., Heinonen, A., Paulussen, S., Singer, J., & Vujnovic, M. (2008). Participatory journalism practices in the media and beyond. *Journalism Practice*, 2(3), 326–342.
- Dowler, K., Fleming, T., & Muzzatti, S. L. (2006). Constructing crime: Media crime and popular culture. *Canadian Journal of Criminology and Criminal Justice*, 48(6), 837–850.
- Dumais, S. T. (2004). Latent semantic analysis. *Annual Review of Information Science and Technology*, 38(1), 188–230.
- Evangelopoulos, N., Zhang, X., & Prybutok, V. (2012). Latent semantic analysis: Five methodological recommendations. *European Journal of Information Systems*, 21(1), 70–86.
- Farley, M. (2006). Prostitution, trafficking, and cultural amnesia: What we must not know in order to keep the business of sexual exploitation running smoothly. *Yale Journal of Law and Feminism*, 18, 109–144.
- Farrell, A., & Fahy, S. (2009). The problem of human trafficking in the US: Public frames and policy responses. *Journal of Criminal Justice*, 37(6), 617–626.
- Farrell, A., McDevitt, J., & Fahy, S. (2010). Where are all the victims? *Criminology & Public Policy*, 9(2), 201–233.

- Foltz, P. W., Kintsch, W., & Landauer, T. K. (1998). The measurement of textual coherence with latent semantic analysis. *Discourse Processes*, 25(2–3), 285–307.
- Gallagher, A. (2001). *Human rights and human trafficking: A reflection on the influence and evolution of the U.S. trafficking in persons*. Report at Brysk, A., & Choi-Fitzpatrick, A. (Eds.). (2012). *From human trafficking to human rights: Reframing contemporary slavery*. Philadelphia: University of Pennsylvania Press.
- Ghanem, S. (1997). Filling in the tapestry: The second level of agenda setting. In M. McCombs, D. Shaw, & D. Weaver (Eds.), *Communication and democracy: Exploring the intellectual frontiers in agenda setting theory* (pp. 3–14). Mahwah, NJ: Lawrence Erlbaum Associates.
- Graham, T., & Wright, S. (2015). A tale of two stories from ‘below the line’ comment fields at the guardian. *The International Journal of Press/Politics*, 20(3), 317–338.
- Greer, C. (2007). News media victims and crime in Victims crime and society davies. In P. Davies, P. Francis, & C. Greer (Eds.), *Victims, crime and society* (pp. 20–49). London: SAGE.
- Gulati, J. (2010). *Media representation of human trafficking in the United States, Great Britain and Canada*. Social Science Research Network. Retrieved April 22, 2014, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1633574
- Gulati, J. (2011). News frames and story triggers in the media’s coverage of human trafficking. *Human Rights Review*, 12(3), 363–379.
- Gulcur, L., & Ilkcaracan, P. (2002). The ‘Natasha’ experience: Migrant sex workers from the former Soviet Union and Eastern Europe in Turkey. *Women’s Studies International Forum*, 25(4), 411–421.
- Haas, T. (2005). From ‘public journalism’ to the ‘public’s journalism’? Rhetoric and reality in the discourse on weblogs. *Journalism Studies*, 6(3), 387–396.
- Haas, T. (2007). *The pursuit of public journalism: Theory, practice, and criticism*. New York, NY: Routledge.
- Haynes, D. F. (2006). (Not) found chained to a bed in a brothel: Conceptual, legal, and procedural failures to fulfill the promise of the Trafficking Victims Protection Act. *Georgetown Immigration Law Journal*, 21, 337–381.
- Hermida, A., Domingo, D., Heinonen, A., Paulussen, S., Quandt, T., Reich, Z., & Vujnovic, M. (2011, April 1–2). *The active recipient: Participatory journalism through the lens of the Dewey-Lippmann debate*. Paper presented to International Symposium on Online Journalism 2011, University of Texas, Austin, Austin.
- Hermida, A., & Thurman, N. (2007, March 30–31). *Comments please: How the British news media are struggling with user-generated content*. Paper presented in 8th international symposium on online journalism 2007, University of Texas, Austin.
- Höijer, B. (2004). The discourse of global compassion: The audience and media reporting of human suffering. *Media, Culture & Society*, 26(4), 513–531.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288.
- Immordino, G., & Russo, F. F. (2015). Laws and stigma: The case of prostitution. *European Journal of Law and Economics*, 40, 209–223.
- Jacobson, S. (2013). Does audience participation on Facebook influence the news agenda? A case study of the Rachel Maddow show. *Journal of Broadcasting & Electronic Media*, 57(3), 338–355.
- Jahic, G., & Finckenauer, J. O. (2005). Representations and misrepresentations of human trafficking. *Trends in Organized Crime*, 8(3), 24–40.
- Jeffreys, S. (1999). Globalizing sexual exploitation: Sex tourism and the traffic in women. *Leisure Studies*, 18, 179–196.
- Johnston, A., Friedman, B., & Shafer, A. (2014). Framing the problem of sex trafficking: Whose problem? What remedy? *Feminist Media Studies*, 14(3), 419–436.
- Jönsson, A. M., & Örnebring, H. (2011). User-generated content and the news: Empowerment of citizens or interactive illusion? *Journalism Practice*, 5(2), 127–144.
- Kelly, L. (2003). The wrong debate: Reflections on why force is not the key issue with respect to trafficking in women for sexual exploitation. *Feminist Review*, 73, 139–144.

- Kiousis, S., Mitrook, M., & Wu, X. (2006). First- and second-level agenda-building and agenda-setting effects: Exploring the linkages among candidate news releases media coverage and public opinion during the 2002 Florida gubernatorial election. *Journal of Public Relations Research*, 18(3), 265–285.
- Kulkarni, S., Apte, U., & Evangelopoulos, N. (2014). The use of latent semantic analysis in operations management research. *Decision Sciences*, 45(5), 971–994.
- Laczko, F., & Gramegna, M. A. (2003). Developing better indicators of human trafficking. *Brown Journal World Affairs*, 10, 179–194.
- Landauer, T. K. (2002). On the computational basis of learning and cognition: Arguments from LSA. *Psychology of Learning and Motivation*, 41, 43–84.
- Lee, E. J. (2012). That's not the way it is: How user-generated comments on the news affect perceived media bias. *Journal of Computer-Mediated Communication*, 18(1), 32–45.
- Lee, E. J., & Jang, Y. J. (2010). What do others' reactions to news on Internet portal sites tell us? Effects of presentation format and readers' need for cognition on reality perception. *Communication Research*, 37, 825–846.
- Liebes, T., & Katz, E. (1986). Patterns of involvement in television fiction: A comparative analysis. *European Journal of Communication*, 1(2), 151–171.
- Limoncelli, S. (2010). *The politics of trafficking: The first international movement to combat the sexual exploitation of women*. Stanford, CA: Stanford University Press.
- Lu, Y., Duan, H., Wang, H., & Zhai, C. (2010, August). Exploiting structured ontology to organize scattered online opinions. In *Proceedings of the 23rd international conference on computational linguistics, Beijing, China* (pp. 734–742). Beijing: Association for Computational Linguistics, Chinese Information Processing Society of China (CIPS).
- Manning, C. D., Raghavan, P., & Schütze, H. (2008). *Introduction to information retrieval 1: 6*. Cambridge: Cambridge University Press.
- Marchionni, D. M. (2012). International human trafficking: An agenda-building analysis of the US and British press. *International Communication Gazette*, 74(2), 145–158.
- Mayes, I. (2004, July 10). A girdle round the earth. *The Guardian*. Retrieved December 2014, from <http://www.guardian.co.uk/comment/story/0,,1258030,00.html>
- McCarthy, L. A. (2014). Human trafficking and the new slavery. *Annual Review of Law and Social Science*, 10(1), 221–242.
- McCombs, M. (1997). New frontiers in agenda setting: Agendas of attributes and frames. *Mass Communication Review*, 24(1–2), 32–52.
- McCombs, M., & Shaw, D. (1972). The agenda-setting function of the mass media. *Public Opinion Quarterly*, 36(2), 176–187.
- McCombs, M., & Shaw, D. (1993). The evolution of agenda-setting research: Twenty-five years in the marketplace of ideas. *Journal of Communication*, 43(2), 58–67.
- Murray, A. (1998). Debt-bondage and trafficking: Don't believe the hype. In K. Kempadoo & J. Deozema (Eds.), *Global sex workers: Rights resistance and redefinition* (pp. 413–426). New York, NY: Routledge.
- Page, B. I., & Shapiro, R. Y. (1983). Effects of public opinion on policy. *American Political Science Review*, 77(1), 175–190.
- Pajnik, M. (2010). Media framing of trafficking. *International Feminist Journal of Politics*, 12(1), 45–64.
- Ruiz, C., Domingo, D., Micó, J. L., Díaz-Noci, J., Masip, P., & Meso, K. (2011). Public sphere 2.0? The democratic qualities of citizen debates in online newspapers. *International Journal of Press/Politics*, 16(4), 463–487.
- Salton, G. A. (1975). Vector space model for automatic indexing. *Communications of the ACM*, 18(11), 613–620.
- Saussure, F. D. (1959). *Course in general linguistics* (C. Bally & A. Sechehay, Eds., W. Baskin, Trans.) New York, NY: Philosophical Library.
- Steyvers, M., & Griffiths, T. (2007). Probabilistic topic models. *Handbook of Latent Semantic Analysis*, 427(7), 424–440.

- Surette, R. (1998). *Media, crime, and criminal justice: Images and realities* (2nd ed.). New York, NY: Wadsworth.
- Thurman, N. (2006, April). *Participatory journalism in the mainstream: Attitudes and implementation at British news websites*. Proceedings of 7th international symposium on online journalism, Austin, TX, USA.
- Thurman, N. (2007). The globalization of journalism online: A transatlantic study of news websites and their international readers. *Journalism*, 8(3), 285–307.
- Thurman, N. (2008). Forums for citizen journalists? Adoption of user-generated content initiatives by online news media. *New Media and Society* 10(1), 139–157.
- Thurman, N., & Lupton, B. (2008). Convergence calls: Multimedia storytelling at British news websites. *Convergence*, 14(4), 439–455.
- United Nations. (2000). United Nations protocol to prevent, suppress, and punish trafficking in persons, especially women and children, supplementing the United Nations convention against transnational organized crime, Article 3 (a–d), G.A. res. 55/25, annex II, 55 U.N. GAOR Supp. (No. 49) at 60, U.N. Doc. A/45/49 (Vol. I).
- Van Aelst, P., & Walgrave, S. (2011). Minimal or massive? The political agenda-setting power of the mass media according to different methods. *The International Journal of Press/Politics*, 116(3), 295–313.
- Van Dijck, J. (2009). Users like you? Theorizing agency in user-generated content. *Media, Culture & Society*, 31(1), 41–58.
- Walkowitz, J. R. (1992). *City of dreadful delight: Narratives of sexual danger in late Victorian London*. Chicago, IL: University of Chicago Press.
- Waller, C. S. (2010). Media representation and human trafficking: How anti-trafficking discourse affects trafficked persons. *Second annual interdisciplinary conference on human trafficking* (p. 6). Lincoln: University of Nebraska.
- Wanta, W., Golan, G., & Lee, C. (2004). Agenda setting and international news: Media influence on public perceptions of foreign nations. *Journalism & Mass Communication Quarterly*, 81(2), 364–377.
- Wasileski, G., & Miller, M. J. (2012). Rethinking gender violence: Battered and trafficked women in Greece and the United States. In A. Brysk & A. Choi-Fitzpatrick (Eds.), *From human trafficking to human rights: Reframing contemporary slavery* (pp. 107–120). Philadelphia: University of Pennsylvania Press.
- Weitzer, R. (2007). The social construction of sex trafficking: Ideology and institutionalization of a moral crusade. *Politics & Society*, 35(3), 447–475.
- Winson-Geideman, K., & Evangelopoulos, N. (2013). Research in real estate 1973–2010: A three-journal comparison. *Journal of Real Estate Literature*, 21(2), 255–267.
- Wu, H. D., & Coleman, R. (2009). Advancing agenda-setting theory: The comparative strength and new contingent conditions of the two levels of agenda-setting effects. *Journalism & Mass Communication Quarterly*, 86(4), 775–789.