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Abstract

This study investigates the causes of fluctuations in public concern about immigration and contends that issues emphasized in media coverage explain these fluctuations. Drawing on agenda-setting research and theories about issue attributes, it is argued that media emphasis on aspects of immigration that are likely to be unobtrusive but with potentially concrete consequences for the public is likely to raise concern about immigration far more than unobtrusive but abstract issues. The analysis, based on public opinion data and newspaper articles on the topic of immigration to the U.K., shows that press emphasis on two unobtrusive but concrete issues within the theme of immigration—the economy and education—appears to increase concern about immigration; emphasis on more abstract issues evokes little reaction from the British public.

Immigration has become one of the most divisive issues facing developed democracies. Given the high levels of anti-immigration sentiment in many countries, a great deal of research has been devoted to understanding why some individuals are more positive about immigration than others (Sides & Citrin, 2007; Sniderman, Hagendoorn & Prior, 2004). These existing analyses tend to be based on cross-sectional surveys, short panels, or experiments. However, over-time measures indicate that considerable temporal variation exists in the levels of public concern about immigration.

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Several studies have emphasized the key role played by media in moving public attitudes toward immigration, but most of these have been unable to analyze changes outside of an experimental context or only cover very short periods because of limited data availability (Domke, McCoy & Torres, 1999; Dunaway, Goidel, Kirzinger &Wilkinson, 2011; Boomgaarden & Vliegenthart, 2009; Schemer, 2014; Schlueter and Davidov 2013). Thus, very little is known about the impact of media coverage of immigration on over-time dynamics of public concern about this issue. In particular, there is a need for understanding the multifaceted nature of the immigration theme in media coverage and the potentially differential effects of this coverage. Our argument builds on research in the area of attitude formation regarding immigration, research regarding the media's agenda-setting power, and the issue attribute theory to test agenda-setting hypotheses using over-time data on public opinion regarding immigration to the U.K. The combination of these strands of research leads us to the conclusion that much of the British public was unlikely to have had enough personal experience with the specific issues often raised about immigration for immigration to become of increasing personal concern but that media emphasis on particular issues within the general theme of immigration has led to immigration periodically becoming of concern to the general public.

Why the Public Becomes Concerned About Immigration

It has long been argued that the mass media are "stunningly successful" in determining what ordinary people think about (Cohen, 1963), and studies based on this public agenda-setting function of the media often show that most important issue assessments track the amount of media coverage of an issue (Funkhouser, 1973; McCombs & Shaw, 1972; Wanta & Ghanem, 2006). These results are connected to seminal research on how survey respondents answer questions about their key concerns, which indicates that many respondents give "top-of-the-head" replies based on what they have heard or discussed lately (Zaller, 1992). This, in turn, is likely to depend on what media outlets are covering. In the realm of immigration, existing research has built on this seminal work and hypothesized that the amount of news coverage of the theme of immigration is likely to explain fluctuations in public concern about immigration (Boomgaarden & Vliegenthart, 2009; Dunaway et al. 2011; Schlueter and Davidov 2013). In fact, however, this existing research indicates that media effects exist but are somewhat limited in size. Given that there are very clear fluctuations in public concern about immigration (as will be shown below), the first potential "culprit" that still must be examined is overall increasing or decreasing media attention to the

issue. Here we follow and thus replicate the classic agenda-setting assumption and expect that:

> H1: *Media emphasis on immigration is likely to increase public concern about immigration.*

Of potential relevance to explaining cross-time shifts in public opinion is the body of research that emphasizes the degree of obtrusiveness of an issue in understanding the media's agenda-setting power (Soroka, 2002a, 2002b; Walgrave, Soroka & Nuytemans, 2007). The main distinction here is between obtrusive and unobtrusive issues. Building on Zucker's (1978) "obtrusiveness" hypothesis, for instance, Soroka and colleagues contend that the more obtrusive an issue is—i.e., the more likely individuals experience it directly—the less potential there is for media effects on public opinion. In contrast, unobtrusive issues are those that cannot be directly observed by the public, and in the realm of unobtrusive issues, the media have far more power in setting the public's agenda.

Within the category of unobtrusive issues, we can also distinguish between the more concrete versus the more abstract issues. Some issues are "concrete with tangible consequences for the population" (Walgrave et al. 2007, p. 820) but are unobtrusive in that most of the public will not have actually had personal experience with the issue being emphasized. Without this first-hand experience and the ability to form an opinion on this basis, the public becomes more open to media influence when an issue with concrete public consequences is emphasized. Governmental issues, which often feature in media coverage, on the other hand, are argued to be unobtrusive but fairly abstract and are less likely to affect the public's agenda than many other issues.

Existing research on media coverage of immigration points to a few key specific issues within the theme of immigration that receive particularly high attention in many countries: the economy, crime/security, and government policymaking (Balch & Balabanova, 2011; Caviedes, 2015; Entman, 1992, 1994; Kaye, 2001; Matthews & Brown, 2012; Poole, 2006; Powell, 2011; Quinsaat, 2014; Romer, Jamieson, & de Coteau, 1998). We thus expect similar issues to appear in the news about immigration in the U.K., but we also contend that there is likely to be variation in the emphasis of these issues over time.

For many of the specific issues emphasized within the media's coverage of the general theme of immigration, the vast majority of the British public is unlikely to have direct experience with these issues but will likely see potentially strong "tangible consequences for the population" as a whole. This is true in the case of emphasis on the effects of migration on the economy and crime (or security). Research on public attitudes to immigration has highlighted the limited effects of direct experience with either the economic or security aspects of immigration (Sniderman, Hagendoorn & Prior, 2004) but

illustrates strong public concern about these aspects of immigration nonetheless. This may be because media coverage that invokes themes of crime or the economy in the context of immigration provides compelling arguments by emphasizing particularly salient attributes of immigration. As argued by McCombs (2014), it is not only (and sometimes not even) emphasis on an object that increases public concern but it is rather when a particular attribute of the object is emphasized, public attention to the issue as a whole increases. Our study thus addresses attribute agenda-setting, the second level of agenda-setting, in that it focuses on the distinct attributes that are connected to immigration but distinguishes these attributes by issue characteristics. We contend that it is likely that media emphasis on unobtrusive but potentially concrete issues within the general theme of immigration is driving changes in public concern about immigration in the U.K. Our second and third hypotheses are thus:

> *H2: Media emphasis on unobtrusive issues with clear potentially tangible consequences, like the economic and security effects of immigration, should increase public concern about immigration.*
>
> *H3: Media emphasis on unobtrusive but abstract issues, such as governmental processes and policymaking, is likely to have little impact on public concern about immigration.*

An important factor to take into consideration in our analyses is the potentially differential effect of left- versus right-wing newspapers on public concern about immigration. For instance, Fryberg et al (2012) find that the political ideology of newspapers influences how those papers cover immigration. Similarly, Kaye (2001) finds more negative stories about asylum-seekers in *The Times*, the *Telegraph*, and the *Daily Mail* (all considered to be right-wing newspapers in the U.K.) compared with the left-leaning *Guardian*. The more negative approach to immigration found in right-wing papers is more likely to have an impact on shifting levels of concern about immigration for three reasons: (1) left-wing paper readership is lower;[1] (2) negative news appears to have stronger effects on public opinion than positive news (de Vreese, Boomgaarden, & Semetko, 2011; Soroka, 2006); and (3) it is likely that readers of right-wing newspapers in particular are more prone to mention immigration as an important concern. We thus expect that:

> *H4: Emphasis on unobtrusive issues with clear potential tangible consequences like the economic and security effects of immigration within right-wing press coverage should have a stronger effect on increasing public concern about immigration than left-wing press coverage of similar issues.*

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[1]Readership of newspapers generally considered to be left-leaning (*The Guardian/The Observer* and *Daily Mirror/Sunday Mirror*) in 2013 was approximately 13 million; readership of newspapers generally considered to be right-leaning (*The Sun, Daily Mail/The Mail on Sunday*, *The Daily Telegraph/The Sunday Telegraph*, *The Times/The Sunday Times*) was almost 35 million (see http://www.pressgazette.co.uk/uk-newspapers-ranked-total-readership-print-and-online/, last accessed 18 August 2016).

Public Concern About Immigration in Britain

To measure public concern about immigration in Britain, we use the Ipsos Mori monthly "Most Important Issue" (MII) item (available from http://www.ipsos-mori.com/researchspecialisms/socialresearch/specareas/politics/trends.aspx#issues, last accessed 26 June 2014), which captures monthly levels of concern about a range of social and political issues.[2] Some may question the extent to which this item captures public *concern* about any particular issue rather than salience. However, Jennings (2009) contends that responses to MII in the U.K. are correlated strongly enough with "immigration mood" to warrant concluding that the former is measuring attitudes to immigration policy. To validate the use of the MII question as a proxy measure for immigration problem perceptions, we cross-checked our measure by means of analyzing a number of different U.K. surveys that were available throughout our research period and that include both an MII question and other immigration attitude variables. Specifically, we compare the means of responses on immigration attitude items tapping into different aspects (such as culture, crime, or the economy/welfare) between those respondents who reported immigration as the most important issue and those who did not. Overall, as shown in Table 1, we find that responses are significantly more negative among those who see immigration as the most important issue. That is, people who identify immigration as one of the most important issues facing the country are likely to also be worried about very different aspects related to the issue of immigration. We take responses to this item as an indicator of cross-time fluctuations in levels of public concern about immigration (see also Boomgaarden & Vliegenthart, 2009 for a similar approach regarding the German case).

Figure 1 shows responses to the MII question since the mid-1990s, comparing the percent who give answers that Ipsos Mori classify into an "immigration/race relations" category with other prominent concerns—crime and the economy. As shown in Figure 1, despite increasing concerns about asylum-seekers in the 1990s (Kaye, 2001), issues of immigration and race relations rarely made it to the top of most people's list of major concerns until around the turn of the century. Since then, there have been several periods when a third or more of survey respondents name this as one of the most important concerns, with the figure at times approaching 50%. Thus, it seems that this is a theme that is persistently at the top of many people's list of concerns in the modern day.

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[2]Ipsos MORI's Issues Index is conducted monthly via face-to-face interviews with a representative quota sample of approximately 1,000 adults aged 18+ across Great Britain. The questions are spontaneous—i.e., respondents are not prompted with any answers. (see, for instance, https://www.ipsos-mori.com/research-publications/researcharchive /3763/Concern-about-the-EU-reaches-secondhighest-recorded-level.aspx, last accessed 19 August 2016).

Table 1
Validation of MII responses

| Immigration survey items | Immigration most important issue | | | | |
| | Yes | | No | | |
	M	SD	M	SD	ANOVA
2010					
Immigration – disgusted, yes (1) or no (2) (N = 1,935)	0.48	0.50	0.21	0.41	$F = 98.27, p < .001$
Immigrants increase crime rates, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree (N = 1,498)	2.34	1.00	2.95	1.09	$F = 57.84, p < .001$
Immigrants take jobs, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree (N = 1,014)	1.97	1.05	2.73	1.27	$F = 46.51. p < .001$
2005					
Immigrants take jobs, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) Strongly disagree (N = 3,550)	2.49	1.10	2.99	1.13	$F = 100.16, p < .001$
Immigrants – increase crime rate, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree (N = 3,196)	2.13	0.94	2.81	1.10	$F = 135.66, p < .001$
Immigrants – good for economy, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree (N = 3,195)	3.53	0.88	3.02	0.97	$F = 97.48, p < .001$
2001					
Immigrants – increase crime rates, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree (N = 1,962)	2.10	1.30	2.85	1.08	$F = 10.06, p < .01$
Immigrants-good for economy, (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree (N = 1,940)	3.67	1.28	3.23	0.97	$F = 4.29, p < .05$
1994					

(continued)

Table 1
Continued

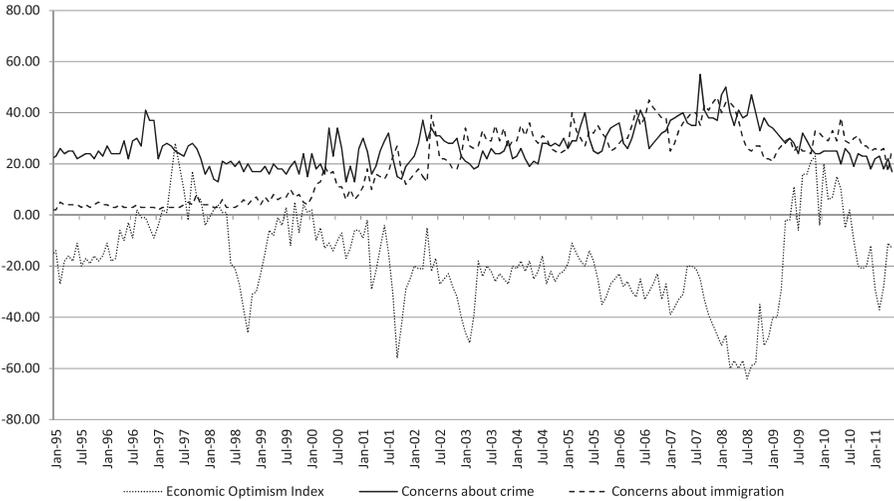| Immigration survey items	Immigration most important issue				
	Yes		No		
	M	*SD*	*M*	*SD*	ANOVA
Foreigners – reduce education level, (1) tend to agree, (2) tend to disagree (N = 1,292)	1.25	0.44	1.67	0.47	$F = 22.57, p < .001$
Foreigners – exploit social welfare, (1) tend to agree, (2) tend to disagree (N = 1,292)	1.00	0.00	1.36	0.48	$F = 15.14, p < .001$
Foreigners – increase unemployment, (1) tend to agree, (2) tend to disagree (N = 1,316)	1.15	0.36	1.35	0.48	$F = 4.80, p < .05$
1997					
Attitudes toward minorities: abuse social system, (1) tend to agree, (2) tend to disagree (N = 12,855)	1.10	0.30	1.41	0.49	$F = 40.86, p < .001$
Attitudes toward minorities: keep economy going, (1) tend to agree, (2) tend to disagree	1.71	0.46	1.60	0.49	$F = 4.82, p < .05$
Attitudes toward minorities: increase unemployment, (1) tend to agree, (2) tend to disagree (N = 13,626)	1.18	0.39	1.48	0.50	$F = 38.15, p < .001$
Immigrants: send back if offenses, (1) tend to agree, (2) tend to disagree	1.07	0.26	1.24	0.43	$F = 18.22, p < .001$

Note: These data come from the 2010 British Election Study, pre-post mail survey, 2005 British Election Study, pre-panel mail survey, 2001 British Election Survey cross section, Eurobarometer 41.1 (1994, U.K. only), Eurobarometer 47.1 (1997, U.K. only).

Also important to note in Figure 1, however, is that there is clear fluctuation in responses. Even before 2000, there are periodic sharp increases in the percentage identifying immigration or race relations as an important concern. The era since the turn of the century has seen even more dramatic shifts, lurching at times from 20% to 40% naming this as the most important concern over very short periods. The key question we aim to answer is whether variation in the issues covered by the media within the theme of immigration can explain these fluctuations.

Data and Measures (Independent Variables)

We argue that news coverage of immigration has an impact on public concern about immigration. Our key media-related independent variables are (a) the

Figure 1

Public concern about immigration, crime, and the economy, 1985–2011

Source: Ipsos/Mori, http://www.ipsos-mori.com/researchspecialisms/socialresearch/specareas/politics/trends.aspx#issues, last accessed 11 August 2014

amount of news on the general theme of immigration and (b) the specific issues emphasized within this theme. For both measures, we selected stories that focus on the general theme of immigration in the four U.K. national newspapers that are available electronically since the mid-1990s (note that only *The Times* and *The Guardian* have made their content available electronically since the 1980s): the *Daily Mail*, the *Daily Mirror*, *The Times*, and *The Guardian*.[3] Thus, the analysis of newspaper content includes two of the three most widely circulated tabloid newspapers in the U.K. both historically and in the modern day (the left-leaning *Daily Mirror* and the right-leaning *Daily Mail*), as well as the main left-leaning and right-leaning broadsheets in the U.K. (*The Guardian* and *The Times*). Our period ranges from January 1995 to May 2011.

Note that we are unable to analyze the impact of televised news content on concern about immigration, as electronic copies of transcripts of U.K. news broadcasts are unavailable; however, existing research argues that newspapers are at times more influential than TV in the process of public opinion formation (McCombs, 2014), while Vliegenthart and Walgrave (2008) demonstrate the importance of newspapers in intermedia agenda-setting processes.

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[3]We used the following search string in LexisNexis: immigr! OR migrat! OR migrant! OR asylum OR multicult! OR ethnic! OR refugee! OR deport! OR racism! OR racist! OR racial! OR ("race relations") OR (race w/5 discrim!) OR naturaliz! OR naturalis! AND NOT (letter! OR opinion OR editorial! OR fashion OR bird! OR TV! OR sport! OR music! OR DVD!).

Figure 2

Visibility of immigration stories and public concern about immigration, 1985–2011.
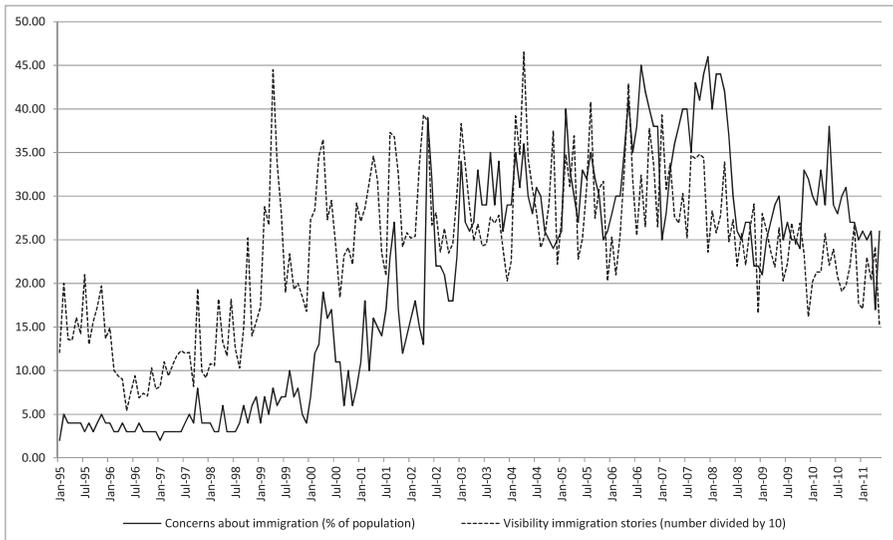
Note: The number of articles on immigration has been divided by 10 for the purposes of constructing this graph

While we acknowledge the potential importance of television news coverage (and in more recent years, online news), given our interest in explaining dynamics over long periods, we rely on newspaper coverage.

Figure 2 demonstrates the cross-time visibility of the theme of immigration in our four newspapers. Casual inspection of this figure indicates that there might be some correlation between news coverage of and public concern about immigration. Below we provide a more systematic analysis of the relationship between visibility of immigration news and concern about immigration.

Turning now to the content of the immigration news stories, we use computer-assisted content analysis to derive the specific issues emphasized in newspaper stories about the theme of immigration. We began our content analysis by first identifying the most frequently used words in the corpus of stories about immigration (omitting stopwords). Four coders then indicated for each word whether it was related to immigration or could be relevant in the context of immigration, starting with the most frequent word. For the first 500 words that each coder indicated as relevant, we selected those that were mentioned by at least three of the four coders, resulting in a list of 350 words. For each word, we searched the number of occurrences per news story and ran a factor analysis with VARIMAX rotation to determine word-clusters that might be indicative for a certain topic. Words that jointly load high on a

factor co-occur more often than one would expect based on chance, and those "clusters" of words are argued to represent an issue of focus for the news story (for a similar approach, see Hellsten, Dawson & Leydesdorff, 2010). Based on eigenvalues, scree plots, and the interpretation of the word-clusters, we identified the top five factors that can be interpreted as coherent issues. Jointly, they explain 10% of the variance in word use. An issue is considered to be present in a story if at least three of the words loading on a given factor (>0.20) occur in the story. We outline the five issues below.

We expected three key issues to emerge from stories within the general theme of immigration: the economy, crime/security, and government policy-making. In fact, the first issue to emerge is related to the legal processes surrounding immigration and asylum, including keywords such as appeal, application, asylum, convention, court, decision, department, deportation, home, justice, law, leave, Lord, order, person, secretary, seekers, state, and tribunal. This issue appears in some ways to tap into the government/policy-making issue discussed above. Another issue to emerge as expected was crime, which included clustered words such as arrested, association, crime, force, inquiry, investigation, officer, officers, police, rights, and service. A third cluster of words pertained to the economy and included words such as agency, economy, employment, job, jobs, Polish, skills, staff, work, workers, and working.[4]

An unexpected issue emerged within the top five factors and was related to foreign wars and the resulting rise in numbers of refugees to the U.K. and other countries. Words included in this topic were army, campaign, crisis, defence, fighting, force, forces, international, Kosovo, leaders, military, operation, president, soldiers, troops, war, and western. Though this issue is not emphasized in academic research on media coverage of immigration, in a quantitative computer-assisted content analysis such as the one used here, it might not be surprising that such an issue emerges. Because many of these stories are not likely to have direct bearing on the U.K. (note, for instance, that this cluster of words does not include "asylum" or "seekers," which appear within the first cluster), we do not expect them to be relevant to public concern about immigration to the U.K. To simplify our analyses and presentation of results, we thus do not include this issue in the analyses presented below.

Another unexpected issue to emerge among the top five word-clusters was one related to education, which included words such as education, parents, pupils, school, schools, and teachers. As with the foreign wars issue, in hindsight, the emergence of the education issue within the realm of immigration is

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[4]Note that news stories may include multiple topics. For instance, stories that emphasized crime may also have discussed legal processes. However, the correlations between topics emphasized are fairly low, ranging from 0.03 to 0.34.

not entirely surprising, given the considerable emphasis in the media on the impact of migrants on the number of school places available to natives and the difficulty of coping with increasing numbers of non-English speakers in schools (e.g., http://www.telegraph.co.uk/education/educationnews/ 8023243/Warning-over-primary-school-admissions-crisis.html, last accessed 30 October 2015). Evidence from Eurobarometer polls also indicates rising public concern about the impact of immigration on education systems in the U.K. (McLaren, 2015, Chapter 3). Unlike the foreign wars issue, however, the education issue *is* likely to prompt concern about the impact of immigration to the U.K. because the impact of immigration on education is generally a relatively unobtrusive issue, but it has potentially concrete, tangible implications for the general public. An examination of the education-related news stories indicates a range of material that fits into this category: some of the stories are about large numbers of students not speaking English; other stories appear to be about teaching multicultural topics in school; still others are about students getting visas to attend British universities and then staying on indefinitely (i.e., migrants getting into the country by the "backdoor"). Thus, it may be that these sorts of news stories foster fear of the British education system being used (and abused) by immigrants and, in turn, foster very serious worries about what this means for one's own children. However, indirect evidence points to the conclusion that despite increased immigration levels, it is still unlikely that the majority of U.K. citizens will have personally experienced problems stemming from immigrants in the school system. For instance, information regarding the percent of pupils who do not speak English would indicate that only a relatively small percentage of schools in most of the U.K. outside of London is affected by these widely reported problems (http://www.migrationwatchuk.org/briefingPaper/document/210, last accessed 30 October 2015). As this issue is likely to be unobtrusive but with potentially tangible implications for most people, we expect increased coverage of it to also increase concern about immigration to the U.K.[5]

Figure 3 illustrates the cross-time fluctuations in average visibility of these issues across our four newspapers since 1995, as a percentage of all immigration stories in each period (i.e., each month). The responses to the MII item also appear in these graphs. Clearly, legal processes related to immigration is the most visible issue since the late 1990s. Other prominent issues are crime and the economy. Throughout the period analyzed, crime is the more prominent of these two topics until around the middle of the past decade. Certainly, since the start of the economic crisis, coverage of the economic

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[5]It is possible that discourse on the impact of immigration on education contains some economic aspect in that immigration may be presented as resulting in more education-related costs. Given that education emerged as a separate factor in our factor analysis and that the correlation between coverage of economic and education issues is only 0.04, we treat education as a separate issue here.

Figure 3

Immigration issues and public concern about immigration, 1995–2011.
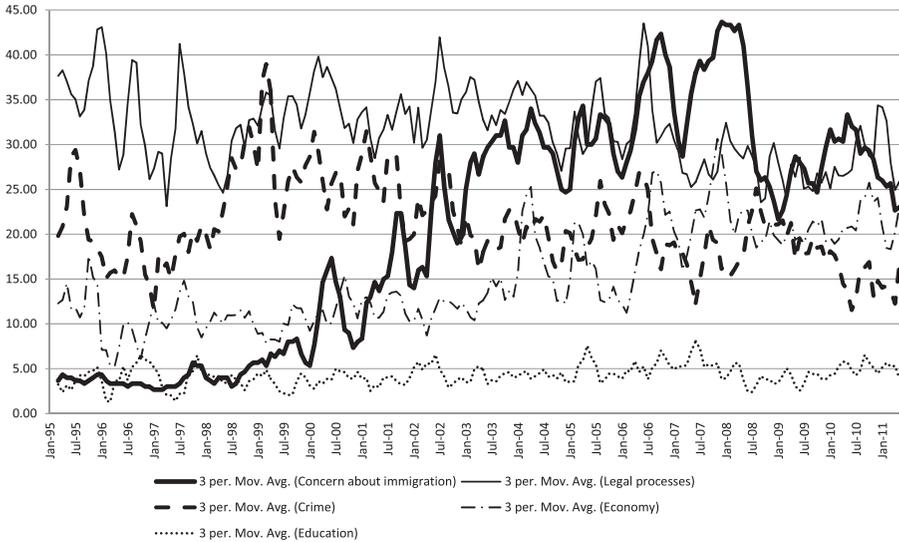
Note: lines other than the ''Concern about immigration'' line represent the average visibility of each issue across four newspapers (see paper text for further information) as a percent of all immigration stories each month

impact of immigration appears to have increased. Finally, the education issue shows the least prominence throughout the period, though with some fluctuation across time.

Our analysis below also includes the following control variables. First, existing research on attitudes to immigration has long hypothesized that anti-immigration sentiment should be higher when the mass public faces high levels of unemployment because the latter creates a greater sense of competition for resources than is the case when unemployment is relatively lower (Coenders, Lubbers, Scheepers, & Verkuyten, 2008; Coenders & Scheepers, 1998; Meuleman, Davidov, & Billiet, 2009); we thus control for unemployment rate (obtained from the OECD). To further account for economic conditions, we control for GDP/capita (quarterly data available from the OECD). In addition, fluctuations in concern about immigration depend on which other concerns are prominent for the public at any given time. If the economy in general is a prominent concern, attention to immigration may dwindle. During the period of our analysis, there were two themes that were also prominent besides immigration in the Ipsos Mori polls—the economy and crime. We thus control for concern about these—crime as expressed through the MII series, and economic concerns as expressed via Ipsos Mori's economic optimism index (see http://www.ipsos-mori.com/

researchpublications/researcharchive/43/Economic-Optimism-Index-EOI-State-of-the-Economy-1997-present.aspx?view=wide, last accessed 12 August 2014). We further control for the number of asylum applications lodged in each month; most of these data were made available by Will Jennings, with additional data obtained from Eurostat, which uses the same source as Jennings (the U.K. Home Office) to compile asylum-seeking statistics. Unfortunately, other immigration-related measures are not available on a monthly basis, and so, we control for the percent foreign in the U.K., available annually from the OECD. We also introduce a series of event-related dummy variables, such as a governing party dummy variable, race-related rioting dummy variables, and terrorist event dummy variables. All control variables are shown in Table 2, and a full list of events controlled for is available in online supplemental materials.

Analysis

Our argument in this article is that emphasis on some issues within the general theme of immigration will have a more powerful influence than emphasis on other issues and when those issues become more visible, they are able to prompt increased concern about immigration. For our analyses of this proposition, we draw on ARIMA (Auto-Regressive Integrated Moving Average) time-series techniques and Box–Jenkins transfer modeling (Clarke, Mishler & Whiteley, 1990; McCleary & Hay, 1980). Autoregressive orders (AR) represent the influence of previous values of the series on the current value, and moving averages (MA), which represent the influence of residuals from previous values on the current value, are used. Different models are tested, step-by-step adding the different independent variables to the univariate ARIMA models. This allows consideration of the effect of the individual variables, and also model improvements (indicated by log likelihood scores) as well as their goodness-of-fit (Akaike information criterion); thereby, different models can be directly compared.

As the first step, we test the univariate ARIMA model, not including any independent variables. The control variables and our media variables are added successively. An ARIMA model has as a prerequisite that all variables in the model have stationary means and variances. To test for stationarity, we conducted the most common test indicating the presence of a unit-root, the augmented Dickey–Fuller test (Enders, 2002). We also conducted tests for co-integration by testing for the stationarity of the linear combination of our MII measure and various issue indicators. Results showed that all dependent series were nonstationary and not co-integrated with immigration-related issues covered in the media. Therefore, we transformed them by differencing the values ($t - t$-1). Single differencing yielded stationary variables with the augmented

Table 2
Public Concern About Immigration Predictors, 1995–2011

Independent variables	Model 1: Base model		Model 2: Issues emphasized		Model 3: Left-wing papers (*Guardian* and *Mirror*)		Model 4: Right-wing papers (*Times* and *Mail*)	
	Coef.	t-value	Coef.	t-value	Coef.	t-value	Coef.	t-value
Control variables								
Unemployment, L1	1.17	2.69	0.79	2.31	1.21	2.71	0.72	2.25
GDP/capita, L1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asylum applications	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00
Percent foreign-born, L1	0.36**	0.12	0.31**	0.10	0.36**	0.13	0.28**	0.10
Economic perceptions, L2	0.05	0.04	0.06	0.04	0.05	0.04	0.07	0.04
Crime perceptions, L3	0.18*	0.07	0.16*	0.07	0.18*	0.07	0.14*	0.07
Labour Party Government, L2	1.64	3.65	1.20	3.30	1.45	3.52	1.11	3.64
Events, L1	-1.21	1.02	-1.05	1.03	-1.16	1.04	-1.05	1.02
Media variables								
Visibility of immigration news, L1	0.01*	0.01	0.01*	0.00	0.02	0.01	0.02*	0.01
Issues:								
Political/legal processes (F1, L1)	—	—	0.06	0.07	0.01	0.05	0.05	0.05
Crime (F3, L1)	—	—	-0.05	0.07	-0.03	0.06	-0.07	0.06
Economy (F4, L1)	—	—	0.17*	0.07	0.09	0.08	0.13*	0.06
Education (F5, L1)	—	—	0.35*	0.16	-0.01	0.17	0.30**	0.10
Constant	-0.20	0.18	-0.18	0.14	-0.21	0.18	-0.18	0.13
ARMA	—		—		—		—	
MA, L1	0.59***	0.06	0.68***	0.06	0.58***	0.06	0.68***	0.06
AIC	1106.28		1098.20		1111.65		1094.8	
Log-Likelihood	-541.14		-533.10		-539.82		-531.40	
LBQ	36.96		30.48		37.70		29.72	
N	195		195		195		195	

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$

Dickey–Fuller test suggesting no unit-root. Similarly, in later analysis, we differenced the various independent variables. The autocorrelation and partial autocorrelation functions for the transformed dependent variables suggest a moving average at lag 1, resulting in a (0,1,1) ARIMA model. The residual statistics indicate no significant autocorrelation in the residuals (Ljung–Box Q over 20 lags) as for all other models to follow. After reaching appropriate ARIMA specifications for our dependent variables, we added our independent variables to the model. We use lagged values with a maximum of three months and use fit statistics to assess the most appropriate lag length for each variable.

Results

After conducting the above-mentioned preliminary analyses, we next estimate a base model that includes key contextual control variables, along with the visibility of immigration-themed news. These results are shown in Model 1 of Table 2. Here and in all subsequent models, unemployment, GDP/capita, economic optimism, and the number of asylum applications do not appear to have significant effects on concern about immigration to the U.K. The above-mentioned events—race-related riots, terrorist attacks, announcements of census results, along with other events—also appear to make no difference to levels of concern about immigration to the U.K. Additionally, people do not appear to be significantly more concerned about immigration during periods of Labour Government. On the other hand, changes in the percentage of foreigners and increases in concern about crime are associated with increased concern about immigration. Table 2, in line with *H1*, also examines the potential effect of the visibility of immigration news on public concern about immigration. Increased coverage of immigration in British newspapers appears to be related to increased concern about immigration, except in the left-wing paper analysis (Model 3).

We next add relative visibility of each issue covered within the theme of immigration news, thus the monthly share of immigration news featuring the particular issue (economy, crime, education, and legal processes), to the above model. These results are shown in Model 2 of Table 2 and indicate that in a model with the above-mentioned issues included, the only issues covered in immigration-related news to emerge as statistically significant are the economy and education. The results suggest that a 1% increase in coverage of the economy issue is associated with an approximate increase of 0.17 in concern about immigration; similarly, a 10% increase in coverage of this issue would raise concern about immigration by approximately 1.7%. A hypothetical 10% increase in education-related issues would increase concern about immigration by 3.5%. Relating to *H2* and *H3*, we thus find in particular that two of the immigration-related issues with clear potentially tangible consequences–the

economy and education—are significantly related to changing levels of concern about immigration, whereas the unobtrusive but abstract issue of legal processes surrounding immigration had no impact on concern about immigration. On the other hand, it was expected that coverage of the unobtrusive but potentially tangible issue of crime within the context of immigration would also produce heightened concern about immigration, but this component of $H2$ was not supported.

$H4$ stipulated that different types of newspapers are expected to have differential effects on public concern about immigration. The final two columns of Table 2 summarize the results for left-leaning papers versus right-leaning papers. The results confirm our expectation formulated in $H4$—it appears to be the right-wing papers' coverage of economic issues and coverage of the impact of immigration on education that is increasing concern about immigration. Moreover—consistent with the four-paper analysis—though it is the least visible of our issues, an emphasis on education-related issues in the context of immigration particularly by right-wing newspapers may have a fairly powerful effect on concern about immigration. Crime and security-related issues do not appear to increase levels of concern about immigration even when presented in right-wing papers, though these issues are at times fairly visible. In terms of model fit, we see the best-performing model to be the one only including right-leaning newspapers (Model 4), but this is only marginally better than Model 2 including all papers. We turn to the conclusion to discuss the implications of our findings.

Conclusion

The media are often blamed for creating hysteria around particularly controversial topics like immigration. We argue that in certain areas of public discourse, the media are likely to have considerable agenda-setting power; this is particularly the case for issues with which individuals may have no personal experience but worry about the impact on themselves and/or fellow countrymen and –women. Our results indicate that for issues that appear to fit this category—the effect of immigration on the economy and on the education system—when the media emphasize these issues at increasing levels, it prompts a rise in public concern about immigration. On the other hand, coverage of the governmental and legal processes surrounding immigration appears to have no bearing on public concern about immigration. Somewhat surprisingly, emphasis on the potentially tangible but unobtrusive issue of immigration and crime appears to have little effect on levels of concern about immigration. Thus, it is possible that crime may be less tangible than education and economic-related issues, in that most individuals have children and worry about their education and most people have jobs that they also

worry about; however, most people will not have experienced crime (inflicted by immigrant-origin individuals or otherwise), and so, this issue is perhaps less tangible than that of education and the economy. It may also be the case that crime is covered so extensively in the right-wing press that the readers have become numb to the topic. Education, on the other hand, is mentioned more rarely and this, combined with its potential level of (un-)obtrusiveness, may explain its relatively powerful effects.

Our findings are consistent with a growing body of cross-time research in Europe and the United States that indicates that media coverage of immigration is important in explaining why some individuals appear to be more hostile to immigration than others (Boomgaarden & Vliegenthart, 2009; Schlueter & Davidov, 2013) and the growing body of experimental studies that show that the content of that coverage may be crucial to understand what moves public opinion on this issue (Igartua & Cheng, 2009; Valentino et al., 2013). Our study is the first to combine these two approaches to provide some indication of the impact of actual news content on representative samples of a wider population. More generally, our findings speak to the body of media agenda-setting research that contends that it is not only sheer visibility of a topic (or object) that matters for shifts in public attitudes toward that topic. Instead, it is compelling arguments or issue attributes that are key to understanding how an issue comes to the public's attention (McCombs, 2014).

Our results also highlight the potential importance of differentiating between news sources. In the case of the U.K., right-leaning papers appear to have considerable influence, both in terms of the amount of immigration coverage but also in terms of which attributes they emphasize. This implies that framing analyses that pool news sources may miss, or at least fail to fully grasp, the nature of important media effects.

Moreover, our findings imply that the public may be more concerned about some aspects of immigration than others, and yet most measures of attitudes to immigration do not take these different types of concerns into account. We therefore may not be accurately explaining the source of concern; this, in turn, has implications for policymakers who may be trying to tackle the inter-group tension that has arisen from mass migration to European countries like the U.K.

Our findings also imply that research that claims that immigration has been securitized in Europe (Huysmans, 1995) may be overstated. An important aspect of securitization is the impact of securitizing language on public opinion. Our results show that the most direct security-related issue found in press coverage of immigration—crime—has no influence on public attitudes to immigration to the U.K., despite receiving relatively extensive coverage at times, though it must also be acknowledged that the concept of securitization is expansive and could include, for instance, economic aspects as well.

There are several avenues for further research on this topic. First, our results for the various issue attributes within press coverage of immigration are likely to pertain primarily to issue attributes that receive sporadic coverage in the media. As noted by Boswell (2012), variability in what is covered in the media depends on information availability in differing issue areas. Future research could go further toward investigating the differential availability of information on media attention to sub-issues within immigration and, in turn, how this differential attention by the media affects public attention to and concern about the issue.

In addition, there is considerable scope for drilling down further into sub-issues (and attributes) contained within even the broad sub-issues we identified within media discourse on immigration. Research could, for instance, focus more specifically on asylum and/or refugees to understand in greater detail how this topic is framed and the impact of this on public attitudes to asylum-seekers and refugees. Similarly, as the strongest predictor of anti-immigration sentiment in survey research often appears to be cultural concerns, it would be instructive to understand how the media frame issues related to immigrant cultural integration and the impact of this on public concern about immigration. Overall, however, our analysis makes a significant contribution to understanding how issue attributes are likely to be affecting public concern about this controversial and divisive topic.

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