

# IDS

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### Testing TwitterWeave: An Application of the New IDS Web Tool for Tracking Research

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May 2016

The IDS programme on Strengthening Evidence-based Policy works across seven key themes. Each theme works with partner institutions to co-construct policy-relevant knowledge and engage in policy-influencing processes. This material has been developed under the Policy Anticipation, Response and Evaluation theme.

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## TESTING TWITTERWEAVE: AN APPLICATION OF THE NEW IDS WEB TOOL FOR TRACKING RESEARCH

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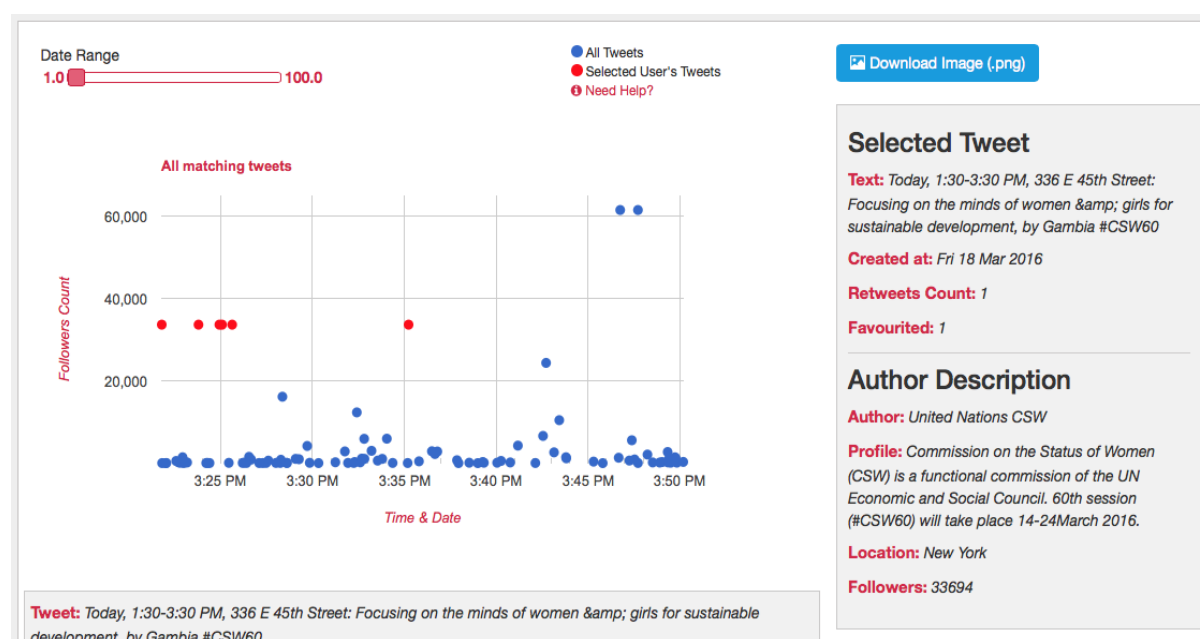
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# 1 Background

Understanding how people engage with research is a key issue for researchers, donors and anyone concerned with research impact, but observing this type of engagement is not easy. However, thanks to today's widespread use of social media, it is now possible in principle to capture some of this engagement (Scott and Munslow 2015).

To enable people to do this, a software application, 'TwitterWeave', was recently developed as part of the Institute of Development Studies (IDS) programme on Strengthening Evidence-based Policy. This free-to-use web application allows users to track not only what is being said on Twitter about a particular topic, but also who is saying it. Many Twitter-tracking tools exist, but the innovative feature of TwitterWeave is the way it organises and displays Twitter information into visualisations of chronological threads of related tweets, retweets and replies (see Figure 1.1). (The other applications that provide anything comparable are expensive social media monitoring systems, whereas TwitterWeave is completely free to all users.)

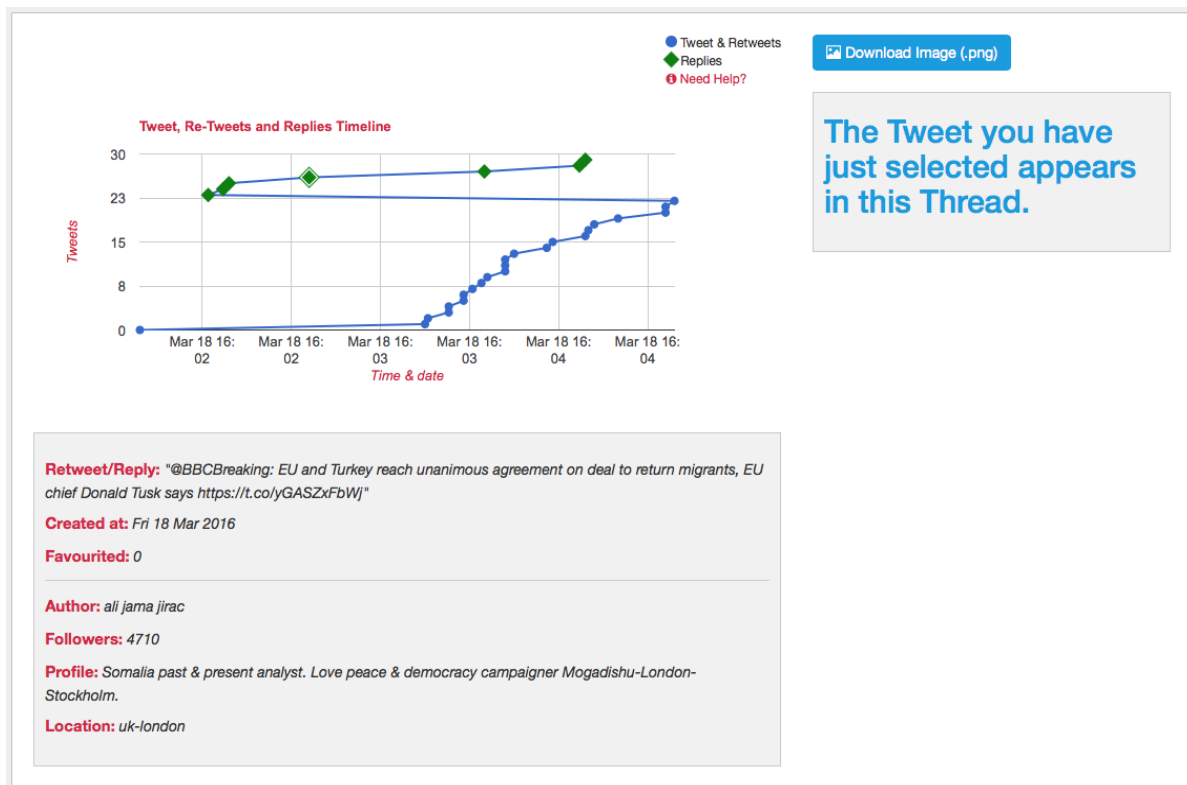
**Figure 1.1** TwitterWeave visualisation of tweets



Source: Author's own.

TwitterWeave resides on a webpage ([www.twitterweave.org](http://www.twitterweave.org)). To operate it, users first login using their own Twitter account and then search for whatever they want, just as they would using Google. The application generates a graphical visualisation, showing individual tweets, retweets and replies as clickable points plotted against a timeline. Users can then refine this display by selecting particular 'threads' of tweets, where a specific tweet has generated retweets or replies (see Figure 1.2). In addition, users can see details of each tweet, including information from the tweet author's profile. This often contains information about the author's professional interests, institutional affiliations, job title, geographical location and number of Twitter followers.

**Figure 1.2 TwitterWeave thread of retweets and replies**



Source: Author's own.

For researchers, this information can help build a picture of the kind of people who are engaging with their work. The number of followers each tweet author has is useful because it can be taken as a crude proxy for influence: the higher the number of followers, the greater the potential audience for each tweet (Romero *et al.* 2011). Because the application displays tweets and retweets in threads (points along a timeline), it is also possible to make inferences about how that engagement has propagated over time.

No technology can determine how many people have actually read a tweet, but TwitterWeave does show the approximate size of the potential audience, which is the combined total of followers for all the authors in a thread of retweets. This figure is approximate because there may be some degree of duplication among the lists of followers for different authors, especially where those authors share similar interests or professions.<sup>1</sup> The important point, however, is that the extent to which a tweet has been retweeted, or replied to, together with the sum of all the followers in that particular thread of retweets, does provide some indication of the relative significance of that tweet in the Twitter universe and the scale of its exposure in the wider community.

In common with many other Twitter-tracking applications, TwitterWeave also generates comprehensive data sets for each search. These take the form of downloadable spreadsheets (in CSV and JSON formats), which can then be further analysed using other software packages.

<sup>1</sup> A more accurate figure for combined total of followers could be calculated, but only by eliminating all duplicate names in the follower lists of all the authors in that particular thread, which would be an enormous task.

## 2 Case studies

To help test the TwitterWeave application, two different case studies were carried out. The first focused on the conference 'Contested Agronomy 2016: whose agronomy counts?', held at IDS on 23–25 February 2016. The second centred on the launch of *Gender, Sexuality and Social Justice: What's Law Got to Do with It?*, an Edited Collection of research prepared by an international team led by IDS researchers (Lalor *et al.* 2016).

### 2.1 Case study 1: Contested Agronomy 2016

The focus of the Contested Agronomy conference was 'battlefields in agricultural research, past and present' (IDS 2016). There were approximately 90 participants from a number of countries, mostly working for host institutions that could be described as predominantly research-oriented or academic.

The conference-specific Twitter hashtag – #ContestedAgronomy – was created by the conference organisers at IDS. As is common practice with academic conferences, this was intended to serve the dual function of helping to publicise the conference (particularly during the pre-conference period) and serving as an identifying keyword to be used by those participating in – or commenting on – the conference itself. TwitterWeave therefore used this hashtag to track Twitter communications relating to the conference.

Tracking began on 16 February (seven days before the conference started) and ended on 1 March. During this period, a total of 266 tweets using the #ContestedAgronomy hashtag were sent by 111 individual Twitter accounts. Of these 266 tweets, 87 were original tweets, while the remaining 179 were retweets. Only two tweets were Twitter 'replies' – i.e. where one Twitter user sends a message directly to another user, in response to a tweet from the latter.

An examination of the user profiles suggested that the majority of the Twitter accounts were owned by individuals who are professionally involved in research. A smaller proportion of Twitter accounts were institutional. Of the individual Twitter accounts, most people self-identified as researchers or academics in international development or agronomy-related fields such as geography, development studies, rural development, anthropology, ecology, earth sciences, biotechnology or life sciences. A small proportion described themselves as having professional roles in fields such as fund management, communications and urban planning, while an even smaller number described themselves as activists, teachers or writers. Many individuals combined a number of these terms to describe themselves.

It was not possible to establish with any certainty what proportion of the 111 Twitter account-holders were physically present at the conference. Cross-checking the names of conference participants against the Twitter accounts suggested that this figure was quite low, implying that the majority of people tweeting about the conference were not actually attending in person.<sup>2</sup> (In principle it would have been possible to gather the names of all Twitter accounts during conference registration in order to establish how much Twitter activity was generated by conference participants and how much from people not attending.)

The profiles of the institutional Twitter accounts described a range of organisations, including university departments or research institutes (such as IDS or the Science Policy Research

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<sup>2</sup> Twitter names often bear little resemblance to real names, however, and some individuals were almost certainly tweeting from institutional Twitter accounts, rather than using their own personal accounts.

Unit (SPRU) at the University of Sussex), advocacy groups (GMWatch or anti Monsanto bot), networks (BioDivKnowledge, PLOS Synbio or the Political Ecology Network, POLLEN), practitioner organisations (Shift Soil) and organisations such as KIT Sustainable Economic Development, which appeared to embody some combination of all these types of work. A handful of organisations appeared to work in a more diverse range of fields. These included Start-Ups.Co, which claimed to be a networking group for entrepreneurs and venture capitalists, and Africa Green Media, which described itself as a media organisation. A small number of groups (such as Trade News Analysis or anti Monsanto bot) appeared to operate only as Twitter feeds; no information could be found about these groups beyond their Twitter accounts.

Using numbers of followers as a proxy estimate of influence, most of the 111 Twitter accounts had a few hundred or at most 2,000–3,000 followers. But 10 per cent of the accounts had between 4,000 and 150,000 followers. This is significant because each single tweet or retweet from these accounts has a relatively large potential audience in comparison to the other accounts. These ‘high influence’ accounts are listed in Table 2.1.

**Table 2.1 Contested Agronomy conference: Twitter accounts with greatest numbers of followers**

Twitter account	Number of followers
Start-Ups.Co	146,038
IDS	45,690
GMWatch	28,609
Shift Soil	13,341
Future Agricultures	12,435
Trade News Analysis	7,683
AgroBioDiverse	7,304
anti Monsanto bot	5,636
SPRU	4,822
Africa Green Media	4,785
STEPS Centre	4,110

Roughly two-thirds (173) of all tweets contained web-links, intended to draw readers’ attention to – or to comment on – publications, blogs and other online resources. In general, the pattern of Twitter activity fell broadly into two distinct periods: the first was in the days and hours before the start of the conference; the second was when it got under way.

### 2.1.1 Pre-conference period

The period before the conference was characterised by awareness-raising tweets whose function was both to market the conference to potential participants and to raise the profile of the conference more broadly. So, for example, as well as tweeting a straight announcement of the forthcoming conference, the Social, Technological and Environmental Pathways to Sustainability (STEPS) Centre sent a number of ‘teaser’ announcements, such as:

1. Agricultural research is a battlefield. Find out about #ContestedAgronomy 23–25 Feb @IDS\_UK <https://t.co/oXAtBvxix5> <https://t.co/yBqAT0HHGQ>
2. Want to hear a heretic’s view on drip irrigation in developing countries? Join #ContestedAgronomy @IDS\_UK 23-25 Feb <https://t.co/oXAtBvxix5>
3. “We are deeply disturbed by some of the ways that contestation is being pursued” <https://t.co/JyUPu97L3m> #ContestedAgronomy

Of these, the first tweet 'Agricultural research is a battlefield' was retweeted the most – a total of nine times. More significantly, these retweets included IDS, Shift Soil and Future Agricultures, which between them had a combined potential audience of more than 70,000.

IDS sent a number of similar 'marketing' tweets, this time containing links to questions which the conference aimed to consider:

1. Is #contestedagronomy more light than heat? Ahead of @FutureAgrics conf what are the big Qs? <https://t.co/RhW91JIUqb> <https://t.co/Px9vw9TH7L>
2. Any thoughts on whose agronomy counts? Ahead of #contestedagronomy conference <https://t.co/WXVKZKTpqw> @stepscentre @CIMMYT @WageningenUR
3. Coming to our #ContestedAgronomy conf? Check out The Politics of Seed in #Africa <https://t.co/WARSGNjPUc> by @IanScoones and John Thompson

The third comment, 'Check out The Politics of Seed in #Africa', was also aimed at publicising a conference-related publication. None of these tweets resulted in a significant number of retweets, but of course in terms of marketing reach, IDS has a large potential audience of its own (45,690).

### 2.1.2 During the conference

Twitter activity during the conference itself was characterised by: comments related to the discussions during sessions; conference announcements targeted principally at participants; and tweets designed to raise wider awareness of conference-related publications and events.

Session-related comments from the first day of the conference (in chronological order) included:

1. STEPS Centre: Farming is hard, says Dave Harris. Agronomy's only a part of it. And farming is only part of many farmers' livelihoods #ContestedAgronomy
2. Nathan Oxley: Knowledge, practices, power and systems are all aspects of agronomy, says Georges Serpantié #ContestedAgronomy
3. Joshua Ramisch: #contestedagronomy What is agronomy? Last time Ken Giller quipped 'An agronomist is someone endlessly amazed that crops respond to nitrogen'
4. Dazinism: Apparently @via\_campesina isn't so sure about the neutrality of this @FAOKnowledge forum @AgroBioDiverse @domglov #ContestedAgronomy
5. Nathan Oxley: Ken Giller: food riots of 2008 changed world politics, plus interest in farming & food production #ContestedAgronomy
6. STEPS Centre: 'The future of agronomy has to be place-based'. Universal/blanket approaches don't work #ContestedAgronomy <https://t.co/BqHacHyRmZ>
7. Nathan Oxley: Steenhuijsen Piters @100KIT: After huge lit review 'We did not find agronomy had a significant impact on the rural poor' #ContestedAgronomy
8. STEPS Centre: Bart de Steenhuijsen Piters, @100KIT: The poor feature in funding proposals – and disappear in impact evaluations #ContestedAgronomy

The third comment, 'An agronomist is someone endlessly amazed that crops respond to nitrogen', received the greatest number of retweets (eight) for the day. This possibly reinforces the adage that making a tweet humorous is an excellent way to increase the likelihood of retweets.

The second day of the conference featured numerous session-related tweets. The following are those that received four or more retweets:



1. STEPS Centre: Is there a 'healthy' debate in development-oriented agronomy now? Blog: <https://t.co/WSrPhRk5I0> #ContestedAgronomy <https://t.co/HJ9xlcZ7re>
2. Dominic Glover: CRISPR and the 'GMO' problem <https://t.co/cjgMBEO6pU> @glennDavisStone on gene editing & politics of language #AgriBiotech #ContestedAgronomy
3. Nathan Oxley: A. Rüdiger on think tanks & lobbyists promoting agrobiodiversity benefits: 'They turn a contested hypothesis into a fact' #contestedagronomy
4. Ola Westengen: Time to reflect critically on the politicization of evidence says Whitfield of @UniversityLeeds about biosafety in Kenya #ContestedAgronomy
5. Future Agricultures: New special issue of 'World Development' on China and Brazil in African Agriculture <https://t.co/Sqrba1v12h> @IDS\_UK #ContestedAgronomy

Tweets 2 and 5 had a particularly large reach. Tweet 2, 'CRISPR and the "GMO" problem', which linked to a blog post about a new gene-editing tool, was the most frequently retweeted comment of the conference (18 times). Retweeters included some of the biggest influencers, such as GMWatch and IDS, so this particular tweet had a potential audience of up to 101,615. Tweet 5, which highlighted a special issue of the journal *World Development* on China and Brazil, was retweeted 14 times.

Of the 60 tweets and retweets during the final day of the conference, the majority were once again directly related to the sessions (as would be expected), with a continuing focus on the issues of gene editing and the potential for knowledge transfer to Africa from Brazil, Russia, India, China and South Africa (BRICS). The remainder of the tweets concentrated on celebrating the success of the conference and highlighting key emerging themes and questions. Here are all the tweets that generated three or more retweets:

1. Nathan Oxley: 'The GM debate, I think, is ultimately going to be superseded by a debate about gene editing' #ContestedAgronomy – RTx3 via GMWatch (BIG)
2. Nathan Oxley: 'People [here] are interdisciplinary-curious' #ContestedAgronomy
3. Nathan Oxley: Scoones: Knowledge constructed in particular way, but many ways of knowing. Which questions are asked, and who asks them? #ContestedAgronomy
4. Find Your Feet: Our Director, Dr Dan Taylor, has been sharing at #ContestedAgronomy conf @IDS\_UK Look forward to the learning <https://t.co/ISPbcQGCT1>
5. STEPS Centre: #ContestedAgronomy: Four big questions to debate by @IanScoones @stepscentre <https://t.co/Je9j0pmhgC> #agronomy <https://t.co/XtDSFjZwle>
6. Ola Westengen: Thank you for organizing a great #ContestedAgronomy conference @stepscentre @IDS\_UK <https://t.co/W29AQdUAxD>
7. Future Agricultures: New #ContestedAgronomy blog: Exporting China and Brazil's agricultural know-how to Africa <https://t.co/3uieuO8rHX> <https://t.co/bXpwYII5DA>
8. Future Agricultures: #ContestedAgronomy: 4 big questions to debate <https://t.co/HV8hNps8mh> <https://t.co/a1j7vJuKiN>
9. IDS: In this 'Golden Age' of agronomy, can new ways of farming deliver on their promises? @WLE\_CGIAR <https://t.co/bG3qZsEPDu> #contestedagronomy
10. STEPS Centre: 'There are few global truths or axioms, but a lot of space for fruitful dialogue...' <https://t.co/5BzP7aP3Bg> via @IFPRI #ContestedAgronomy

## 2.2 Case study 2: Launch of the IDS Edited Collection on *Gender, Sexuality and Social Justice*

The second case study focused on the Twitter activity surrounding the launch of the IDS publication *Gender, Sexuality and Social Justice: What's Law Got to Do with It?* (Lalor et al. 2016). This took place on 1 March 2016 and consisted of a number of online and social

media activities, together with a lunchtime seminar at IDS. Online activity included the publication of the electronic version of the Collection on the IDS website, while social media activity included announcements on the IDS Facebook page and on various institutional and individual Twitter accounts, including IDS and IDS-affiliates such as SexualityPovertyLaw.

The launch was tracked from 29 February 2016 until 7 March 2016, again using a bespoke Twitter hashtag: #sexsocjustice. During this period 197 tweets and retweets were recorded from a total of 57 unique Twitter accounts. Only one Twitter reply was recorded.

The Twitter profiles revealed that 48 of those tweeting were individuals, mostly researchers, based in at least one of the following fields: law, medicine, development, anthropology, sexuality, theology or gender. The rest of the individual accounts for the most part self-identified as campaigners, while one person described himself as a writer and film director. The remaining nine accounts appeared to be institutional. Five of these were IDS and four IDS affiliates: the STEPS Centre, BRIDGE (the gender and development research and information service), the OKHub (an Open Data platform for sharing online information on development) and the SexualityPovertyLaw team (responsible for producing the Edited Collection). Two accounts belonged to the advocacy groups, feminIEsta and Nazdeek, while the remaining accounts were the Manchester Law School (academia) and Sussex LGBTQ+ (a support network for lesbian, gay, bisexual or transgender staff and students at the University of Sussex).

As with the first case study, the numbers of followers for each of the accounts had a skewed distribution. Three accounts had more than 10,000 followers, four had between 4,000 and 10,000 followers, 15 had between 1,000 and 4,000 and the remaining 35 each had less than 1,000 followers. Table 2.2 shows the seven accounts with the highest numbers of followers.

**Table 2.2 Launch of the IDS Edited Collection on *Gender, Sexuality and Social Justice*: Twitter accounts with greatest numbers of followers**

Twitter account	Number of followers
Medical Board Reform	78,395
IDS	45,833
Stephen Wood	14,961
Bisi Alimi	5,116
Matthew Weait	4,953
@MissouriDIFP Reform	4,344
STEPS Centre	4,109

The proportion of tweets containing links to online resources was higher than in the first case study (156 out of the total 197 tweets, or just over three-quarters of all the tweets).

Evidently, all the tweets used the #sexsocjustice hashtag, but some also used additional hashtags such as #sexuality and #gender, as did this tweet from IDS, for example:

IDS research illuminates avenues to advance #sexuality and #gender justice  
<https://t.co/vF1TU6yo2Z> #sexsocjustice

In terms of increasing reach, additional hashtags are a useful tactic. Because the #sexsocjustice hashtag was intentionally narrow in focus (to create a specific online space for discussion and comment about the *Gender, Sexuality and Social Justice* Edited Collection), the use of these broader hashtags may have helped to publicise the Collection

among other interested groups. This is especially likely given that these particular hashtags are already used by relevant wider communities. That said, some have cautioned against using too many hashtags; two per tweet may be the optimum number (Lee 2015).

As with the previous case study, there were few Twitter replies (only one was found). This might be because the overall Twitter activity appeared to focus on publicising key messages, rather than explicitly engaging in dialogue. It may also be because there was an apparent consensus among participants on broad values and opinions. Indeed, the only confirmed reply appeared to take a normatively different view from the great majority of other participants:

Cahyana E. Purnama @ids\_uk Social justice in action don't mean adopting unstable moral standard & further consequence of healthy life measures & local cultures

### **2.2.1 Pre-seminar period**

There were approximately 60 tweets and retweets in the hours before the lunchtime seminar, most of which drew attention to different themes and sections within the Edited Collection. During this period, the three most highly retweeted contributions were as follows.

1. Elizabeth Mills: RT @IDS\_UK: Missed our #sexuality and social justice symposium? Full report now out <http://t.co/uFY6OH9jvk> @SexualityPovLaw #SexSocJustice
2. IDS UK: An excerpt from the gender&sexuality Collection, and & invite to join us in an ongoing conversation <https://t.co/ZhZspNiVjw> #sexsocjustice
3. IDS\_UK: IDS research illuminates avenues to advance #sexuality and #gender justice <https://t.co/vF1TU6yo2Z> #sexsocjustice

The first of these, which was actually a retweet of an IDS tweet from September 2015, was retweeted seven times, while the second and third tweets (also from IDS) were retweeted six and five times respectively. This means that the pre-seminar tweets were not widely retweeted, but because they all originated from the IDS Twitter account they each had the benefit of the potential audience of the 45,833 IDS followers. In addition, the second tweet, 'An excerpt from the gender&sexuality Collection...', was retweeted by the Medical Board Reform, whose 78,395 followers dramatically increased the size of the potential audience for this tweet.

### **2.2.2 During the seminar**

The seminar itself lasted about 90 minutes and was characterised by a continuation of the kind of awareness-raising tweets already described, coupled with some real-time reporting of points made during the seminar. These came predominantly from SexualityPovertyLaw, for example:

1. We need to recognize different forms of oppression AND the ways people in different contexts act on these says @EMills\_IDS #sexsocjustice
2. It's not just necessary but exciting to get conversation going between lawyers, activists and academics says @EMills\_IDS #sexsocjustice
3. Communication is as much about listening as speaking says Kay Lalor #sexsocjustice

This real-time reporting was not retweeted to any great extent. Indeed, during this period, the Twitter space was largely dominated by retweets of the profile-raising tweets sent prior to the start of the seminar.

### **2.2.3 Post-seminar period**

The earlier awareness-raising retweets continued after the seminar and were supplemented by new tweets promoting additional themes from the collection, again predominantly from SexualityPovertyLaw, for example:

1. In the collection: How activism and research can work together: Reflections from the #Philippines <https://t.co/NhgdnEFuoT> #sexsocjustice
2. In the collection: The role of technology for legal Empowerment in #India by Francesca Feruglio <https://t.co/NhgdnEFuoT> #sexsocjustice
3. In the collection: Differentiating transgenderism from Homosexuality by Audrey Mbugua <https://t.co/NhgdnEFuoT> #sexsocjustice
4. In the collection: 'A story of my engagement with sexuality, law and social justice' by Ivana Radacic <https://t.co/NhgdnEFuoT> #sexsocjustice

### 3 Discussion

TwitterWeave was created to allow researchers, communications or advocacy professionals to track the progression of ideas in real time across the Twitter social media space (the 'Twittersphere'). By showing the user profiles of people and organisations retweeting or replying to other tweets, the application can reveal useful information about those people and organisations. In particular, it can reveal moments when a tweet originating in one community (for example, academia) manages to migrate to another community (for example, the media, donor organisations, non-government organisations, civil society organisations, or professionals involved in policy or practice). This is particularly valuable when the initial tweet refers to – or contains an embedded link to – a key research publication or message.

The two case studies in this report both had their own 'local' constituencies: mostly communities of researchers and activists interested in the broad themes of either agronomy in international development (case study 1) or gender, sexuality and social justice (case study 2). In neither case did the organisers of the two events explicitly wish to target specific constituencies beyond these local boundaries, so there is no major disappointment in the fact that little evidence of such engagement could be found. However, in both cases there was a desire to reach the widest possible range of audiences, so this analysis is useful because it provides some indication of how wide those audiences turned out to be.

Both events generated a good deal of interesting Twitter activity. Both were characterised by a considerable amount of what might be described as marketing announcements and advocacy messages: tweets whose purpose was to draw wide attention to particular events, publications or ideas. In case study 1, the high follower numbers of some of the participating Twitter accounts, coupled with a relatively high rate of retweeting, suggests that these tweets were reasonably successful. This is perhaps not surprising, given that the focal event was an academic conference. By contrast, case study 2, which focused on the online and face-to-face launch of a publication, did not produce quite the same level of Twitter engagement. The two events were different and therefore would not be expected to generate the same volume of activity.

Both cases also involved a limited amount of discussion via Twitter (again, this was more pronounced in the case of the agronomy conference than the publication launch). This limited use of Twitter for debate may reflect a wider trend in Twitter behaviour. Since late 2013, retweets have become more frequent than replies, suggesting that people are using Twitter less as a tool for engaging in explicit dialogue and more as a micro-blogging platform for posting messages to a wide audience (Liu, Kliman-Silver and Mislove 2016).

It is also worth noting that, despite the fact that Twitter works in all languages, all the tweets recorded for these case studies were written in English. However, given that all the relevant publicity materials, including the hashtags, were only available in English, this is perhaps not too surprising.

TwitterWeave is well suited to this type of analysis. By plotting all the tweets from a particular search against a timeline, and ranking them by the number of followers for each author, the application makes it easy to locate and explore interesting areas of activity. Selecting an individual tweet automatically displays the chronological thread of activity containing that tweet – i.e. strings of linked tweets, retweets and replies which contain that specific tweet – together with the user profiles for the authors of those tweets. This makes it

easy to locate interesting clusters of Twitter activity – for example, threads containing the following.

1. Large numbers of retweets – suggesting strong interest in a particular message.
2. Large numbers of replies – suggesting a message that has generated debate.
3. High-value ‘influencers’ – authors with large numbers of followers.
4. Authors with interesting profiles – especially difficult-to-reach, high-value authors such as particular individuals or organisations involved in policy work, politics, the media, or funding.

The analysis of the two case studies used this feature of TwitterWeave to explore all these areas of activity. Both case studies contained many examples of activities 1 and 3, as discussed earlier. Activities 2 and 4 were rarely observed: neither case study exhibited much direct debate via Twitter replies, nor did the Twitter activity include direct participation from potentially high-value Twitter accounts from beyond the immediate communities of interest.

One limitation of the current version of TwitterWeave is the inability to directly explore the relationship between the use of embedded links in tweets and the download rate for the documents referred to in those links. As noted earlier, the majority of tweets in both case studies contained such links; indeed, embedded links are used in roughly one-third of all tweets sent in the world (Prestipino 2014). Being able to observe whether or not the retweeting of embedded links coincides with increasing download rates – particularly when the retweets are posted by accounts with large numbers of followers – would be useful for supporting those involved in research communications. It may, for example, suggest ways to test different approaches for using social media to increase research dissemination.

The fact that TwitterWeave displays tweets on a timeline means it should, in principle, be easy to compare this to something like a Google Analytics timeline showing document downloads. If downloads of documents referred to in the links simultaneously increase with the Twitter activity containing those links, this might suggest a causal link between the two. The functionality for displaying Google Analytics graphs within TwitterWeave itself was explored during the development of the application, but this was rejected because of the technical complexity and resources that would have been required, at least for this first version of it.

## 4 Conclusion

Twitter is widely regarded as one of the most influential social media platforms that currently exists, both for the academic world and beyond (Mandavilli 2011). Because of this, TwitterWeave was designed as a free-to-use web application to help researchers and communications specialists learn more about how people engage with research. The purpose of this report was to assess the prototype TwitterWeave application by testing it with reference to two events: the Contested Agronomy conference, held at IDS from 23 to 25 February 2016 and the launch of the IDS publication *Gender, Sexuality and Social Justice: What's Law Got to Do with It?* on 1 March 2016.

Two TwitterWeave searches were carried out, using hashtags created by the IDS Communications team for the two events. The searches generated a wealth of data, including all the tweets, retweets and replies containing the hashtags during the period of the study. TwitterWeave generated plots of the data, showing when each tweet was made, when it was retweeted or replied to, and who the author of each tweet or retweet was. It also included user profiles which, depending on how Twitter authors had described themselves, provided useful information about authors' interests, jobs and organisational affiliations.

From this information an analysis was produced, illustrating what was posted on Twitter in relation to the two events. This analysis showed which posts received the most traction among participants who were active Twitter users, as well as the size of the potential audiences for the posts. It also revealed useful information about the authors themselves, suggesting the relative proportions of the various professions and interest groups participating in the Twitter discussions.

In conclusion, although such analysis is partial because it only reflects social media activity, it can nonetheless generate useful additional information. Such information can reveal patterns – and tell stories – about how people engage with research ideas.

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