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10 Network Weather

Previous chapters have looked at the potential for change in scholarly practice but deliberately avoided an argument based on compulsion or inevitability. This chapter takes a slightly different tack and suggests that the use of digital, networked open tools and approaches will have an impact on some areas of scholarly practice, which in turn will affect all scholars, regardless of whether they themselves use the technologies or not.

Network weather

The metaphor that will be adopted here is one suggested by Adam Greenfield (2010), which he termed ‘network weather’. Greenfield is interested in the way technologies affect our physical environment, in particular life in cities. His argument is that, even if you are unaware of these technologies, they are beginning to have an impact on how we experience our daily lives in urban settings. He gives the following scenario to demonstrate his point:

The irritating guy with the popped collar standing next to you at the bar? He paid less for his G&T than you did, because he’s the Mayor of this place on Foursquare, and the management has cannily decreed Mayors get a 5% discount. Ten minutes from now, the place is going to fill up with his equally annoying buddies, absolutely ruining your hope of a quiet drink. And they’re going to show up not because he did so much as call them to tell them where he’d be, but because he’s got things set so his Foursquare account automatically posts to his Facebook page. Buddies of his that don’t even use Foursquare will come, to slouch at the bar, stab at their phones and try and figure out where the party’s going next.

You’ll settle up and leave, miffed, and ease on down the road a spell to a place you know where you can get a decent bowl of penne – nothing special, but good and hearty and cheap, and you’ll chase it with the big bouncy house red, and all will be well and right with the world. Except the Italian place is gone, gone because it racked up too many nasty reviews on Yelp, or somebody Googlebombed its listing, or its hundred healthcode violations made it positively radioactive on Everyblock.

... if you don’t know what they are and how they work, you’ll never have the foggiest clue why things shook out the way they did. Your evening will have

a completely different shape and texture than what it would have prior to the advent of ubiquitous mobile Internet. You'll have been tossed this way and that by the gusts and squalls of network weather. (Greenfield 2010)

We can consider similar scenarios for scholarly practice and the way they are affected by network weather. A good example that is already happening is the nature of the academic conference – a practice and event that sits at the heart of scholarship. It achieves many vital functions in academic practice, including the following:

- Knowledge sharing – attendees get to present and listen to other talks.
- Validation – by sharing research and ideas within a subject community attendees gain validation of their own research.
- Networking – it is often through meetings at conferences that scholars develop their network of peers.
- Recognition – publishing conference papers is often a first step for researchers to publishing papers and are recognised outputs.
- Socialising – slightly different from networking, there is a social element to conferences which make them enjoyable.

Each of these functions is affected by network weather. I will address the changes in detail, but they can be summarised as follows:

- Remote participation – streaming events allows people to attend remotely and often put questions to the speakers.
- The backchannel – Twitter, in particular, has become a potent force for creating a backchannel of conversation, with positive and negative results.
- Amplified events – many conferences now seek to draw in a wider audience using remote participation, beyond the normal constituents.
- Socialisation – people will organise events before and during the conference using social networks.
- Alternative session formats – in response to the impact of such technologies, conference organisers are beginning to use the face-to-face element of conferences to do more than just content delivery.

Here, then, is my attempt at Greenfield's network weather scenario for an academic at a conference.

When you arrive you are disappointed to find out that someone who has attended for the previous three years, and who you always have a meal with, has stayed at home because they can attend remotely. In the opening session the keynote speaker makes a claim that someone checks and passes around via Twitter, and it seems they have misrepresented the research findings. There is a noticeable change in atmosphere and the questions the speaker receives are more challenging than you usually encounter. In another session the speaker takes questions from the remote audience, which includes students and this generates a very good discussion about the learner perspective.

That evening the conference bar seems rather empty, and seeing an old colleague he informs you that there is an alternative conference Facebook page, and they have arranged a meeting in a local bar, with a discussion theme.

The next day the afternoon doesn't have any presentations; instead it has an informal format where the participants seek to create a set of learning resources and a link up with four remote hubs in different cities.

This may not sound like an improvement to the conference, or in fact a substantial change, but each of these uses and impacts are all ones that have been implemented in the past year or so. They represent real changes to an activity at the core of scholarly practice and are therefore a good example of the type of network weather which we may experience across all areas of scholarly function.

Remote participation

Over the past few years remote participation of conferences has become more commonplace, as tools for streaming video have become cheaper and social tools have become widely adopted. Entirely online conferences will be covered later; this section is concerned with the often vicarious, casual participation at a distance of a physical event. This type of participation is often unofficial and uses low-key, free technology, although increasingly it is an official element of the conference. It is often a hybrid of the following examples:

- Twitter hashtags
- live video streaming (whether official or via an individual)
- blogging
- live blogging (i.e. reports during a session)

- video/audio updates and interviews
- Flickr photo streams
- Slideshare presentations
- Cloudworks/Friendfeed aggregations

There are at least three interesting issues this raises. First, how does it change the nature of the conference to have this broader participation? Second, how can conference organisers and presenters best take advantage of it and incorporate it into the conference? Third, what is the experience like for the remote participant compared with the 'real thing'?

It is changing the nature of the conference for the attendees because it means the boundaries of the conference become blurred. As well as engaging in dialogue with those who are present, there is a wider group who can engage in conversations on blogs or Twitter (or the conference may use an official remote presentation environment such as Elluminate for streaming). It also blurs the time over which these discussions take place with some pre-event discussion in anticipation and a good deal of post-event discussion as people blog and reflect on the conference.

The second question of taking advantage of remote participation is one where we are seeing a range of experimentation. This can include seeking questions from remote participants, asking them to send in online contributions (such as videos), organising virtual streams which run parallel to the main conference, and using their participation both as promotion for the conference (because it creates more online discussion) and analysing their involvement as part of the overall conference review.

There is a delicate balance for conference organisers to strike here, for if the remote participation becomes too effective then people may stop attending the conference, and it is difficult to get people to pay for remote participation.

For the last question relating to experience, I conducted a short online survey to gain an overview of how remote participation compares with real attendance. The first three questions asked how remote participation compared with face-to-face attendance on some of the main functions of conferences, namely networking, content and socialising.

For networking most people ranked it as between 25 and 50 per cent as good as attending face to face, while for accessing the content, most people ranked it as around 75 per cent as effective. Unsurprisingly, socialising didn't fare as well, with most people ranking it between 25 per cent as good and no good at all.

Lastly, I asked about how much time remote participation took compared with face-to-face attendance. An estimate of 25 per cent was the most popular response.

This gives an interesting starting point for considering remote participation at conferences. When considering attending a conference, an individual can ask oneself a question such as ‘if I can achieve 50% networking, get 75% of the content for 25% of the time and it’s 75% greener, then what are the real benefits of attending?’

This is not to argue that remote attendance is superior, or should completely replace face-to-face conference attendance, but it will need to be clearer what benefits are accrued from physically attending, and maybe individuals will trade-off some face-to-face attendance for remote participation.

Backchannel

The combination of a common (but not formally promoted) communication channel (such as Twitter, FriendFeed and Facebook) and pervasive Wi-fi access has led to the rise of the backchannel at conferences. Combined with the use of the hashtag, the audience of a talk don’t need to agree to ‘meet’ in a common forum, or to even know each other to engage in discussion. This could be seen as another example of the technology and community norms of social media spaces such as Twitter overriding the boundaries between people that we saw in Chapter 6. In Chapter 6 we were concerned with interdisciplinary boundaries, for the conference the boundaries are more physical – how do you communicate with strangers who you share a room with but can’t speak to?

The backchannel allows people to comment on the presentation, both with others at the presentation and also to their wider network. This can be a benefit, with positive feedback, following up links, real-time discussion before the ideas dissipate, the creation of an instant archive around an event and a means of connecting with others at the conference that can be followed up.

But the experience is not always a positive one, as Danah Boyd (2009) relates. She gave a presentation at a conference where the Twitter backchannel was displayed behind her, but she couldn’t see it. She relates how the public commentary disrupted her talk:

[W]ithin the first two minutes, I started hearing rumblings. And then laughter. The sounds were completely irrelevant to what I was saying and I was devastated. I immediately knew that I had lost the audience. Rather than getting into flow and becoming an entertainer, I retreated into myself ... I fed on the response I got from the audience in the worst possible way. Rather than the audience pushing me to become a better speaker, it was pushing me to get worse. I hated the audience. I hated myself. I hated the situation. (Boyd 2009)

In an example of network weather she points out how the conference organiser's decision to foreground the backchannel changed the nature of the talk:

The problem with a public-facing Twitter stream in events like this is that it FORCES the audience to pay attention to the backchannel. So even audience members who want to focus on the content get distracted. ... the Twitter stream fundamentally adds another layer of content that the audience can't ignore, that I can't control. And that I cannot even see. (Boyd 2009)

The vast majority of backchannel conversations are, in my experience, positive, encouraging and complementary (and complimentary) to the talk. When the backchannel has been negative it has often been because the speaker is being deliberately provocative, so this reaction is no doubt what they intend. But we should appreciate that the backchannel is a powerful element, and as with many emerging practices finding the balance of behaviour may take time; for example, turning the backchannel into a 'frontchannel' is probably something that should only be done if the speaker wants it and is planning to use it in some way.

Academics are accustomed to, and usually welcome, thoughtful criticism, but care must be taken to avoid the pack mentality the backchannel sometimes exhibits. Dave Ferguson (2009) relates his experience of witnessing a 'harshtag' incident, when the keynote speaker was deemed to be condescending. He argues that although the behaviour may be reprehensible, it should also make organisers think about the role of the keynote and how speakers use their time and the concept of an audience: 'I'm not going to talk about *audience* any more. An audience is what you have at a performance, like a concert or a play or a taping of *Wheel of Fortune*. When it comes to a professional presentation, what you have are participants – people who want to take part, who *plan* to take part, in what's going on'.

Amplified events

Remote participation can occur without the conference organiser's explicit backing or promotion, and the provision of easy broadcasting tools will only increase the extent to which this happens and the channels it occurs across. The amplified event (Dempsey 2007) is one where the conference organisers seek to reach out to audiences beyond the physical conference, to include input from remote participants using 'a variety of network tools and collateral communications' and also to provide attendees with an 'amplified' experience.

In its simplest form this might include live-streaming the talks and having an agreed hashtag. A more sophisticated approach would utilise environments to encourage remote participants, whether these are synchronous videoconferencing

tools such as Elluminate or Big Blue Button, asynchronous discussion in VLEs such as Moodle or conference-specific social network spaces such as Crowdvine. The use of appointed bloggers and social media coverage may also contribute to the 'amplification' of the conference.

Another aspect of amplification is not only across physical distance but also across time. The archive of a conference will include a distributed record of formal and informal content, including the recordings of talks, the papers, participants' presentations on sites such as Slideshare, blog posts, Twitter archives, individual audio and video accounts, messages in discussion forums, official and unofficial photos on Flickr and so on. If there is a commonly used hashtag, then all of this material can be discovered and represents a much more complete picture of the conference and the issues than simply the record of the published papers. Compare the archive of a conference held in 1990 to one held in 2010 – the archive of the former is likely to consist of little more than the printed proceedings and maybe some photos in an album somewhere. The archive of the latter will be multimedia, distributed and feature a range of tone, from the formal academic one to informal, social chat. There are undoubtedly issues around the preservation and curation of such a record, but it represents a more complete representation of the conference. In this respect at least the open, networked, digital conference is already radically different from its historical predecessor.

Brian Kelly (2008) suggests the following eight forms of 'amplification':

- 1 Amplification of the audiences' voice: Prior to the availability of real-time chat technologies at events it was only feasible to discuss talks with immediate neighbours, and even then this may be considered rude.
- 2 Amplification of the speaker's talk: The availability of video- and audio-conferencing technologies makes it possible for a speaker to be heard by an audience which isn't physically present at the conference.
- 3 Amplification across time: Video and audio technologies can also be used to allow a speaker's talk to be made available after the event, with the use of podcasting or videocasting technologies allowing the talks to be easily syndicated to mobile devices as well as accessed on desktop computers.
- 4 Amplification of the speaker's slides: Sites such as Slideshare enable the slides used by a speaker to be more easily found, embedded on other websites and commented upon, in ways that were not possible when the slides, if made available at all, were only available on a conference website.

- 5 Amplification of feedback to the speaker: The backchannel acts not only as a discussion channel for conference participants but also as a way of providing real-time feedback to a speaker during a talk. There are also dedicated microblogging technologies, such as Coveritlive and Scribblelive, which aim to provide more sophisticated 'backchannels' for use at conferences.
- 6 Amplification of a conference's collective memory: The pervasive nature of digital cameras and mobile phones generates a collective representation of a conference, which are then shared via sites such as Flickr. The ability of such photographic resources to be 'mashed up' with, say, accompanying music can similarly help to enrich such collective experiences.
- 7 Amplification of the learning: The ability to be able to follow links to resources and discuss the points made by a speaker during a talk can enrich the learning which takes place at an event.
- 8 Long-term amplification of conference outputs: The availability in a digital format of conference resources, including both official and unofficial resources, may help to provide a more authentic record of an event, which could potentially provide a valuable historical record.

Socialisation

It is accepted that one of the functions of the academic conference is to 'network' and meet peers. Rather like study at a university, the exchange of academic knowledge is only one function – it is the most publicised one, but of equal importance is the human or social element. As we saw in Chapter 5, many academics have a network of colleagues with whom they form research teams, often using the same teams, and these connections are usually formed through face-to-face interactions.

New technologies allow this socialisation to occur before, during and after a conference, with a subsequent impact on the face-to-face socialising that occurs at the conference. A network of contacts may have been previously limited by physical networks, but now an academic with an online presence can have a range of contacts, and the conference is a means of reinforcing these or furthering discussion which has taken place online. The sense of meeting up with old friends is, as with above, amplified, since there will be a group of people who have not met face to face and yet feel as though they know each other, not just because they have engaged in discussion around their discipline but also because they will know an element of each other's personal lives. As I argued in Chapter 6, one of the key factors in Twitter's success is that people deliberately mix personal and professional messages.

They are, after all, called 'social networks' for a reason because they encourage social interaction. This needn't always culminate in actually meeting the person; meaningful interactions can occur between people who may never meet, and it undervalues online relationships to view them as 'face-to-face friendships in waiting'. The conference, though, can reinforce these relationships, with the result that ongoing virtual interaction is strengthened as a result of meeting physically.

Changing formats

These elements are combining to lead many conference organisers to explore different formats. An example is a hybrid approach where some people attend face to face and others sign up for a structured virtual event, or there are 'hubs' hosting a version of the conference in different locations. For example, the MacLearning 2010 conference took place simultaneously at MIT and Northwestern University with six other campuses joining in via a live videoconference. It was also open to online participation via the web.

Within conferences the range of sessions is also beginning to change. Recognising that it is the face-to-face social element that is the real virtue of physical conferences, organisers are seeking to capitalise on this. The BarCamp model has been adopted within some conferences. The BarCamp was initiated in 2005 as a developer workshop which deliberately eschewed much of the practice of conventional conferences. Participants are encouraged to share their work via social media, and the structure is much more fluid, with participants proposing and scheduling sessions each day as they progress and see what is of interest. This 'unconference' type approach has been adopted for non-developer events also. For example, the TeachMeet (<http://www.teachmeet.org.uk/>) events are organised as informal, unconference-type events where teachers can share good practice, practical innovations and personal insights in teaching with technology, and they often run in conjunction with conventional events. They have explored different formats, including

- micro-presentations – lasting 7 minutes;
- nano-presentations – lasting 2 minutes;
- random selection of speakers – from a pool of willing participants; and
- use of the backchannel – to let non-participants participate.

As with the Barcamp model, TeachMeet encourages others to organise their own version, rather than restricting the conference to one location.

In this section we have been looking at how the conventional face-to-face conference is experiencing change as a consequence of the top-down or

bottom-up adoption of technologies. What this illustrates once again is that new technologies provide a range of alternatives where previously it was a distinctly binary choice: you either attended or not (although you could read the proceedings afterwards). Now there are a range of alternatives; individuals who may have attended some conferences previously may now choose to do so remotely, they may still attend some and other conferences which they would never have attended they may now dip into vicariously.

In the next section I will look at the wholly online conference, as an example of an alternative to hosting a conference.

Case study – the Open University conference

The Open University holds an annual learning and technology internal conference, and in 2010 I took over the responsibility for organising it. The format of the conferences had become rather staid, and the use of technology was conservative, so there was a remit to try new approaches. There was also a requirement to lower costs, with financial cutbacks, so there were a number of factors which suggested attempting a different format.

The structure we decided upon was to make the conference wholly online, free and open to all, with a theme of ‘Openness in Education’. We used two main technologies: Cloudworks for asynchronous discussion and sharing resources, and Elluminate for the synchronous sessions of the conference itself. The conference was held over two days, with four synchronous sessions.

The Cloudworks site acted as the main hub for the conference, allowing participants to register and get information about the conference. Cloudworks allows content to be embedded from other sites such as Flickr, YouTube, Slideshare and so on. We added in the presentations that people gave us, contributions and interviews, but there was no need to host these; instead we relied on cloud services. Each Elluminate session was recorded and could be played back, so it could be accessed after the event had finished, the links being provided in the main Cloudworks site. Each section was also chunked into the separate smaller talks and delivered as podcasts so people could view or listen to them on mobile devices.

We made use of a range of other free online services around the conference also, including Twitter (we used the hashtag #OUConf10 to track conversations), twapperkeeper which archives tweets (for the hashtag), SurveyMonkey for the post-conference questionnaire, blogs for promotion, YouTube, Slideshare, Animoto and Xtranormal (all for creating content).

As well as the two-day conference, there was specific pre- and post-conference activity in Cloudworks. A number of interviews were filmed with the vice chancellor

and others on the themes of the conference (see <http://cloudworks.ac.uk/cloud/view/3959>) and shared via YouTube. Instead of paper contributions we requested 'multimedia posters' where individuals or teams could create videos about their research or projects using a range of tools. After the conference we held an asynchronous discussion session focused around these contributions (see <http://cloudworks.ac.uk/cloudscape/view/2012>).

Organising the conference completely online offered a number of advantages. First, it meant we could get a wide range of speakers, usually willing to present for free. We had four external keynote speakers, including Wikipedia founder Jimmy Wales, all of whom presented remotely without any requirement to travel to the university. Most, but not all, of the OU presenters were on campus. Had we required presenters to travel to the OU we would certainly not have been able to get the same range of speakers.

Overall the conference attendance compared favourably to previous years, with 287 people attending the synchronous Elluminate sessions over the two days and 3,500 viewing conference content in Cloudworks. Approximately, 250 had attended the previous year's face-to-face conference.

A survey of those who attended the conference gave very positive responses, with 'excellent' or 'good' ratings of 83 per cent (for content), 79 per cent (use of technology) and 83 per cent (organisation). In addition 73 per cent said they would definitely attend another online conference and 25 per cent indicated they probably would, suggesting this is a medium the university can explore for other events.

Attendees came in from 14 different countries and 48 per cent indicated that they would not have attended if it was a face-to-face conference. Compared with the previous face-to-face conference the costs were marginal at around £2,500, plus staff commitment from a considerably smaller team, compared with costs of around £30,000 and a larger team in previous years.

The conference generated a significant amount of network publicity, with 3,251 views of the main cloudscape page, 168 comments, 14 separate bloggers and 141 different twitterers using the conference hashtag over 766 tweets.

There are other factors which are difficult to measure but which we gained some insight into through the survey. For instance, most participants reported that they combined participating in the conference with doing some work. Combined with the time saved in not travelling, this ability to engage in some work simultaneously may indicate a more efficient use of time. However, some respondents also suggested that this was a negative effect, in that they value the time away from work which attending a physical conference affords, as this provides them with valuable thinking time.

In terms of socialisation and interaction, most participants thought that the conference allowed a community to form and thought that the open nature of the

conference worked well. Opinion was divided as to whether the interaction was less than with a face-to-face conference.

While the responses overall were positive there were also some issues around online conferencing which emerged, which speak to the context within which the academic conference operates and many of the assumptions we hold implicitly about how it operates. Online conferences are probably in a similar position to distance learning 40 years ago or elearning 10 years ago. They have a legitimacy deficit to some and thus have to work hard to overcome this. Some of the practice issues surrounding online conferences include the following:

- Online conferencing doesn't separate from daily tasks sufficiently – this is also one of its strengths, of course, in that people can attend, which a three- or four-day travelling commitment may prevent. But some people commented that either they weren't allowed to prioritise virtual attendance over other work or that if they were in the office, then people assume they are interruptible. If you attend a face-to-face conference the physical separation immediately performs this function.
- Online doesn't command as much attention – although attendance was comparable with the physical event held the previous year, one might have expected it to be higher. When you have a physical conference on campus there are a set of physical cues – signs, catering, attendees. A virtual conference, despite all the communications deployed, loses some of these cues.
- Commitment to online is lower – when you are travelling to a physical conference there is a need to make some preparations: accommodation, transport, child care cover and so on. An advantage of an online conference is that it doesn't require this level of organisation (and thus people attend who couldn't normally). This also means the conference doesn't foreground in an attendee's attention in the same way. Some people experienced connection problems, which were easily fixed, but because it happened on the day of the conference, it was too late and they gave up. Despite issuing instructions detailing how to check connections prior to the conference, it may be that a virtual conference doesn't register in the same way as making physical arrangements.
- The Camelot comparison – when being compared against an existing practice, there is a tendency sometimes to accentuate the positive elements of the entrenched practice. Not every face-to-face conference is a success. Not every speaker is engaging. Not every location wonderful. But the new version is often compared against the idealised version of this.

- Unrealistic burdens – with new formats unrealistic demands are sometimes placed upon them, which are never asked of the existing practice.
An open, online conference may well bring in different audiences who would not attend physical conferences, and these participants will have different expectations. The traditional conference format doesn't appeal to some people, but their voices are not heard because they don't go to conferences.

Online conferences are different entities to face-to-face conferences. They have different advantages, disadvantages, modes of operation and interactions. Just as with elearning it is a mistake to only compare them with the existing practice because it's what they do *differently* that's intriguing.

Conclusion

This chapter has explored the concept of network weather as a metaphor for the impact of open, digital networked approaches on scholarly practice. The network weather argument suggests that changes in your environment are occurring because of other people's use of these technologies and the behaviour they facilitate, even if as an individual you are not engaged with them.

The example of the academic conference was used to map this onto scholarship as it is a practice common across all disciplines. There are a number of ways in which the interactions, structure and record of a physical conference are being altered by the use of these technologies. This occurs both through the informal adoption of technologies by attendees and the formal deployment of them by conference organisers in order to amplify their event.

This may seem confined to conferences with a technology focus presently, but it is likely to follow the familiar Rogers (1962) diffusion of innovation S-shaped curve. Whenever new technologies are adopted in education, the first examples are where the technology itself is a focus. For example, initial elearning courses were often about the Internet, so the use of the technology was part of the learning experience. As practice becomes standardised and more robust, it spreads and the use of the technology becomes less of a barrier. Now elearning courses are commonplace in all disciplines, from Shakespeare to statistics. The same will occur with changes in conferences. It may start with a handful of attendees blogging an event, and some others sharing photographs from their iPhones on Flickr, while some of the research students connect via Twitter. The following year the conference organisers propose a common hashtag and the conference is on its way to becoming an amplified event, and network weather is gathering.

It is not just in conferences that we see the network weather effect. In teaching, for example, a lecturer may find that a student at the back of the class is asking

challenging questions because they are watching a Stanford University professor talk about this subject on iTunes U, or a lecture-based course may find itself in competition with an open, online course on the same topic, or students may be sharing up-to-date resources via Facebook. In most of this book I have been arguing for the positive impact of new technologies, but there is also a more harsh realism stance, which states that it is not whether new behaviours are an improvement but that they are occurring anyway. As with the industries examined in Chapter 3, attempts to prevent this through technical or legislative prohibitions are rarely successful, so the onus is on higher education to adapt and find benefits that are inherent in an open, digital networked approach.