

# RIGHT RESEARCH



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## MODELLING SUSTAINABLE

## RESEARCH PRACTICES

## IN THE ANTHROPOCENE



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# 16. Econferences Are Not the Same, but Are They Good Enough?

*Terry Anderson*

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Terry Anderson helped pioneer e-conferencing with the email-based Bangkok Project event in 1992, which took place just one year after the World Wide Web went public. In the following chapter, he reflects back on the early challenges of the online conference medium and looks ahead to its future. How has the e-conference evolved from its origins to today? Will online gatherings always feel like a less satisfying version of their traditional, face-to-face counterpart or can they offer conference-goers something unique?

Beginning my PhD program in 1990 meant curtailing the perks I had enjoyed as a director of a distance education network in northern Ontario. There was no money for trips to exotic lands to participate in education research conferences. Thus, I was stuck—in pre-Internet times—in Canada, while my ex-colleagues enjoyed the learning, each other's company and the intercultural experience of other lands while attending international conferences. However, as the International Council of Distance Education Congress in Bangkok approached I began to wonder if I, and potentially hundreds of others, could participate in the conference—without actually travelling there. Thus was the inspiration for the world's first networked supported virtual or e-conference.

In the early 1990s we didn't think much about carbon footprints and time spent on airplanes, but we did worry about the high cost of travel

and hotels. And of course, the irony of distance educators, having to physically travel for their professional development while preaching the benefits of mediated learning, unnerved not just a few of us. So, how could we have meaningful and productive professional learning and networking while remaining in our homes?

To set the context, one must remember that in 1992 there was no Internet—or at least any Internet that ordinary citizens could access. However, email was becoming more popularly supported on networks such as BITNET, FidoNet, NetNorth, Usenet and eighteen other mail distribution lists that participated in this first econference. The learning design for the conference consisted of soliciting text talks/papers from six leading experts who would be attending the conference and distributed these ‘first speaker inputs’. We invited participants to respond (using email) to the paper, to the first speakers and to the other participants. Each topic ran for two weeks of asynchronous discussion, with two topics running simultaneously. Listserv and other early email support services were used to distribute these emails. To expand access, we needed to bridge networks (remember no Internet), by using human ‘porters’—‘unsung heroes of the computer revolution’, who manually cut and pasted text messages between various network distributors. In those days it was quite easy to solicit ‘first speakers’ as most had no idea what an econference was and many were willing to give it a try. Even though, as Canadian researcher Tony Bates noted, ‘I feel like someone standing on the top of a mountain and shouting, without knowing if anyone is listening!’<sup>1</sup>

A participant survey of the Bangkok Project gleamed the following comments:

- ‘For me this virtual conference means that I can attend—I would be un-able to get the funding to attend the ‘real’ conference’.
- ‘It means that I have a permanent record of all dialogue, to which I can easily refer at a later date’.
- ‘It means that I can choose when, during the day, I want to “attend” a session’.

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1 Terry Anderson and Robin Mason, ‘The Bangkok project: New tool for professional development’, *American Journal of Distance Education*, 7.2 (1993), 5–18 (p. 11), <https://doi.org/10.1080/08923649309526819>.

- ‘It means that I can listen to practitioners and experts in my field discussing the new developments that I am interested in and hope eventually to implement myself.’<sup>2</sup>

There have been hundreds of econferences held on the Net since 1992. Now, in addition to email, myriad technologies have been used to bring learning and networking to professionals around the world—including: live and recorded video, immersive environments, blogging, microblogging and others—all without the fiscal and environmental costs of physical attendance. However, in that same period there have been thousands of face-to-face (f2f) conferences held in almost every country of the world. These have created an industry of conference facilitators, conference facilities and dedicated conference hotels.<sup>3</sup>

Despite the attempts to make parallel experiences both on site and online, it is obvious to almost all attendees that an econference is ‘not the same’ and often not the first choice as attending in person.<sup>4</sup> But is it good enough? Does it meet certain needs that cannot be met face-to-face? Can online technologies facilitate meaningful learning experiences? And, of course, the driving question for distance educators, is, does it expand and make easier access to learning for everyone?

Others have noted the environmental cost of travel.<sup>5</sup> Not only airplane travel, but ground transportation to conference venues, cost of heating and servicing hotel and conference meeting rooms add to negative impact on our environment and our pocket books. In 2010, we attempted to quantify these savings using a case study of a medium-sized online conference. Using the participants home institutions to gauge the travel distance, we calculated what the carbon costs would have been if the event had been hosted in London, England, where the

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2 Anderson and Mason (1993).

3 Karin Weber and Kaye Sung Chon, *Convention Tourism: International Research and Industry Perspectives* (Binghamton: Haworth Hospitality Press, 2002), [https://doi.org/10.1016/s0261-5177\(03\)00087-6](https://doi.org/10.1016/s0261-5177(03)00087-6).

4 Veronica Outlaw and Kristi Garrett, ‘Case study: Using HE-TPACK to improve virtual professional development opportunities’, *Distance Learning Administration Conference* (Jekyll Island, Georgia, June 19–22, 2016), pp. 163–174, <https://www.westga.edu/~distance/dla/pdf/2016-DL-PROCEEDINGS-updated.pdf>.

5 Julian Crane and Brent Caldwell, ‘Another inconvenient truth?’, *BMJ: British Medical Journal*, 333.7581 (2006), 1256; Ian Roberts and Fiona Godlee, ‘Reducing the carbon footprint of medical conferences’, *BMJ: British Medical Journal*, 334.7589 (2007), 324–325, [https://doi.org/10.1016/s0261-5177\(03\)00087-6](https://doi.org/10.1016/s0261-5177(03)00087-6).

organizers were based.<sup>6</sup> We found that the 194 conference delegates who would have otherwise travelled by airplane saved 2.21 tonnes CO<sub>2</sub> of carbon emissions each, for a total of nearly 430 tonnes. To put this into perspective, the annual CO<sub>2</sub> emissions per capita in Canada in 2018 was 15.32 tonnes, while by comparison the per capita CO<sub>2</sub> emissions in India was 1.96 tonnes.<sup>7</sup> This means that a single conference flight can generate more carbon emissions than the average person in a developing country does in an entire year.<sup>8</sup> In addition to the environmental benefits, we also found that the financial savings for the participants was high. The cost to attend the econference was a mere \$69 USD, a 3000% reduction in cost as compared to the f2f equivalent, with an average saving per person of \$2,162 USD. Thus, there is no question that moving conferences online reduces the production of greenhouse gases and saves delegates thousands of dollars.

Perhaps because of these benefits, some online events have become enduring fixtures on the conference scene. Likely the longest running econference is the Teaching, Colleges & Communities (TCC) conference held since 1996 from Kapi'olani Community College. This conference attracts approximately 1,000 delegates and was one of the first to charge participants a registration fee. In a 2011 study, Curtis Ho, Bert Kimura and Rachel Boulay published data from five years of participant evaluations of the TCC conference. They report that the strong majority of participants felt a sense of community with other participants, appreciated the interaction opportunities and compared the conference favorably to f2f conferences they have attended.<sup>9</sup>

That said, most econferences are short-term or one-off events, that are only held for one or two years before they shut down or revert back

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6 Lynn Anderson and Terry Anderson 'Online professional development conferences: An effective, economical and eco-friendly option', *Canadian Journal of Learning and Technology*, 35.2 (2010), <https://www.cjlt.ca/index.php/cjlt/article/view/26390/19572>, <https://doi.org/10.21432/T29015>.

7 Union of Concerned Scientists, 'Each country's share of CO<sub>2</sub> emissions', *UCSUSA* (August 12, 2020), <https://www.ucsusa.org/resources/each-countrys-share-co2-emissions>.

8 Niko Kommenda, 'How your flight emits as much CO<sub>2</sub> as many people do in a year', *The Guardian* (July 19, 2019), <https://www.theguardian.com/environment/ng-interactive/2019/jul/19/carbon-calculator-how-taking-one-flight-emits-as-much-as-many-people-do-in-a-year>.

9 Curtis P. Ho, Bert Kimura and Rachel Boulay, 'Retrospective analysis of a virtual worldwide conference for eLearning', *International Journal for Educational Media and Technology*, 5.1 (2011), 107–117, <https://doi.org/10.1109/iceta.2018.8572065>.

to the f2f mode. One of the challenges of econferences is to engender the type of informal and often spontaneous interactions that can and does occur at f2f conferences, most often before or after scheduled presentations. For many, these networking opportunities are as valuable as the formal sessions themselves. In an attempt to gain some of these informal benefits, Hannah Fraser et al. present a model for regional hubs at which delegates gather to attend both online and f2f sessions.<sup>10</sup> This can drastically reduce travel costs, with only a slight reduction in the diversity of potential contacts and of course also decreases the appeal of tourist, family or other personal benefits of expensive travel.

As the population's network literacy increases—through experience with social media, email, video conferencing and other mediums—so too does the potential for valued spontaneous and planned communications. Econferences have tried a variety of mediated techniques to engender this type of spontaneous networking that often include profiles, 'liking' and other techniques used on social networks and non-programmed virtual spaces that support real-time interaction. From our own experiences though, these have only been partially successful and we need innovative designs that attract participants to make themselves and their interests known to others in networking fashion.

Participation in conferences also builds technological competence among participants. Both f2f and online delegates to professional development conferences benefit from exposure and development of their own network literacy by exposure and opportunity to observe and participate in technologically mediated events. In both econferences and f2f conferences delegates are exposed to scheduling apps, profile pages and a variety of technology augmented presentations. In her 2005 dissertation thesis, Miri Shonfeld noted significant later use and competency gains from the exposure to technologies experienced during the conference.<sup>11</sup>

An econference is distinguished from ongoing, online communities of practice because it is time limited. Typically, an econference runs over two to three days. However, unlike its f2f comparator, participants

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10 Hannah Fraser et al., 'The value of virtual conferencing for ecology and conservation', *Conservation Biology*, 31.3 (2017), 540–546, <https://doi.org/10.1111/cobi.12837>.

11 Miri Shonfeld, 'The impact of an online conference in education: A case study' (PhD thesis, Nova Southeastern University, 2005).

are unlikely to all be in the same time zone. Thus, organizers have experimented with twenty-four-hour conferences that ‘Follow the Sun’,<sup>12</sup> and, of course, the asynchronous components of most conferences allow participation around the clock.

Rather than merely attempting to mimic f2f conferences, organizers are experimenting with digital tools that promise to enhance communication beyond that supported f2f. One of the most obvious benefits is the digital record that remains, so that the econference (or sections of it) can be repurposed for future events either f2f or virtually hosted. Besides the recording of presentations, conference organizers have used threaded audio discussions allowing for asynchronous voice and video sharing.<sup>13</sup> The econference also supports the intervention of technologies such as translation, automatic transcription, visual and audio enhancement and other technologies that are emerging in the online world. More recently, we have seen conferences that are housed in virtual worlds providing opportunities for simultaneous experience of a variety of virtual environments and technologies designed to increase participants’ telepresence.<sup>14</sup> Julie Santy, Mary Beadle and Yvonne Needham have noted the positive impact of conferences that bring together professionals from related, but often siloed knowledge bases and limited inter-professional interactions.<sup>15</sup> As these advantages grow, we may yet see a day when f2f seems a too ineffective way to communicate—in addition to being environmentally unsustainable.

In 2010, Lynn Anderson and I published a chronological taxonomy of virtual conferences beginning with the asynchronous, text-based

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- 12 Angela Murphy and Shirley Reushle, ‘Following the sun: Sustainable conferencing in a climate of change’, *29th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE)* (Wellington, NZ, November 25–28, 2012), [http://www.ascilite.org/conferences/Wellington12/2012/images/custom/murphy%2c\\_angela\\_-\\_following.pdf](http://www.ascilite.org/conferences/Wellington12/2012/images/custom/murphy%2c_angela_-_following.pdf); Sarah Stewart, Mary Sidebotham and Deborah Davis, ‘The virtual international day of the midwife: Social networking for continuing professional development’, *Nurse Education in Practice*, 12.5 (2012), 248–252, <https://doi.org/10.1891/2156-5287.5.2.91>.
  - 13 Ho, Kimura and Boulay (2011).
  - 14 William J. Ball, ‘Political science: Academic virtual conferencing; The case of the teaching politics virtual conference’, *Social Science Computer Review*, 18.2 (2000), 147–159; Thomas Erickson et al., ‘Telepresence in virtual conferences: An empirical comparison of distance collaboration technologies’, *CSCW 2010* (Savannah, Georgia, February 6–10, 2010), <https://doi.org/10.23919/cisti49556.2020.9141049>.
  - 15 Julie Santy, Mary Beadle and Yvonne Needham, ‘Using an online case conference to facilitate interprofessional learning’, *Nurse Education in Practice*, 9.6 (2009), <https://doi.org/10.1016/j.nepr.2008.11.004>.



conferences such as the 1992 Bangkok Project.<sup>16</sup> We then documented the development of a second generation of conferences that added real time interaction via video and/or audio conferencing. Finally, we speculated on the development of a third generation based in immersive online worlds such as *Second Life*. By 2018, I realized that immersive worlds seem to have, like a fad, come and gone. It seems that the necessary technology challenges associated with these sophisticated technologies have not proven as useful to participants as we anticipated. However, small numbers of conferences based on all three generations continue to be produced.

Perhaps the largest econference to date was the 2016 HackSummit that attracted over 30,000 participants over four days to a conference hosted on Crowdcast streaming video platform enhanced with Twitter and other technologies.<sup>17</sup> This example demonstrates the potential for scalability of econferences that far exceeds that of f2f conferences. However, in practice, most econferences attract audiences measured in the hundreds—not tens of thousands!

## Time Management and Continuous Partial Attention

One of the often-overlooked advantages of the econference is the ease with which a participant can control the amount of time and mental energy they give to the conference. Likely all of us have found ourselves sitting through conference sessions or on airplanes when our time and potential activities are totally controlled by others, regardless of our interest in being present at that time. We must wait until the session ends.

In an econference, I can exit any time I wish and return as easily. Of course, this license gives rise to abuse—and I just might not come back! The flexibility advantage is also a disadvantage as we observe the same phenomena in econferences as in Massive Open Online Courses (MOOCs), which are free and open to all and where significant numbers of registrants attend rarely and some not at all.<sup>18</sup> This convenience and

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16 Anderson and Anderson, 'Online professional development conferences' (2010).

17 Sai Hossain, 'How to create a Crowdcast for 30,000 people', *Crowdcast blog* (August 9, 2016), <http://blog.crowdcast.io/post/create-a-virtual-event-for-30000-people>.

18 Doug Clow, 'MOOCs and the funnel of participation', *Third Conference on Learning Analytics & Knowledge (Lak 2013)* (Leuven, Belgium, April 8–12, 2013), pp. 185–189, <https://doi.org/10.1145/2460296.2460332>.

the related power to shift time through asynchronous technologies suits the self-directed, but sadly is often abused by the externally motivated.<sup>19</sup> However, this challenge is not unique to e-conferences and has challenged distance educators using any medium.

An interesting development in professional development conferences is the increasing use of online media by delegates while attending the conference (online or f2f). It is now possible for anyone to subscribe to the micro blogging feeds and social media reactions from delegates in addition to the audio/video from keynote or other speakers. Thus, we see pressure from both the online and the f2f delegates to harness the affordances of online technology to enhance their professional development. However, this simultaneous focus on multiple technologies and social contexts, has itself created problems and cautionary warnings from researchers.<sup>20</sup>

As noted earlier, the speakers in e-conferences often have challenges understanding the nature, the number and the reactions of their audience. Many systems provide means by which audience can share various emoticons expressing laughter, applause etc. However, these are typically used only by a minority of the attendees. What of the majority? It is likely that many participants are giving only partial attention to the conference while they are simultaneously engaged in other activities. Linda Stone labels this behavior 'continuous partial attention' (CPA). Stone differentiates CPA from multitasking in that the CPA goes beyond the efficiency of trying to accomplish more than one task at a time. CPA seeks to maintain connectivity at all times, thus making oneself open to opportunity, entertainment or whatever other potential benefits available within the (networked) environment.<sup>21</sup> CPA

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19 Wen-Chung Liu and Chen-Ling Fang, 'The effect of different motivation factors on knowledge-sharing willingness and behavior', *Social Behavior and Personality: An International Journal*, 38.6 (2010), 753-758, <https://doi.org/10.2224/sbp.2010.38.6.753>.

20 Jennie Winter et al., 'Effective e-learning? Multi-tasking, distractions and boundary management by graduate students in an online environment', *ALT-J*, 18.1 (2010), 71-83, <https://doi.org/10.1016/j.compedu.2011.08.029>.

Eileen Wood et al., 'Examining the impact of off-task multi-tasking with technology on real-time classroom learning', *Computers & Education*, 58.1 (2012), 365-374, <https://doi.org/10.1080/09687761003657598>.

21 Linda Stone, 'Continuous partial attention', *Linda Stone* (November 30, 2009), <https://lindastone.net/2009/11/30/beyond-simple-multi-tasking-continuous-partial-attention/>

is just one of the manifestations of networked culture and economy in a networked era. Michael H. Goldhaber argues that ‘the economy of attention not information is the natural economy of cyberspace’.<sup>22</sup> Organizers and presenters in econferences must then design interfaces and produce content that knowingly competes with the audience for their attention. Ironically, presenters in f2f conferences face a similar challenge as evidenced by the large percentages of their audience using their smartphones for a variety of tasks and entertainment while sitting in the physical presence of the presenters.

In 2008, George Siemens, Peter Tittenberger and I published an article arguing for the inclusion of a variety of technologies designed to increase interactivity amongst conference participants both online and f2f.<sup>23</sup> While driven by our interest and belief in the value of interactivity, I reflect now that many of the techniques we recommended (backchannel communication, live editing of conference proceedings, polling, games etc.) also had the negative association of potentially increasing CPA. This is not to say that these network-based additions/distractions are new to the present time. I can recall sitting through many a church sermon and leaving not recalling a single idea that the preacher had shared!

So, where are we now? Econferences continue to be hosted by a variety of academic, NGO and commercial industry groups. Indeed, a small industry has arisen of online companies that provide logistical and organizational support for these conferences.<sup>24</sup> But f2f conferences continue and (at least outside of pandemic times) are many times more popular than their online cousins. Convention tourism is a large and booming industry,<sup>25</sup> though its recovery from COVID-19 is far from certain. Obviously, econferences offer large economic and ecological advantages over their f2f alternatives. These advantages are likely to increase as the ecological and financial costs of travel increase. However,

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22 Michael H. Goldhaber, ‘The attention economy and the net’, *First Monday*, 2.4 (1997), <https://doi.org/10.5210/fm.v2i4.519>.

23 George Siemens, Peter Tittenberger and Terry Anderson, ‘Conference connections: Rewiring the circuit’, *EDUCAUSE Review*, 43.2 (2008), 14–28, <https://auspace.athabascau.ca/bitstream/handle/2149/3525/ERM0820.pdf?sequence=1&isAllowed=y>.

24 See for example, Communiqué Conferencing’s virtual trade show platform: Communiqué Conferencing, *Virtual Trade Show Software Platform* (2019), <https://www.virtualtradeshowhosting.com>.

25 Weber and Chon (2002).

as Everett Rogers<sup>26</sup> and other researchers of technological adoption processes have observed: relative advantage is important and necessary but not often in itself sufficient to induce adoption of new technologies or practices. In *Diffusion of Innovations*, Rogers identifies four key factors that impact the speed of adoption, but none of these appear able to adequately explain the resistance to econferences. The first factor he points to is *compatibility*, yet, given the ubiquitous use of audio and video from smart phones or desktops, compatibility seems hardly an issue in econference adoption. Next is *trialability*, and again it is relatively easy (as I demonstrated even in 1992) to organize an econference. Then comes *complexity*, and once more our exposure to these technologies has meant a continuous increase in network literacy, especially among potential attendees at academic conferences and increased ease of use of online technologies. Finally, *observability*, but this should not be a problem as it is relatively easy to drop in and visit an operating econference. So, what holds adoption up?

Critics of Rogers's adoption theories, especially in regard to technological innovations, have charged that the theory underestimates the complex social environment in which adoption takes place. For example Kalle Lyytinen and Jan Damsgaard argue that innovation 'researchers should be careful in analyzing the impact of the nature and meaning of the technology, the role of institutional policies and regimes, the impact of the industrial policies and strategies, and the importance of the installed base and learning inertia'.<sup>27</sup> Besides applying all of these barriers to the context of econferences, we see perhaps an even larger benefit of f2f conferences that will never be matched virtually. These are the personal benefits that accompany f2f conferences.

I illustrate that with a final story from my own experience. As a graduate student, I undertook a small study among medical doctors working in small communities in Northern Ontario. My intent was to determine the demand and the barriers to the compulsory professional development for medical doctors that could be delivered at a distance.

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26 Everett Rogers, *Diffusion of Innovations* (New York: Free Press, 2003).

27 Kalle Lyytinen and Jan Damsgaard, 'What's wrong with the diffusion of innovation theory?', *Working Conference on Diffusing Software Product and Process Innovations* (Banff, Canada, April 7-9, 2001), p. 14, [https://doi.org/10.1007/978-0-387-35404-0\\_11](https://doi.org/10.1007/978-0-387-35404-0_11).

When I queried these doctors about the disadvantages associated with attending professional development activities in large urban centres that are located in some cases thousands of kilometers from their homes, I heard a variety of concerns. Doctors would have to leave their families and their practices, arrange for substitutes, travel by car to airports, stay in strange hotel rooms, listen to potentially boring talks and eat restaurant food for days. When I asked about the contrasting advantages, I heard that the doctors looked forward to getting away from their family and patients, travelling to far away cities, staying in hotel rooms, eating fine restaurant food and listening to inspiring talks. These same characteristics are both positive and negative: the same reasons both encourage and discourage adoption of econferences.

Conferences have become an established and often subsidized means for participants to travel, to extend their visit with tourist activities, to bring family members along on a holiday, and to enjoy social networking activities with persons of kindred interest. Econferences are limited in their support of any of these characteristics. Thus, until established social, employment and taxation practices are changed—for example, tax write offs and employer subsidy of f2f conference attendance—we will continue to see econferences play a secondary role to their f2f cousins. But just as these obstacles to econference adoption are large, they are fragile, and increases in all of Rogers's characteristics in support of econference adoption ensure that econferences will continue to be hosted and attended. We can also expect improvements in the technologies used to support econferences, increase networked literacy amongst both participants and presenters, as well as increasing pressure to restrain professional development costs, both financial and ecological.

To conclude, we should remember that, as Voltaire said in 1770, 'best is the enemy of the good'.<sup>28</sup> Online conferences are not the same as their f2f counterparts. However, econferences are good enough to ensure quality learning, professional development and network exposure, and can achieve this at far less environmental and financial cost—which makes them worth pursuing.

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28 Quoted in Susan Ratcliffe, *Concise Oxford Dictionary of Quotations* (Oxford University Press, 2011) p. 389, <https://doi.org/10.1108/09504121211193948>.

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