



A primary definer online: the construction and propagation of a think tank's authority on social media

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Abstract

Who has power in the construction of economic news in the United Kingdom? Are social media reshaping how this power is enabled? We examine the public Twitter interactions between journalists, political elites and, what is arguably the United Kingdom's most important think tank, the Institute for Fiscal Studies (IFS), during the 2015 UK general election campaign. Combining human-coded content analysis and network analysis of Twitter discourse about the IFS during a 38-day period, we explain how and why the authority of this think tank is being translated to social media. We develop a new, social media theory of 'primary definers' and show how the political authority on which such roles rest is co-constructed and propagated by professional journalists and political elites. Central to this process is a behaviour we conceptualize and measure: authority signalling. Our findings call into question some of the more sanguine generalizations about social media's contribution to pluralist democracy. Given the dominance of public service broadcasters in the processes we identify, we argue that, despite the growth of social media, there can be surprising limits on the extent to which contemporary media systems help citizens gain information about the assumptions underlying economic policy.

Keywords

austerity, authority signalling, economic policy, journalism, news, power, social media

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We begin from a simple but important normative current in communication research: a media system ought to promote a diversity of public information about the assumptions underlying government policies. The 2008 global financial crisis and the long period of austerity it created have raised crucial questions in this regard. As we continue to move through the aftershocks of the Great Recession, what role should media and non-governmental organizations play in helping citizens understand economic policy? To what extent do our systems for producing economic news empower citizens by helping them grasp why the economies of the advanced democracies face such immense challenges?

In Britain, since the late-2000s, political debate has been dominated by the question of the government deficit. Deficit reduction and the need for public spending cuts was the central discourse among Britain's political and media elite during the 2010 and 2015 general elections (Berry C, 2016; Clarke and Newman, 2012). An important actor in this discourse is an organization that, over the last decade, has become arguably Britain's most significant think tank: the Institute for Fiscal Studies (IFS). The IFS has long produced rapid-response, journalist-friendly analyses of government policy announcements and its 'policy briefs' now dominate the news cycle following every major UK government statement on taxation and spending (Akam, 2016). Jamie Angus, former editor of BBC Radio 4's *The World at One* and currently editor of Radio 4's flagship morning news show the *Today Programme*, vividly told us of the IFS' importance:

When I was editor of *The World at One* ... which I always see as the in-house broadcaster of the IFS ... I used to have a joke. I used to say to the team 'there is a red telephone on the desk and you just pick it up and this is a hotline straight through ... and you just kind of connect them into the studio'.¹

Robert Peston, arguably Britain's leading economic journalist and a key figure in narrating the financial crisis for BBC News, once said, 'Basically, when the IFS has pronounced, there's no other argument. It is the word of God' (quoted in Akam, 2016).

The linkages between media and the global financial crisis form the overarching context of this article. To date, research in this area has mostly focused on the failure of professional media to expose the systemic causes of the 2008 crash (Knowles et al., 2017; Starkman, 2014; Stiglitz, 2011; Tambini, 2010). With some notable exceptions (Berry C, 2012; Berry M, 2016), far less attention has been devoted to how the interactions between media and policy actors have shaped the austerity that followed.

Given the potential scale of this topic, we slice into the relationships between media and policy actors in a way that reflects an important part of how media systems now work. We focus on the public Twitter interactions between journalists, political elites and the IFS during the 2015 UK general election campaign. Our goal is to explain how and why the authority of a think tank whose strategy was founded and perfected during the broadcast era is now being translated to the social media environment. We develop a new, social media theory of primary definers and show how the political authority on which primary definition rests is co-constructed and propagated by professional journalists and political elites. Central to this process is behaviour that we conceptualize and measure: *authority signalling*. We combine two methods: human-coded content analysis and network analysis. Our data comprise the network of Twitter discourse mentioning

the IFS during the 38-day campaign period of the 2015 UK general election (16,619 tweets, including 4754 tweets whose hyperlinked content we analysed).

Despite Twitter's reputation for being chaotic, we find that the IFS' authority translates to this environment. We argue that this is because Twitter can function as a stage for an interpretive game in which political and journalistic elites seek to acquire authority and status. We find remarkably little contestation of the IFS' authority among partisans, journalists, or indeed any other group, including other think tanks. We reveal the conditions – in this case a particular incentive structure affecting the interactions between elite journalists and policy actors – under which an organization is able to extend its reach into this potentially unruly space and become a new-style primary definer. Achieving primary definer authority is not simply a result of the direct influence of the IFS' own interventions on Twitter. Rather, authority emerges because professional media and partisan elites have their own motivations for wanting to mobilize a nonpartisan think tank's framing of credible policy. In our conclusion, we reflect on how our analysis might open up new avenues for understanding how ideological consensus can become established in social media settings.

The IFS and austerity as fiscal politics in the United Kingdom

The IFS specializes in the economics of taxation and public spending. Founded in 1969 by four City of London financiers, today it is an independent, nonpartisan think tank of around 40 full-time research economists and is relatively financially autonomous from both the private and public sectors. It has been funded by a blend of corporate donations and grants from charities and various public bodies, including a small number of government departments and the United Kingdom's academic research councils (Institute for Fiscal Studies, 2014). It has a list of 'corporate members' and is managed by a director who is overseen by an advisory council of 30 individuals from business, finance, academia, politics and the civil service.

The IFS defines its field of expertise narrowly. It focuses on fiscal policy and the government 'balance sheet'. It has avoided interventions in the debate about whether spending cuts and austerity are desirable or effective policies in themselves (Akam, 2016). This position rests on the implicit acceptance that deficit reduction is an unavoidable policy norm. Yet, economists have long been divided on the wisdom of deficit reduction for its own sake (Blyth, 2013). And since the 2008 crash, they have been joined in their scepticism by citizens' movements and NGOs. A range of alternative, anti-austerity economic perspectives has emerged in the United Kingdom and elsewhere. In the United Kingdom, some of these grew from the protest and activism of the trade unions, Occupy, anti-tax avoidance movement UKUncut, and the disability rights and student movements. There is also a more staid network of organizations that question deficit reduction's social costs, its basic effectiveness in maintaining living standards, and its ability to provide governments with the tax revenues they need to reduce government debt in the long run. These include the nonpartisan Resolution Foundation, and the broadly leftist New Economics Foundation (slogan: 'economics as if people and the planet mattered'), Compass and the Tax Justice Network. There is also the fiscal stimulus

approach favoured by a community of broadly Keynesian academic economists (see, for example, Stiglitz, 2015) and the ‘wealth tax’ approach led by Thomas Piketty (2014).

In short, the IFS’ narrow, self-defined remit matters. If the organization has become the ‘word of God’ on tax and spending during an election campaign, this threatens the normative principle with which we began: a media system ought to promote a diversity of public information on the assumptions underlying policy.

Think tanks and media

Almost nothing is known about the online influence of policy think tanks, even though many of these elite organizations are highly prominent in everyday political communication. Previous research on think tanks has three characteristics relevant to our study. First, there is definitional uncertainty. The dilemmas are not central to our aims in this article, but we build on the useful definitions of Schlesinger (2009: 4–5) and McNutt and Marchildon (2009: 221). Think tanks produce policy knowledge and move among policy and media elites, to whom they gain access due to their expert capital. While many think tanks are aligned with parties and government, they are usually relatively autonomous of parties, NGOs, and the public and private sectors. Think tanks mostly strive to promote their own agendas rather than those of their funders. They emphasize analytical research, and they orient their information towards those who implement and discuss policy. They mostly claim to contribute to, though not represent, the public interest.

Second, research has considered whether think tanks influence parties and government policy-making (Cockett, 1995; Denham and Garnett, 1998; Pautz, 2010; Stone, 1996). In his study of two liberal-left think tanks in the United Kingdom, Schlesinger (2009) writes of a ‘double movement’ (p. 17): governments use think tanks to legitimize their decisions with expert evidence but also as distancing devices when airing new policy ideas. We integrate this understanding of think tanks’ boundary and brokerage roles but redirect it towards analysis of how a similar double movement might work in mediated interactions.

Third, limited research exists on the intersection between think tanks and media, and what little there is pre-dates social media (McNutt and Marchildon, 2009; Rich and Weaver, 2000). Research building on Bennett’s influential theory of indexing, which suggests the range of opinion in media coverage is shaped by the level of disagreement among government and legislative elites, hints at how the growth of think tanks might be changing news. However, this does not focus on think tanks in any detail because it assumes they are secondary in importance to official government sources (Bennett, 1990; Bennett et al., 2007: 134–135).

The theory of primary definers

The theory of primary definers forms an important part of Stuart Hall et al.’s (1978) highly influential book on the social production of news. Using street crime as a case study, Hall et al. argued that elite media reproduce consensus, not because of their inherent bias, but because they routinely work in relations of reciprocity and interdependence with policy elites. The approach was built on a mix of critical theories of ideology, the

sociology of knowledge, and what was, at the time, an emerging body of empirical research on the social construction of news. Hall et al.'s work has influenced much research on framing, agenda-setting, audience behaviour and the sociology of news, among many other subfields. Very little of this scholarship examines the role of independent expert sources.² And, for obvious reasons, the original theory had nothing to say about the role of social media in potentially reconfiguring how primary defining works. We want to revisit, renew and extend the theory.

The central concern here is how routine structures of news production explain how media come to 'reproduce the definitions of the powerful, without being, in a simple sense, in their pay' (Hall et al., 1978: 57). This task becomes all the more important in the United Kingdom, where strong public service norms of 'due impartiality' govern television and radio news and prevent most broadcast journalists from editorializing. Due to the familiar pressures of news production – scarcity of time, money and personnel – media organizations tend to become 'cued in' to specific news topics by 'regular and reliable institutional sources'. Not only do such sources enhance the credibility of journalists' work, they also legitimize journalists' roles as masterly providers of 'objective' coverage of contentious issues.

Primary definer status may emerge due to the formal position of an individual – a government spokesperson, for example.³ Alternatively, it may emerge from an individual's or a group's claim to represent an organized interest. But just as significant in the process are expert sources like think tanks, whose status derives from specialist knowledge. Experts are particularly important for enabling professional media to maintain public service impartiality norms; they provide journalists with valuable opportunities to rise above sectional partisan conflicts by promoting 'independent', 'authoritative' and credible judgements on public policy and the behaviour of public figures. Experts allow journalists to invoke information and opinion that is 'external' to partisan conflict and to mobilize these as resources that enable them to act in the political field while remaining insulated from accusations of partisan capture and bias. At the same time, experts are useful to political elites who also seek credible support for their policies from outside the partisan field.

As impartiality norms converge with journalists' and politicians' incentives to rely on expert sources, media organizations tend to routinely reproduce a narrow spectrum of views. Primary definers become so deeply implicated in news production practices that their interpretations of social reality come to form the initial definitions of policy problems – reference points to which all further news coverage and political action must be seen to respond. While counter-definers may emerge over time, the possibility of competition pushes primary definers to maintain their status through close relationships with media organizations. And they are assisted in this task by politicians, whose own professional incentive structure encourages them to build long-term relations of interdependence with the experts who can enhance their own knowledge, status and power.

A social media theory of primary definers

A core insight of the original theory is just as relevant today; there are strong relations of interdependence among journalists, political actors and expert sources. Building on this,

in the field of UK economic news, we suggest that a particular incentive structure binds together these actors on social media and that the outcome is the *co-construction* and *propagation* of primary definer authority.

Today, in contrast with the era of untrammelled broadcast media dominance, social media function as an important public stage upon which this incentive structure plays out, often in real-time and under great competitive pressure (Chadwick, 2013). Social media serve as platforms on which politicians and their staff, journalists and engaged activists can publicize their activities and enhance their reputations and influence. Social media enable participation in an interpretive game in which competing but ultimately interdependent elites seek to acquire authority. These interactions are characterized by what we term *authority signalling*: a process whereby journalists, politicians and activists define and share information from expert sources in ways that enhance theirs and the expert source's status, legitimacy and ultimately power.

This leads us to the final part of our theory: how does power work in social media environments? Self-promotion is built into the logic of social media, but this alone does not necessarily create the conditions for powerful action. In a media environment where exposure comes from the cascading circulation and recirculation of information by large numbers of ordinary users, real power derives just as much from what others say about an organization as it does from what an organization says about itself. On Twitter, the construction and propagation of authority does not so much derive from a user's own tweets, or even simply from the number of followers a user has, as it does from others tweeting and retweeting about that user (Bakshy et al., 2011; Cha et al., 2010; Freelon and Karpf, 2015). Thus, it is important to examine how the affordances of Twitter are used in various combinations by network actors to enhance or undermine the authority of others in the network. An expert think tank's own interventions on Twitter undoubtedly matter but what matters more is that professional media and partisans mobilize a think tank's policy discourse. While the rest of the actors in the network spread a think tank's information and opinion, we can expect the think tank itself to rise above the fray. It does not need to be an active advocate of its own ideas because others in the network (and, indeed, the broader media system) will perform that function for it, by signalling its authority to others. We see this as the essence of how primary definers emerge in social media environments.

Exploring a primary definer on social media: research design and method

For the entirety of the 2015 UK general election 'short campaign' (30 March 2015 to 6 May 2015), we used automated software, Tweepository, to mine Twitter's search application programming interface (API) for tweets mentioning and posted by the IFS. This yielded a dataset of 16,619 tweets, including retweets. We undertook human-coded quantitative content analysis and network analysis of this dataset.⁴

Our content analysis combined inductive and deductive practice. We wanted our conceptual constructs to translate to Twitter's unique communication environment. We first reviewed the entire dataset and carried out exploratory qualitative analysis of approximately 500 randomly selected tweets. We then examined retweets and identified

recurring narrative themes that provided clues about how the IFS was portrayed within the Twitter network during the campaign.

We then identified the total of 8947 unique Twitter user accounts in our dataset. Next, using three Twitter metadata fields – name, username and profile summary – we (the authors) categorized users according to whether they were a journalist or a supporter of a British political party. Our approach was strict; we categorized only those accounts where user role or partisanship was explicit from these metadata fields. To be coded as a partisan, a user's profile had to contain the name of a party. For a user to be coded as a journalist, the profile had to contain reference to their job or the name of a media organization for whom they worked. Inter-coder reliability (Krippendorff's alpha) for this user partisanship/role variable, based on a random sample of 100 users, was .90. On the basis of our strict criteria, we were able to positively identify 1645 partisans or journalists: 18.4% of the 8947 unique Twitter users in our dataset. These 1645 partisans or journalists were the authors of 3627 tweets (21.8% of the 16,619 tweets in the dataset). In the analyses that follow, where we break down our content analysis to refer to partisans and journalists, our findings are based on this 18.4% of users and 21.8% of tweets. However, our coding for authority signalling and our network analysis was based on a much larger subset of the data, as we shall explain shortly.

Next, we developed a pilot coding frame to analyse our entire dataset of tweets. To operationalize our concept of authority signalling, we broke this behaviour down into three basic types: first, *overt authority signalling*. This refers to tweets that clearly and overtly gave the impression that the IFS was authoritative, for example, when the organization was described as 'independent' or 'respected'. Second, and equally important for our theory, we coded for *assumed authority signalling*. This refers to tweets that presented the IFS' information, opinion or status as if they were simply 'the facts' or 'common sense' and beyond critique. The third category we developed was *contested authority signalling*: messages that conveyed disagreement with the IFS' information, opinion or status. We also coded the authorial intent of any hyperlinked material in a tweet, such as news stories, blog posts, websites and reports. We were interested in whether externally linked organizational sources were important for authority signalling and how this might vary according to the type of organization being invoked.

Coding for authority signalling required a larger team. To pilot this, we assigned four independent coders the same 100 randomly selected tweets. After reviewing the inter-coder reliability results, we refined our coding frame. We removed measures with low reliability, rewrote some of the coding manual and conducted further coder training. We then ran a second pilot using a revised coding frame. Inter-coder reliability improved significantly during the second pilot and reached excellent levels for all variables used in this article.⁵

Network analysis, which augmented our content analysis, is based on the assumption that an actor's location in a network reveals his/her relational power vis-a-vis other actors (Borgatti et al., 2013: 1). Twitter, with its follower, mention and retweet networks lends itself to such analysis. Because we were interested in the propagation of authority signalling, we reconstructed the entire retweet network among the 7392 users in our dataset who were connected by a retweet relationship. In other words, this subset of 7392 users comprises those who either retweeted at least one other user or had at least one of their tweets retweeted by another user. Those users who did not retweet another user or who

did not have any of their tweets retweeted were excluded. This retweet network contained a total of 11,819 retweets. Finally, we used the widely used open source software Gephi (<http://gephi.org>) to compute the network centralities of all users.

Analysis: the construction of authority

We expected to find low levels of contested authority signalling and high levels of overt authority signalling, as Twitter users signalled their clear praise of the IFS. We also expected levels of assumed authority signalling to be higher still. This would be evidence that the IFS' information and opinions had become so deeply embedded in the circulation of ideas that their interpretations had become taken-for-granted reference points, part of the common sense of an important network of economic policy discourse on Twitter during the campaign.

As Figure 1 shows, the results are remarkably clear. Overall 47.5% of the tweets mentioning the IFS during the 2015 UK general election campaign signalled the assumed authority of the think tank. They treated the IFS' information or opinion in a matter of fact way. While 36% of tweets signalled the overt authority of the IFS, only 6.1% of tweets actually contested it.

We now break the authority signalling results down to see if these varied according to a user's partisanship and whether a tweet came from a journalist. As Figure 2 reveals, journalists on Twitter were remarkably important for constructing the authority of the IFS during the 2015 general election campaign. Overall 68% of journalists' tweets in our sample conveyed the assumption that the IFS was authoritative while 18.3% of their tweets contained overt descriptions of the IFS' authority. In contrast, only 3.4% of journalists' tweets contested the IFS' authority. Partisans of the United Kingdom's three major parties – the right of centre Conservatives, left-of-centre Labour and the centrist Liberal Democrats – were also deferential. Conservative partisans were particularly willing to post tweets that overtly signalled the IFS' authority: 59.1% of their tweets did so. Labour partisans were close behind, on 45%. Tweets from partisans of these two parties also scored highly on our assumed authority variable. The Liberal Democrats were slightly less keen to post tweets that overtly signalled authority but their role in the co-construction of the IFS' primary definer status is beyond doubt: 70% of their tweets signalled assumed authority and only 0.2% contested it.

Figure 2 also shows that supporters of the Scottish National Party (SNP), the anti-immigration, anti-European Union party United Kingdom Independence Party (UKIP), and, to a much lesser extent, the Greens were more likely to contest the IFS' authority than supporters of the major parties and journalists. The SNP in particular stand out here: 40.1% of their tweets took issue with the IFS and levels of assumed authority signalling among SNP supporters dipped to 30.4%, the lowest figure in our dataset. A close examination of the tweets from SNP partisans revealed that some of their supporters were critical of the IFS' forecast that the SNP were planning greater austerity measures in Scotland than the Labour Party. Still, overall, opinion among SNP partisans was evenly divided: 40.4% of their tweets were not critical of the IFS. With UKIP, the picture was similar. Of their supporters' tweets, 32% contested the IFS' authority and levels of overt authority signalling were low in comparison with tweets from the supporters of the main parties and from journalists.

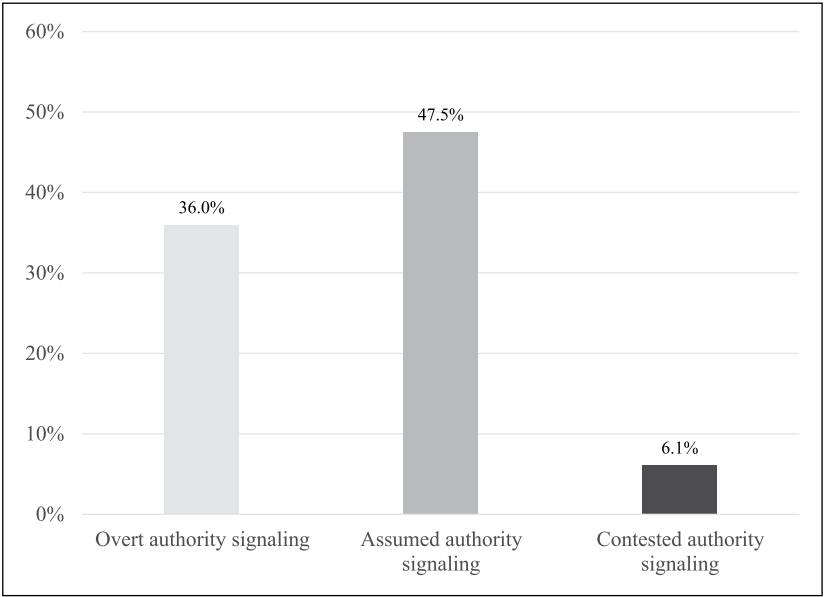


Figure 1. Authority signalling in tweets mentioning the IFS during the 2015 UK general election campaign. N = 16,619 tweets.
Note: 10.5% of tweets contained no authority signalling and are excluded.

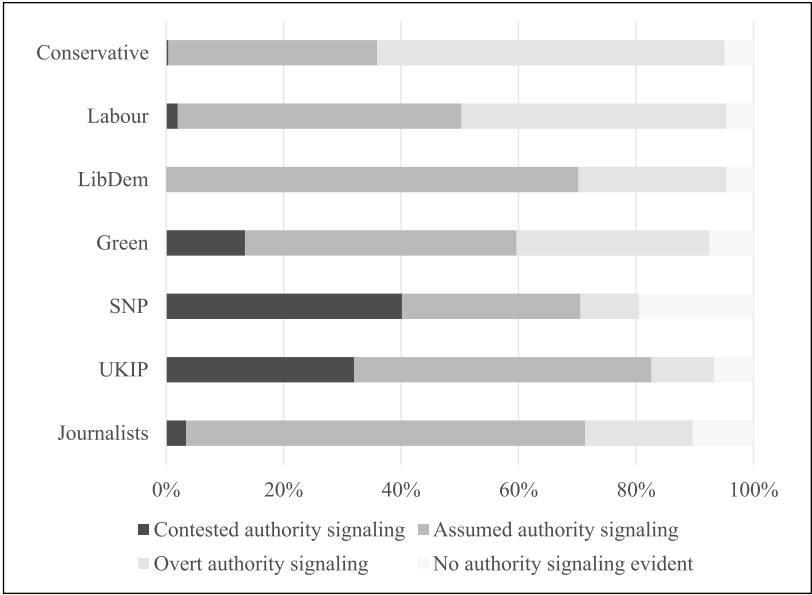


Figure 2. Authority signalling in tweets mentioning the IFS during the 2015 UK general election campaign, by partisanship and journalism role. N = 1645 users, 3627 tweets.

However, a solid 50.7% of UKIP tweets conveyed the IFS' assumed authority. And, if we add UKIP supporters' overt authority tweets (10.7%), it becomes clear that UKIP, like the Greens, were part of the consensus that the IFS was authoritative.

The final stage of our content analysis examined the kinds of organizations that were invoked in tweets when users signalled the authority of the IFS. Hyperlinks are a crucial part of the Twitter platform and our network was no exception. In total, 28.6% of the tweets in our dataset contained hyperlinks that played a role in authority signalling. Strong evidence of overt and assumed authority signalling among these hyperlinked sources would be further evidence of the IFS' primary definer status on Twitter. Not only would it reveal the extent to which users went beyond simple Twitter messages to provided external evidence for their authority signalling, it would also provide evidence of the broader network of content from media and political organizations that was important for augmenting the co-construction of the IFS' status.

As Table 1 shows, hyperlinks to external sources were important for both overt and assumed authority signalling. The most common hyperlinked sources were the IFS' own websites and documents. This might seem obvious. However, the IFS only tweeted 58 times during the campaign and only 32 of these tweets linked back to its own website. Thus, the IFS' own website was in fact a resource that other actors in the network were willing to use to support their own positions. As we outlined in our theoretical discussion of power on Twitter, we should expect a primary definer to rise above the fray and let others do the work of signalling its authority. The IFS did not need to be an active advocate of its own ideas because others came to perform that function for it.

But who performed this authority signalling work? Media organizations, particularly the BBC, newspapers and online-only news organizations were particularly important linked sources. And a large proportion of the linked content was highly favourable towards the IFS. A total of 22.0% of the content linked from BBC websites overtly signalled the IFS' authority, while 78.0% signalled the IFS' assumed authority. Among liberal/left newspapers, the figure for overt authority signalling was 40.2%. Close examination of the tweets revealed that, during the campaign, the *Guardian* newspaper printed several 'puff pieces' about the IFS and its role in holding politicians to account.

Content from the websites of the two of the major parties – the Conservatives and the Liberal Democrats – was also important. Conservative content was heavily skewed towards overt authority signalling by two tweets. Both contained an online political poster graphic stating that the IFS, 'Britain's most respected economic research institute' had 'confirmed that debt would be "about £90 bn more"' under a future Labour government. The first of these tweets came from party leader David Cameron and was retweeted 450 times. The second was part of an orchestrated campaign by Conservative supporters who tweeted the poster 490 times (probably by clicking a share button on the Conservative website) and those tweets were retweeted a further 59 times.

The only results that contradicted this overall pattern of authority signalling, albeit in very minor ways given the tiny numbers involved, were tweets that linked to blogs and to the websites of other think tanks. These are worth discussing because they provide further evidence of just how deeply entrenched the IFS' authoritative status became. As Table 1 shows, 70.4% of the tweets that linked to blogs contested the IFS' authority. However, this amounted to only 57 tweets overall (including retweets) – just 0.3% of all

Table 1. Types of organizations users invoked via hyperlinks to signal the authority of the IFS, ordered by total number of hyperlinks to each organization type.

Type of organization	Number of hyperlinks to type of organization	Hyperlinked sources with overt authority signalling (%)	Hyperlinked sources with assumed authority signalling (%)	Hyperlinked sources with contested authority signalling (%)
IFS	1923	96.0	4.0	0.1
Media organization – liberal/left newspaper	845	40.2	44.6	15.1
Media organization – BBC	513	22.0	78.0	0
Party – Conservatives	473	100	0	0
Party – Liberal Democrats	149	38.3	61.7	0
Media organization – right-wing newspaper	139	33.8	46.8	19.4
Media organization – online-only news e.g. BuzzFeed, HuffPo	90	22.2	77.8	0
Blog	81	23.5	6.2	70.4
Education	70	30.0	64.3	5.7
Pressure group/campaigning organization/charity	66	10.6	86.4	3.0
Business/City/finance organization	54	42.6	57.4	0
Media organization – ITV, Channel 4 or Channel 5	41	29.3	70.7	0
Think tank (not IFS)	18	44.4	27.8	27.8
Media organization – Business news broadcaster	16	56.3	43.8	0
Media organization – Sky News	11	36.4	63.6	0
Media organization – News agency, for example, PA, Reuters	4	25.0	75.0	0
Opinion polling company	4	100	0	0
Government/regulatory body	2	0	0	100
Party – Labour	1	100	0	0
Party – UKIP	0	0	0	0
Party – SNP	0	0	0	0
Party – Green	0	0	0	0
Party – Plaid Cymru	0	0	0	0
Trade union	0	0	0	0
Other type of organization	264	16.7	51.5	31.8
Total	4764	64.0	29.5	6.5

Notes: N = 4754 tweets with hyperlinks. Ten tweets linked to two separate organizations. It includes 37 tweets from the IFS' own account that contained hyperlinks, 35 of which signalled the IFS' overt authority. Images hosted on Twitter's image servers were not treated as external hyperlinks. Totals may not equal 100% due to rounding.

IFS: Institute for Fiscal Studies; UKIP: United Kingdom Independence Party; SNP: Scottish National Party.

tweets mentioning the IFS during the campaign – so it would be misleading to suggest that there was a critical blogosphere using Twitter to spread their criticisms of the IFS. And drilling down into the data reveals that only two blogs accounted for 48 of those 57 tweets. The first, with 28 tweets (including retweets), was anti-tax avoidance Tax Justice Network blogger Richard Murphy's blog, which contained a post critical of the IFS' free market orthodoxies. The second was the Conservative grassroots website Conservative Home, with 20 tweets (including retweets), which contained a post by Conservative Member of Parliament (MP) Robert Halfon questioning why the IFS received public funding when the Treasury could perform the think tank's role.

The authority of the IFS looks even stronger if we consider the tweets that linked to other think tanks. Only 18 tweets in total linked to think tanks other than the IFS. This amounts to just 0.1% of the tweets (including retweets) mentioning the IFS during the campaign. If the IFS' authority was being genuinely contested, we would have seen much more juxtaposition of other think tanks' information in this Twitter network. And, in any case, of those 18 tweets linking to other think tanks, only five actually contested the IFS' authority. Thus, the number of 27.8% for contested authority signalling among other think tanks is accounted for by a blog post questioning the IFS' narrow approach to economic policy. This appeared on the website of the trade union-funded organization the Centre for Labour and Social Studies. With only five tweets (a tweet and four retweets) out of a network of 16,619 tweets, there was little meaningful critical opposition to the IFS in this network.

Analysis: the propagation of authority

Consider a simple fact. By the end of the campaign, the IFS had 14,130 followers on Twitter, yet it followed not a single user. Given the extent to which the IFS' information circulates around Britain's media and political elites, this is one basic metric revealing its desire to be seen as authoritative.

Network analysis offers widely accepted measures to assess the relational power of actors in a directed network such as Twitter (Kumar et al., 2014), though none of these methods have been used to study primary definers. Since our theory is concerned with identifying those who propagate the opinions or information of the IFS, we computed two relevant rankings of power: in-degree centrality and eigenvector centrality.

In the context of Twitter, in-degree centrality is a measure of how many times a user's messages are circulated in the network. We operationalized this as the number of retweets each user received. Figure 3 is a network visualization we generated using the Fruchterman-Reingold algorithm in Gephi. It provides an overview of the entire retweet network among those who were connected by a retweet relationship in our dataset. The 15 most retweeted users in the network are labelled by username. The larger the label, the greater the number of retweets a user received. Nodes are coloured according to partisanship and user role – attributes we identified in our content analysis. For legibility, ties are displayed in the colour of the user being retweeted. For example, a glance at the Labour partisan @LabourEoin reveals that he was highly retweeted and that he was mostly retweeted by identified Labour partisans and users whose partisanship or role we were unable to identify (note the mostly red and grey nodes clustered around him).⁶

Table 2 shows key metrics in the network. Most striking is the importance of journalists in propagating the information of the IFS. Journalists' tweets mentioning the think

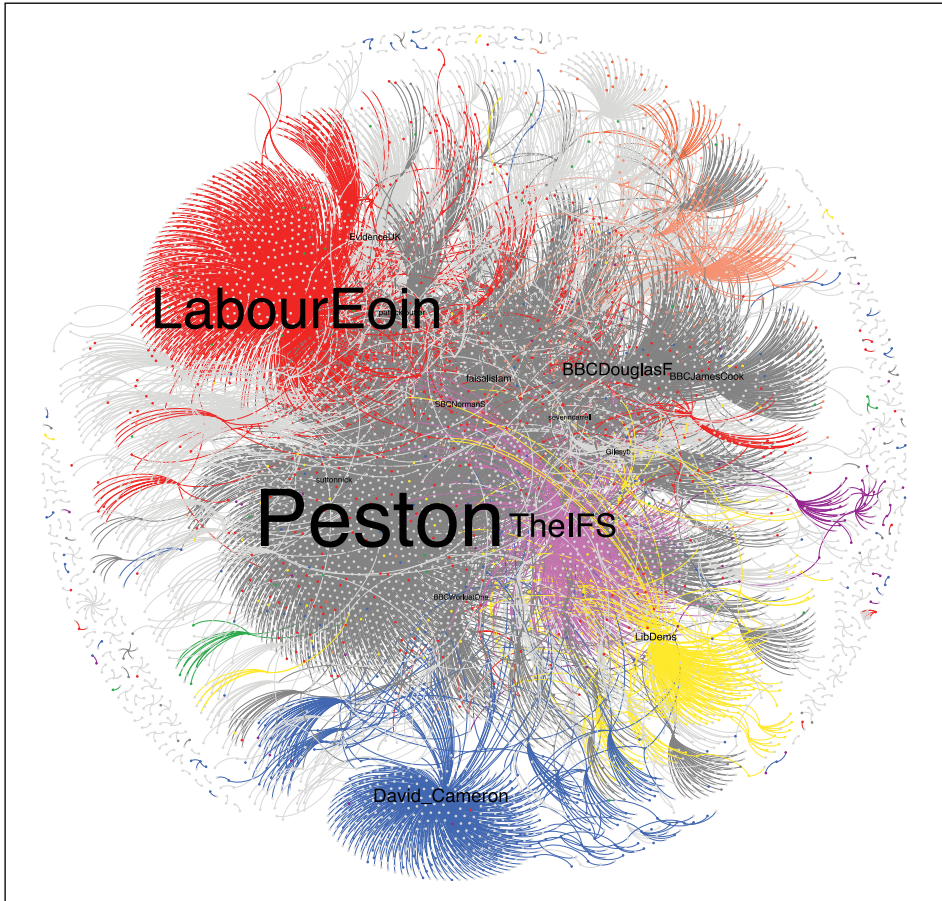


Figure 3. Visualization of the retweet network of users mentioning the IFS during the 2015 UK general election campaign. N = 7392 users, 11,819 retweets. High resolution version here: http://files.andrewchadwick.com/mcs2017/Anstead_Chadwick_MCS2017_IFS_retweet_network.

tank received more retweets than any other group of actors we identified (note the large number of dark grey clusters in Figure 3). The IFS' own 58 campaign tweets were retweeted 853 times, placing them third overall. However, only seven of the retweets of the IFS' tweets came from the other Top 10 most retweeted users. Clearly the IFS was powerful in this network, but the IFS' own tweets and the retweets of its tweets actually account for only a small proportion of its power. Other actors did the work of propagation by posting tweets *mentioning* the IFS and these were retweeted *by other users*. The BBC's Economics Editor at the time, Robert Peston, with more than half a million followers, received by far the most retweets (2207). Our examination of the dataset revealed that Peston posted 22 tweets mentioning the IFS during the campaign. All of these conveyed the IFS' overt or assumed authority and not one contested it. Peston was joined in the Top 10 ranking by four other journalists. Most prominent among these were the

BBC's Scotland Business Editor, Douglas Fraser (@BBCDouglasF), and BBC's Scotland Correspondent, James Cook (BBCJamesCook). All but two of their combined 43 campaign tweets conveyed the IFS' overt and assumed authority.

Also notable in the Top 10 for in-degree centrality are Conservative, Labour and Liberal Democrat accounts: further evidence of the bloc of senior journalists and the main parties united by their construction of the IFS as authoritative. Above, we showed how important Conservative Prime Minister David Cameron's tweet linking to an online political poster was for invoking the IFS' authority. As Table 2 shows, Cameron's solitary tweet and its 450 retweets gained him a ranking of fourth on in-degree centrality.

Overall, the users in our Top 10 for in-degree centrality posted 141 tweets mentioning the IFS during the campaign. Together, those 141 tweets were retweeted 6410 times. Not a single tweet among those 141 contested the IFS' authority.

One user in this ranking, Dr Éoin Clarke (@LabourEoin), is unusual because he is a Labour blogger and activist and untypical of the media and political elites in whose company he found himself when discussing the IFS during the campaign. As the network visualization and Table 2 both show, Clarke's tweets mentioning the IFS were heavily retweeted: he ranked second only to Robert Peston in this regard. Clarke had 40,742 followers by his final tweet of the campaign – a large number, but far fewer than Peston's half a million. So, what explains Clarke's importance in this network? A close examination of the 19 tweets Clarke posted reveals he used the same strategy as Prime Minister David Cameron. Clarke constantly invoked the overt and assumed authority of the IFS in his promotion of Labour's economic policies and his criticisms of the Conservatives. Our content analysis found that all but two of Clarke's tweets signalled the overt or assumed authority of the IFS and none signalled any contestation (two of his tweets did not signal any authority). See Table 3 for examples.

We need to be clear about the process here. The authority of a primary definer emerges from the interdependent relations between political actors and journalists. Éoin Clarke posted 19 tweets mentioning the IFS during the campaign. None was a retweet of an IFS tweet. Instead, Clarke chose to package information from the IFS in a way that suited his partisan goals. He then targeted Labour's political opponents with critical questions, stimulating retweets by other Labour supporters. In the process, Clarke further reinforced the IFS' authority, not only due to the language he used – 'highly respected', 'greatly respected' – but also through his simple, unadorned descriptions of IFS opinion. As Table 3 shows, irrespective of the details of the partisan battle, the IFS' status was enhanced.

Indeed, journalist Robert Peston behaved in the same way. None of Peston's 22 tweets mentioning the IFS during the campaign was a direct retweet of an IFS tweet, but he was particularly fond of using Twitter's so-called dot insertion hack. In other words, by placing '@TheIFS' at the beginning of his tweets he guaranteed that the tweet was not treated as a simple reply to the IFS but would be circulated to all of his followers. All but 7 of Peston's 22 tweets used this device. But unlike Clarke the political activist, Peston was invoking the authority of the IFS in his role as a journalist eager to hold all the major parties to account for their spending plans, as Table 3 shows.

Our second measure of network power is eigenvector centrality (see Table 2). Like in-degree centrality, this is a formal measure that can be operationalized in different ways

Table 3. Top 15 most retweeted tweets mentioning the IFS during the 2015 UK general election campaign.

Rank	User	Followers	Tweet	Retweets	Authority signalling
1	@David_Cameron	996,965	A damning verdict on Labour's borrowing plans from the independent Institute for Fiscal Studies. http://t.co/mfHCeo7Lzd	450	Overt
2	@LabourEoin	40,742	The much respected Institute for Fiscal Studies is very clear, NHS Spending, 2011–2018, is falling 9.1% per patient http://t.co/RYimIjyRX6	293	Overt
3	@Peston	510,898	.@ThelFS say Tory right-to-buy for housing assoc could deplete social housing and worsen UK public finances http://t.co/vwXijzAfmh	261	Overt (in link)
4	@Peston	510,898	.@ThelFS says fiscal gap between Lab and Tories biggest since at least 1992. This election matters	246	Assumed
5	@Peston	510,898	Debt would be £90 billion lower under Tories than Lab says @ThelFS, if they meet their tax and spending plans	246	Assumed
6	@Peston	510,898	.@ThelFS amazingly says SNP would actually shrink public spending as share of GDP more than Labour over course of parliament	238	Overt
7	@Peston	510,898	.@ThelFS says Lab probably right that Tories' planned cuts bigger than in other big rich countries	229	Assumed
8	@Peston	510,898	Tories to cut £30 billion from unprotected debts, LibDems £12 billion, Lab £1 billion say @ThelFS	188	Assumed
9	@LabourEoin	40,742	Institute for Fiscal Studies could not be clearer: David Cameron delivered largest cuts to Education since the 1950s http://t.co/gE559SgfEm	179	Overt
10	@LabourEoin	40,742	The Institute for Fiscal Studies have examined some of the £12 billion Welfare Cuts the Tories are planning next election http://t.co/plGispZXfW	176	Assumed
11	@BBCJamesCook	28,144	Golden election rule. @ThelFS are ALWAYS RIGHT when talking about your opponents and ALWAYS WRONG when talking about you. #ge2015	171	Overt
12	@Peston	510,898	.@ThelFS by 2018/19 Tories to cut unprotected debts by 17.9% compared with 1.8% cut for Lab (& 9% for LibDems by 2017/18)	165	Assumed
13	@LabourEoin	40,742	The Institute for Fiscal Studies say only the wealthier will benefit from the Tories £1.3 billion Inheritance Tax giveaway http://t.co/Yw9WO8kv4	139	Assumed
14	@LabourEoin	40,742	The greatly respected Institute for Fiscal Studies issue three dire warnings about the Tory Right to Buy Policy (see picture) http://t.co/l79nzQkpfm	131	Overt
15	@EvidenceUK	10,383	Today the respected Institute for Fiscal Studies rubbished Tory claim that Labour would raise taxes £3k per household http://t.co/sASWURndi7	123	Overt

NHS: National Health Service; SNP: Scottish National Party; GDP: gross domestic product.

according to network context. Its advantage over simpler measures like in-degree is that it assumes an actor's centrality is based on the centrality values of those to whom an actor is connected. The eigenvector centrality of an actor increases if he/she has ties to other actors with high centrality. This measure provides a useful snapshot of the structure of a whole network because it assumes that an individual is more likely to have greater power if he/she is connected to powerful others (Bonacich, 1972). Translated into the context of the retweeting patterns in our Twitter IFS network, a user was relatively powerful if that user's tweets were retweeted by other users whose own tweets were highly retweeted, and so on.

The right side section of Table 2 shows the Top 10 users by eigenvector centrality. The results are revealing. Apart from two exceptions, there is remarkable overlap with the rankings for in-degree centrality. Once again, journalists did much powerful work in creating information about the IFS that spread across this network. Five of the Top 10 are individual journalists and a sixth user – BBC Radio 4's *World at One* is a radio news show account. As with the in-degree rankings, the three major parties are also represented, with @LabourEoin again featuring alongside the political and media elite actors. In essence, this is the core group of powerful – and powerfully connected – tweeters in the network.

Conclusion

An enduring theme in the research on digital media and politics is the extent to which older forms of political organization are adapting to digital media and shaping the transition to a new settlement in their own image. We contribute to this debate by explaining the mechanisms through which Britain's most important think tank is extending its authority into the social media domain. We have developed and extended the original theory of primary definers by revealing the incentive structure of interdependence among political elites and journalists that embeds the information and opinions of this expert source on social media. We have shown how the IFS' opinion and information were invoked and mobilized on Twitter by a wide range of partisans and media professionals. The IFS is a primary definer on Twitter because its authority is co-constructed and propagated by journalistic and political elites and, in one case, a highly connected and energetic political activist. We found some modest evidence that SNP partisans were willing to contest the IFS' authority. This perhaps speaks to an important seam of nationalist scepticism of the Westminster establishment. Some of the SNP partisans' tweets referred to the IFS' public funding, for example. But only a minority of the SNP's supporters were willing to signal their contestation, and, despite their criticism, it is difficult to see how they might have juxtaposed alternative perspectives in this space. The information and opinions of other think tanks were barely visible. We were surprised to find such little contestation of the IFS and virtually no juxtaposition of other think tanks' information and opinions in this network.

Why do these findings matter? To answer this question requires revisiting the two contexts with which we began: first, the discourse of 'deficit reduction' so dominant in UK politics during the post-crash general elections of 2010 and 2015 (Berry C, 2016) and second, the normative principle that a media system ought to promote a diversity of

public information about the assumptions underlying policy. We might expect this sort of outcome in an elite-dominated media system with comparatively high barriers to entry like broadcast era, 1970s Britain, when Hall et al.'s theory of primary definers was first established. But we should be surprised and concerned to find these sorts of outcomes in today's media system. The systemic nature of these interactions throws into jeopardy some accepted wisdom, both about the 'uncontrollable' nature of social media but also about social media's contribution to information and opinion pluralism. These findings are all the more surprising given that critiques of the theory of primary definers have suggested that the process is more contingent and contested than Hall et al. suggested (Schlesinger, 1990).

Diversity of information about the assumptions underlying economic policy is essential to informed citizenship. In a basic sense, this requires public contestation of a leading organization's opinion or the juxtaposition of that organization's opinion and information with another's, even if that organization is nonpartisan. But in Britain, during the 2015 general election, there was very little pluralism of this kind in the Twitter network of people discussing the IFS. This is not the doing of any single individual or group. It is the logic of an incentive structure of interdependence where expertise can lead to authority which in turn can lead to power. However, that authority still needs to be actively constructed. We have shown that this logic translates to Twitter. The social media environment can be surprisingly fertile for maintaining the power of a primary definer. And, as we outlined in our opening section, this particular primary definer has been a central actor in the politics of deficit reduction, spending cuts and austerity in Britain.

Our findings also have broader implications for understanding how ideological consensus develops in environments that, at first glance, do not seem well-suited to such levels of agreement. In this case, the key force was a group of high-profile, public service television and radio journalists who were active on Twitter during the election and keen to spread the IFS' information and opinions to enhance their own authority to issue judgements on the partisan struggle. They were joined by Twitter users representing Britain's three major parties, who also sought to mobilize the IFS for their own purposes. But the overwhelming dominance of public service broadcasters in both constructing the IFS as authoritative and propagating that authority online suggests that, despite the growth of social media, there can be surprising limits on the extent to which our media systems help citizens learn about the assumptions underlying policy.

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Notes

1. Jamie Angus, Editor of BBC Radio 4's *Today* Programme, interviewed by Andrew Chadwick, 11 November 2016.
2. See: https://scholar.google.co.uk/scholar?cites=16134060271562009690&as_sdt=2005&sciodt=0,5&hl=en
3. For the rich seam of research examining the effects of media proximity to government officials see, for example, Bennett (1990), Bennett et al. (2007), Entman (2010) and Lawrence (2012).
4. The search query was 'Institute for Fiscal Studies' OR @theIFS OR from:theIFS. Tweepository allows for a search query to be automated to run every 20 minutes for an extended period, in this case from 30 March 2015 to 6 May 2015. The retrieved data – up to a maximum of 1800 tweets every 20 minutes – are stored iteratively, without duplication, in a database that runs on the EPrints free and open source web repository platform (<http://www.eprints.org>). At the end of the period, data can be exported in a variety of file formats including CSV and JSON. For Tweepository's source code, see <http://bazaar.eprints.org/431/>. For previous uses of this tool, see Murthy et al. (2016) and Tinati et al. (2012). The Twitter search application programming interface (API) filters for spam, incomplete URLs and some offensive content. However, so long as (a) the search terms used are not likely to return tweets that Twitter tries to filter and (b) API rate limits are not exceeded, the search API results have been demonstrated to be between 96% and 100% complete (Thelwall, 2015). Our data collection fulfilled both of these criteria.
5. For our authority signalling, Krippendorff's alpha was .83. For the measure identifying whether there were externally linked sources that conveyed or contested the authority of the IFS, Krippendorff's alpha was .91. For the measure identifying the type of organization being hyperlinked, Krippendorff's alpha was .80. All of our content analysis categories were mutually exclusive. Content was coded for the most prevalent category. Where applicable, our measures had an option for coders to indicate that there was no evidence of any of the categories listed. Our pilot and final coding frames are available in our data and method file at <http://files.andrewchadwick.com/mcs2017/data.zip>.
6. Recall that our content analysis identified 1645 partisans or journalists. Because we wanted to reveal the structure of the entire retweet network, users who could not be identified as a partisan or a journalist are included in Figure 3 and coloured light grey.

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