EASST *Review*

European Association for the Study of Science and Technology

Vol 39 I No 2 I November 2020

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Editorial

Parting words, returning things

Ignacio Farías

This has been quite a run. My tenure as the editor of the EASST Review began shortly after the EASST conference in Torun, basically with me asking Isaac Marrero to publish one of his photos of the fireworks (remember the fireworks?) on the cover of the following issue. It culminates here. After a fundamentally different, but equally successful conference - without fireworks, but with four times as much attendance and, yes, with productive questions about the role of STS in a fundamentally different world.

When I look back at these six years, I first and foremost see the faces of two friends and colleagues, who have done most of the invisible work: Sabine Biedermann, who became editorial assistant of the EASST Review in 2018 and Anna Gonchar, who's been its graphic designer since 2014. It's great to know that you will outlive me in the Review team!

A very special and wholeheartedly recognition and my gratitude goes also to Josefine Raasch, who co-edited the Review with me during the first year and then became part of the extremely generous Editorial Board we put together. Let me also thank each one of the members of the editorial board: Vicky Singleton, Tomás Sánchez Criado, Andrey Kutzenov, Liliana Doganova, Michaela Spencer and, of course, Niki Vermeulen, who will be part of the editorial collective taking over from now on – and which is completed by Sarah Schonbauer and Vincenzo Pavone. I am very excited to know the Review is in such good hands.

I was also lucky to enjoy the unrestricted support and blind trust of two different presidents (many many thanks for that Fred Stewart/Sonia Liff and Ulrike Felt!) and two councils (thank you all of you! You'll understand you are too many to be named here ☺). In Salla Sariola, editor of our journal ***Science & Technology Studies***, I found a partner in crime and so much inspiration in thinking about what the Review could aspire to be.

I should probably now write something about our accomplishments during these six years, give you some numbers, for example, or things like that. I won't. In that line, I will just mention the thing I am happiest with, namely, the section 'STS Multiple'. I think this is a true treasure. So long live STS Multiple. I would rather use this tribune to speak about the things not yet accomplished.

One major set of concerns throughout the last six years has involved the materiality of the Review as a digital object. I started out with the clear idea that the future of the Review could not be in a PDF-document sent out per email to EASST members. The first step, which we managed to accomplish, was to stop the embargo on the PDF and make it available to the whole STS community. But evolving from a PDF to another material and/or digital form was a cause I stopped to fight for, especially as so many people seemed to be so happy with receiving the PDF in their mailboxes. Be that as it may, the challenge seems still to be to device a better digital presence for the Review.

A second set of ideas and ambitions that only partially came to fruition was to transform the EASST Review into a space for experimentation with and reflection about modes of writing in STS. We had many inventive contributions that went in different ways beyond the minute-like reports of STS events and EASST conferences, and we managed to articulate lively conversations about current issues, such as 'alternative facts' and #metoo. But I always struggled with how to convince you, readers of the EASST Review, that this is the place to go with your experimental, inventive, speculative, overtly political pieces of writing.

Finally, one idea we discussed many times over the years was the dictionary of untranslatable terms and conceptual equivocations. The question was how to account and reflect about the linguistic multiplicity of doing STS and the idea was to ask the national associations to create their contributions to such a dictionary. I leave it out there for whoever might want to make it his or her own. It'd be such a wonderful and interesting resource to expose and reflect about the politics of difference and translation in and through language.

Be as it might: thanks for these wonderful years. Long live the EASST Review!

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Neither one nor two: presenting our new editorial team

Niki Vermeulen, Sarah M. Schönbauer, Vincenzo Pavone

In this editorial from the new EASST review editorial team…Okay, that sounds a bit too classic… perhaps démodé…Let us start again. It is our pleasure to…even worse. What if we cut this quick and collectively thank Ignacio Farias for the terrific job transforming the EASST Review over the past years? He has made it a much more central and contemporary communication platform for EASST and a great source for European STS info, including the new STS Live section to discuss contemporary issues. And of course also many thanks to Sabine Biederman and Anna Gonchar for their important work behind the scenes creating the reviews distinct style, and to the international editorial board members for their diverse contributions over the past years.

That was the right start! Surely it is difficult to replace Ignacio, we know that and, thus… we have decided a transition towards an editorial team consisting of Sarah Schönbauer (Munich Center for Technology in Society, Technical University of Munich), Vincenzo Pavone (Instituto de Políticas y Bienes Públicos of the Spanish National Research Council in Madrid) and Niki Vermeulen (Science, Technology and Innovation Studies, University of Edinburgh). Niki was already part of the editorial board and as such it is very much our plan to continue and consolidate the current path of the EASST Review, but with some new faces and perspectives and with a special emphasis on the importance of collaboration in academia.

In our view, the EASST Review is occupying an important space, in between the research articles in our STS journals and the activities of our local STS hubs, connecting the STS community on a European level. The section STS multiple is showcasing local groups and their programmes, and we would also like to use this section to showcase the various national STS associations and their activities. Cherish not perish is set-up to tell about new journals and alternative publication platforms relevant for STS but we aim to broaden this further and go beyond publications platforms. We also want to shine a light on the great variety of experiences and impact that STS scholars are having as part of their work as consultants, in political activities, among civil society organizations, in non-academic educational settings and elsewhere.

STS Live is dedicated to developing contemporary themes and discussing current issues, whereby we invite a variety of scholars to contribute their work and thoughts. In our next issue (coming out in February) we will focus (surprise, surprise) on the impact of COVID on our scholarship and community, but for later issues we already have topics such as environmental pollution and toxicity, experiences and challenges of early career scholars, and the meaning of open science in STS in mind. But we also know that YOU have great ideas on themes and contributions and we welcome ideas and reflections from all EASST members to shape the future of the review. It is OUR Review, after all, and this is what it is all about. We want the EASST Review to be the journal you look out for and the place where you first send an idea or contribution when it pops up in your mind. Thereby we also hope to find new collective ways to expand our EASST online platform, facilitating the flow of information and posting about events, ideas, and contributions in a more immediate way and creating exciting interactions.

This current *EASST Review* is - as it is every two years - completely dedicated to our conference which took place in August, this time together with 4S. We enjoyed seeing many of you there on the various online platforms and of course we would like to thank the organising team again, as they worked wonders, transitioning from preparing a physical meeting in Prague to the hosting of an online version of *Locating and Timing Matters: Significance and agency of STS in emerging worlds*. The theme of the conference became even more relevant, creating an alternative conference format which allowed us to still gather in Prague, albeit virPrague. As such it might not be a coincidence that one of the organisers Filip Vostal suggested Kafka's Runner (1907-8) for this issues cover illustration. For an account of his experience as conference organiser, please see his contribution which is accompanied by reflections of conference participants on topics or sessions from the conference. The first Vir_Conference has generated and shared much more than a huge amount of terabytes in videos, slideshows and image captures. This issue is showcasing some conference innovations, such as comics, podcasts and spin-off meetings, as well as crucial reflections on the effects of current times on academic labour, e.g. on how the digital conference experience can be combined with care. This latter contribution connects to our upcoming issue which hopes to take reflections on academic work in times of COVID further.

Finally, we want to emphasise the importance of the roles that the EASST president and council members are fulfilling in our European STS community. We have therefore dedicated some space to the announcement of the upcoming EASST members meeting and the call for a new president and council members and would encourage all to consider putting themselves forward. We are looking forward to work with Ulrike Felt and the new EASST president, the EASST council and EASST members, and would welcome all your ideas and contributions to the review. You can reach us at: review@easst.net and we are looking forward to hear from you, as the EASST Review consists of contributions from the community. Next contribution could, indeed, be yours.

Niki Vermeulen is senior lecturer/associate professor at Science, Technology and Innovation Studies (STIS) of the University of Edinburgh and visiting scholar at CWTS Leiden. She specialises in scientific collaboration, predominantly in the life sciences, and has developed a particular interest in the architecture of collaboration, investigating the spaces in which people are working together. Next to her academic work, she has experience as a policy advisor and consultant in science and innovation policy, most recetly with Marine Scotland. Niki is the founder of www.curiousedinburgh.org and a member of the Royal Society of Edinburgh's Young Academy of Scotland (YAS).

Sarah Maria Schönbauer is a postdoc at the Munich Center for Technology in Society (MCTS), Technical University of Munich. Her work focuses on academic knowledge cultures in transition and the role of life scientists with a specific focus on the environmental sciences. Connected to her interest in the environmental sciences, she is working on human-environment relations and the increasing research on, reporting and political regulation of plastics and microplastics in the environment.

Vincenzo Pavone is a senior research fellow at the Institute of Public Goods and Policies (IPP) of the Spanish National Research Council (CSIC), currently serving as Director of the IPP. His work focuses on the relationship between neoliberal capitalism and the bioeconom(ies), with a special focus on the reproductive bioeconomy. He is also interested in the relationship between lay knowledge, science and public policies, as well as in participatory science and participatory technology assessment. You can find more at: https://unboundingsts.wordpress.com

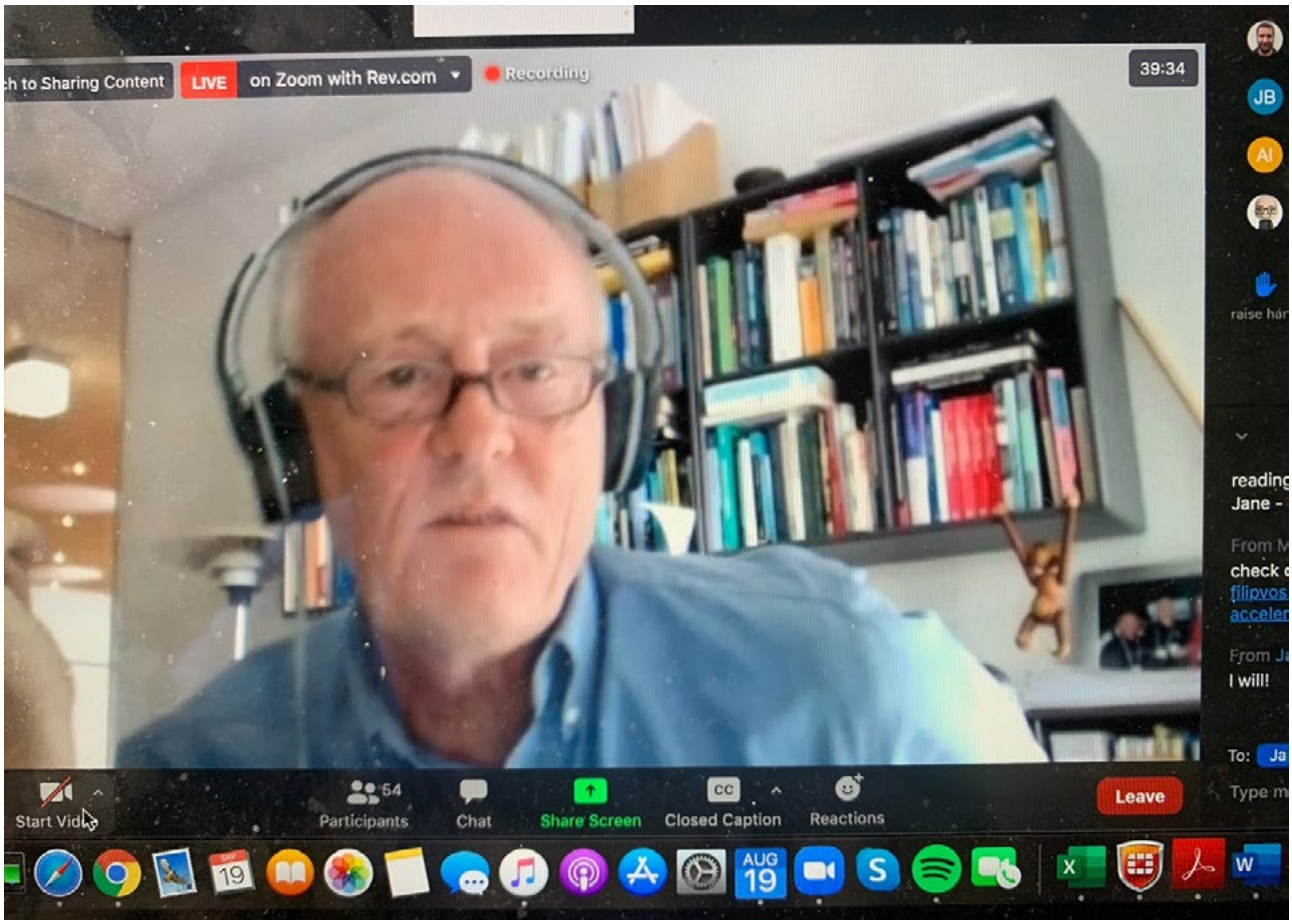
Streams and Bites:
Thoughts on the
EASST Vir_Conference 2020

Navigating 4S/EASST 2020 "virPrague" Conference

Filip Vostal

This year's joint 4S/EASST conference entitled "Locating and Timing Matters: Significance and Agency of STS in Emerging Worlds" would be meaty material for a conference ethnographer. I had the honour of being co-chair (with my esteemed senior colleague Tereza Stöckelová) of the programme committee of the 4S/EASST 2020 joint conference that was *meant* to take place in Prague from 18-21 August 2020. However, as we know all too, this year's conference *did not* take place in Prague in a strictly physical sense due to the accelerating onset of COVID-19.

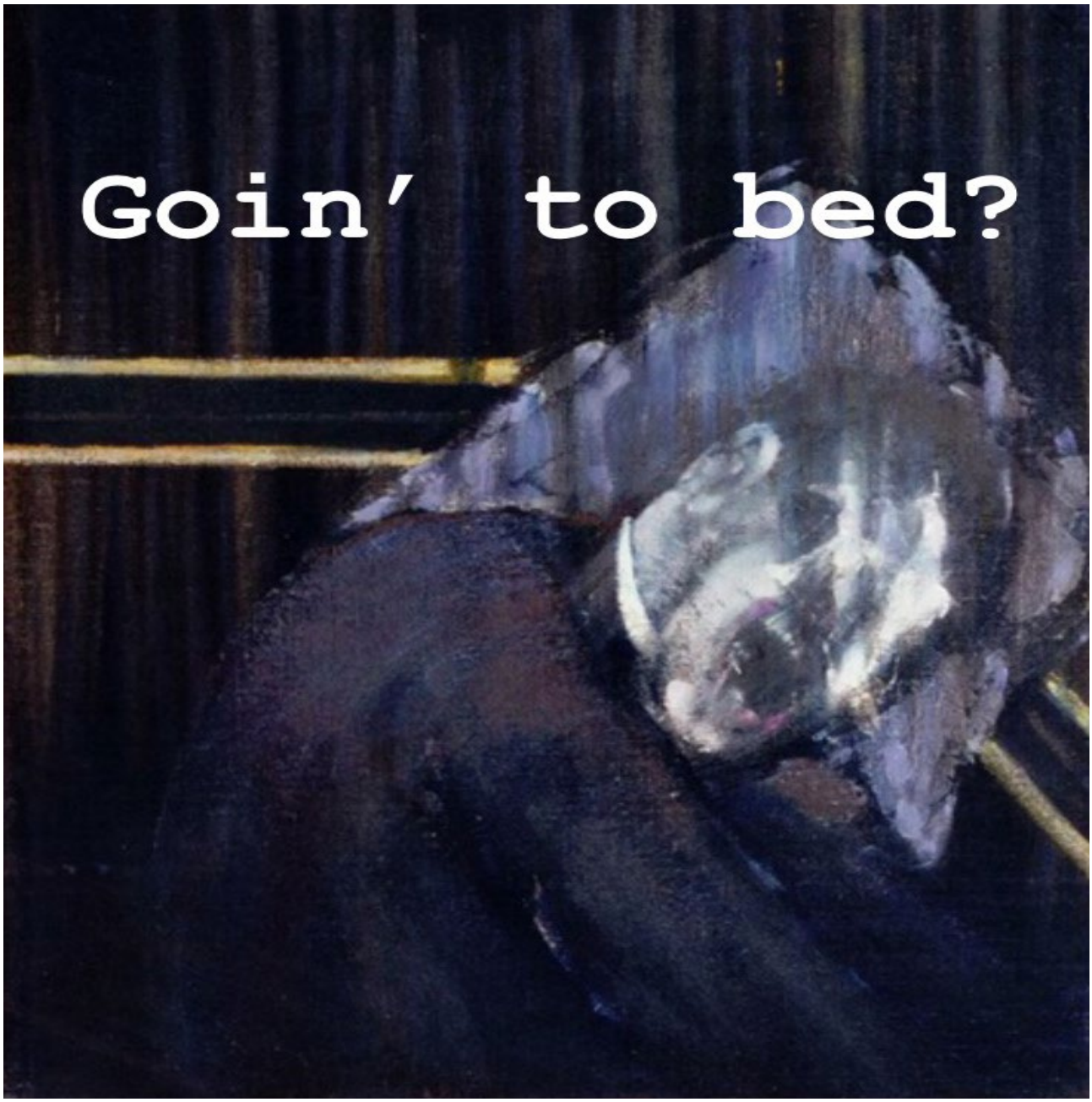
Let me present a time-line first: the premises, number of rooms, extra-conference conviviality and the like were well under preparations by January. Ulrike Felt and Joan Fujimura (the presidents of EASST and 4S respectively), folks from both councils, the local organizing committee (Tereza Stöceklová, Marcela Linková, Luděk Brož, Anna Durnová, Jakub Grygar, David Zavoral and myself), EASST and 4S councils were extremely happy with how things were panning out. With the onset of COVID-19, the Czech Republic opted for an almost complete lockdown very promptly and received praises from the world over as the disease was partially mitigated after several months due to strict restrictions such as legally-mandated



Picture taken by me. This is Alan Irwin during the actual online conference. Apologies for dirty screen – I had no time to clean the blood, sweat and tears from that landed there during preparation period – especially in the final countdown days before the conference commenced.

wearing of masks everywhere (indoors, outdoors), closed businesses, factories, pubs and restaurants, but also schools and governmental offices. (The government and ***we*** – i.e. the large majority of Czechs – thought that we had won the battle against COVID-19, which was, as we see now in the fall, a fatal mistake.) In the midst of the Czech lockdown both 4S and EASST councils, the programme committee and local organizers had to make a decision whether the entire conference would move on-line -- whether we would "go virtual". If I remember, we barely discussed cancellation, but treated the new normal as an opportunity, an opportunity for a big experiment.

What was remarkable nevertheless was the immediately rejuvenated commitment and enthusiasm of all organizational players to do everything we could to make the conference happen. In a sense, the preparation started again and indeed some of us, myself for one, regretted that our colleagues from abroad wouldn't come to Prague (to try the categorically best and famously cheap Czech beer or to discuss how frequent international flights to conferences cripple the climate).



Francis Bacon, *Three Studies of the Human Head*, 1953. Taken from Fiacci L (2017) Bacon. Cologne: Taschen, p. 72. Words mine. When we learned that Zoom went down in many places around the globe on 25 August we interpreted it in two ways: gosh, had it happened a week before our Baconian techno-worries would be met; or, had the conference's smooth running that the participants' enthusiasm overheated Zoom?

When the decision was taken, many of the organizational ordering had to be quickly re-ordered. Session organizers, session chairs and presenters had to be informed. We had to give some hard thought as to how to "translate" what many of us already knew well – i.e. a "normal" physical conference – into an online, virtual meeting of hundreds and hundreds of people. There were precedents we could follow such as the AAG conference. But did we want to just "copy and paste" what others did? Nope, we were more ambitious: let's do it our own way. This of course meant that there were as many known unknowns (would people even register after months of teaching via online apps? Weren't they suffering from "Zoom fatigue"?) as unknown unknowns[1]. (Retrospectively it turns out it was a tremendous work to synchronize papers into sensible time-zones so that people did not have

1 To use slightly inflationary Rumsfeld-Žižek conceptual vocabulary.

Mikuláš Medek, Pokus o portét M.d. S., 1968 (www.dorotheum.cz)

And finally myself, around 8.30PM on Friday, 21 August. No comments needed…look at wrinkle above my left eye and just look closely at how I breathe. There are number of messages in the eyes too, I would say. Have not done proper self-psycho-assessment yet though.

to present at 3AM.) And so I daresay everyone who took a major part in the organization (especially Steve Coffee, Ulrike, Joan, Wes Shrum, Tereza, David, Luděk, myself) rewired their minds and practices of communication as we held online meetings – in different compositions – at least once a week. We immediately began negotiations with Czech/US online conference vendor SlidesLive and the preparatory works – as those of you who took part might well recall – took a rather new twist. New systems, new directions, new translations, new thinking. It was tremendously encouraging how many senior colleagues who had the chance to organize either 4S, EASST or joint meetings supported us during the preparation period. Seasoned STS scholar Alan Irwin was one of our great supporters.

Being in the position I was in has been a unique experience. I was for a short while in the "innards" of global STS, its current debates, streams, innovative directions, new interminglings with other corners of the social sciences and many more. I guess all organizers or co-organizers of big conference such as ours who have the privilege to see, co-evaluate and order what is going to be talked about have the privilege of being temporary "epistemic gatekeepers". All this is not something that unusual – one sees who submits what, assign reviewers; one also sees the ideas and proposals that did not go through. It is indeed a substantive part of the job and a tremendous responsibility weighing on your neck, like big anaconda that often woke me during the night by whispering "Have you forgotten to respond to this or that email? Is it all gonna work?" One day in April the anaconda sloughed its skin and turned into a cyborg, a mini-monster that was silent for a while only to remind me that I should forget about a standard conference and re-order myself. Sometimes I went to bed with a Baconian face as a completely new set of

questions – often of a technical nature – were softly hissed into my ears from the "phygital" (Zil Vostalová's concept) anaconda.

Unintentionally, the shift to "virPrague" – "vir" standing for virus and virtual (credit to Tereza!), interestingly resonated with the "Locating and Timing Matters: Significance and Agency of STS in Emerging Worlds." Even if Tereza and I were based in Prague, other organizers were in different locations. Prague also served as the main "time-hub" – i.e. the main time-zone that we used, either in scheduling the programme or weekly (in August, daily) meetings, was Central European Summer Time, e.g. Prague time. Some more or less fixed location and strict temporal rules and timing was in play nevertheless – it was Prague. Prague was, if you wish, a "spatio-temporal fix", a concept used ***very*** differently by Noel Castree, David Harvey and Bob Jessop 2004 in their analyses of capitalism was Prague. VirPrague's spatio-temporal fix, to the surprise of many, worked extremely well – and Prague ***was*** in a sense a hub for the conference. In a way then, the conference did and did not take place in Prague at the same time. Hmm, a bit surreal, ain't it? Is Schrodinger's cat dead or not? Such surrealism, and surreal humour, has always been part of Prague's cultural and artistic history. So all in all, see you in Prague!

Reflections on the Prague Conference: Much more than a successful coronavirus rescue operation

Torben Elgaard Jensen

From the vantage point of a hotel where a group of Danish remote participants gathered during the conference, this commentary offers some reflections on what we can learn from the virPrague experience. It notes that the online conference functioned very well, and it recommends that the STS community continues the collective experimentation with new types of environmentally sustainable conferences and meetings. But given the current climate crisis, this experimentation cannot be slow. The author therefore proposes a 10-year ban on international STS conferences that require air travel. This will not only reduce our carbon footprint, but also reaffirm our status as a bold, avant-garde discipline.

Introduction

Organizing a large international conference is a truly daunting task, so there is no other way to begin this commentary than by showering praise on the courageous team of organizers behind the Prague2020 conference. From my perspective as a remote participant located in Denmark, every aspect of the online conference appeared to function very smoothly. I can only begin to imagine the amount of invisible work carried out behind the scenes that enabled this mega-event to get off the ground.

A social experiment in remote participation

I happen to know that a great number of other people also enjoyed the conference. Not only did I participate in sessions with lively debates, I also experienced the luxury of hanging out with a group of other Danish STS scholars during the conference. This social interaction was the outcome of an initiative by the Danish Association for Science and Technology Studies (of which I am a board member). A few months prior to the conference, we decided to encourage Danish remote participants to book a room in a particular hotel north of Copenhagen during the conference. Our hope was to create some sort of conference vibe and hold ad hoc meetings and joint activities alongside the conference. We had no idea how many people would buy into this idea, but as it happened more than 20 people booked a room and signed up to a shared Teams page, allowing us to do a bit of ad hoc coordination. We ended up having a very nice "conference dinner" together on the second night of the conference and a fair share of other mingling and serendipitous meetings. We enjoyed a particularly proud moment together when the Danish TANTlab received one of the EASST awards.

Figure 1: A group of conference participants gathering outside the hotel to watch the award ceremony.

Normal conferencing?

When thinking about my own experience of the virPrague conference in a Danish hotel, I try to remind myself that there is actually no such thing as a normal conference or a normal way to meet. This point became very clear to me when I recently read the Dutch historian Wilbert Van Vree's marvelous account of how meeting rules and behavior have developed since medieval times (Van Vree, 1999). With Van Vree's book in mind, I can begin to imagine what might happen if people from other centuries could time-travel to our last so-called normal 4S/EASST conference, the one in Barcelona 2016. They would surely be puzzled. Medieval warrior groups would be proud to see that the conference organizers continued a procedure they invented – a security guard posted at the entrance made sure that swords, battleaxes, and other weapons were not brought inside. But the same warriors would be absolutely shocked to see that the guards allowed women to enter. People from the medieval church councils would recognize the seating arrangement, with some presumably higher-ranking people sitting in front, lower-ranking people in the audience, and inferior others standing by the walls. But they would ask themselves why the inferior meeting participants by the walls only had to stand for 20 minutes, rather than for hour after hour. People from the debating societies of the late 19th century would applaud the authority of the chairpersons who self-confidently allocated speaking time and occasionally cut people off. But they would also wonder why the people in Barcelona completely overlooked the importance of calling a vote.

Some personal experiences

So how did I experience the virPrague conference – being of course not entirely able to shake off my preconceptions of what a normal conference should be like. During other conferences, I have found myself moving from an early phase of wild interest in too many different things to a final stage of severe conference fatigue. The experience of virPrague was similar, but not exactly the same. Before and during the Prague conference, I used the feature on the homepage that allowed me to add items to my personal calendar. This of course made it painfully clear that I wanted to see too much, but the pleasant surprise was that it also allowed me to quickly navigate between sessions in a way that was much easier than trying to move my physical body out of one room and into another without disturbing two presenters and their audiences. For better and for worse, the materialities of the meeting did force me to stick with presentations that I did not find immediately interesting.

I also found the physical strain of listening for many hours easier to bear. The online format made it possible to move my body to more comfortable positions with my microphone muted and my camera shut off. This meant, of course, that the speaker's sense of whether their talk had captured the audience and demanded their attention was diminished. I also experienced this with my own presentation. My sense of the audience consisted entirely of the people who responded directly. Luckily, there were a good number of active participants in the session and a good fit between the presentations. But I heard from others, who were unfortunate to be in a thematically scattered session, that it was quite an eerie experience to present to a passive audience.

The experience of conference fatigue phase caught up with me a little later than I had expected, most likely because the physical and emotional labor was less demanding than that of sitting in a conference hall. When the fatigue hit me, I resorted to some of the old strategies: micro-tourism (in this case going for walk), coffee sessions with other participants, and catching up on other work. I regret that I did not use this phase of the conference to contact people whom I had briefly interacted with during the sessions. This is something I will have to do better in future.

Thinking about the future

I have heard people say that they hope we will never have a strictly online conference again. I too hope that the coronavirus goes away, but I am not so sure about the conference format. Has the climate emergency, as well as the ever-growing size of our STS conferences, made the time ripe for a radical change? I realize that not everything is ideal with an online conference, but neither is the climatic situation in which we have put ourselves. Should we really, mindlessly, continue an academic ritual that causes ever more people to fly to international conferences? I think not. In fact, I will encourage the leadership of 4S and EASST to impose a 10-year ban on STS conferences that require air travel!

How would that work? The quick answer is that no-one knows. But the better answer is that once the decision is made, we will have forced ourselves to ramp up our sociological imagination. What kinds of "normal, inevitable, and necessary" meeting practices need to be challenged? What kinds of new socio-technical meeting formats might stimulate and sustain our STS community? Would it be possible to designate a number of regional locations accessible by train, where remote participants could create new types of conference experiences? What else might we do to engage all generations of STS researchers in different parts of the world? How can we stimulate a broad-ranging experimentation and reflection on new types of meetings? What might we collectively learn from being an STS community and doing STS under these new conditions? All of these questions

and many more would immediately be raised by a ban on grand physically co-located STS conferences. The questions would be troubling and demanding, but I believe they would also spark an extremely interesting discussion and collective experimentation within our community for the next decade.

The environmental benefits are clear – far less CO2 would be emitted. But there are also other immediate benefits. For one, just think of the message a 10-year ban would send to other disciplines. The STS community would demonstrate that we are not afraid to throw ourselves into a radical collective experiment, and we could proudly say that we are not just talking the talk about responsibility. In this way, a self-imposed ban would be a great way to renew our claim to be a bold, avant-garde discipline.

With this comforting thought, I shall end this personal reflection on the virPrague conference. I warmly thank the organizers not only for creating a superb rescue plan in the era of the coronavirus pandemic, but also for setting us on a path that might lead to the more sustainable organization of STS in the future.

Reference

Van Vree, W (1999) *Meetings, manners, and civilization: the development of modern meeting behaviour*. Leicester: Leicester University Press.

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The Anthropocene, COVID-19 and ontology: some reflections following the EASST/4S 2020 online conference

António Carvalho

Some months before the COVID-19 pandemic was declared by the WHO, there was a call for open panels for the 2020 EASST / 4S Joint Meeting. The "Ontological Politics of the Anthropocene" panel aimed to bring together those concerned with the intersections of (post)-politics, ontology and the climate crisis, recognizing the heterogenous set of theoretical and practical interventions currently underway to assemble the Anthropocene.
The present health crisis illustrates the disruptive and generative capacity of non-humans, somehow anticipating the most dramatic impacts of climate change, requiring STSers – and social scientists in general – to attend to the new webs of associations fostered by pandemic ontologies, including new formats for academic work, expression and collaboration. This paper is a provisional attempt to do so.

The Anthropocene event in social theory has reinforced concerns with ontology within STS (Blok and Jensen, 2019). Not only is the Anthropocene characterized by couplings of human and non-human agency, where the boundaries between social, planetary and environmental forces are increasingly blurred (Latour, 2014), but it also displays heterogenous responses and solutions. Permaculture, the Green New Deal, Solar Radiation Management, Extinction Rebellion and sustainable living, more than indicating distinct visions, narratives and repertoires of meaning, can be understood as interventions that aim at assembling particular versions of the world. By recruiting a wide range of technologies, practices and nonhumans, these interventions are "ways of worlding" (Blaser, 2014), of bringing forth specific ontologies: while, on the one hand, there are concerns with the post-political and depoliticizing undertones of the Anthropocene (Swyngedouw and Ernstson, 2018), on the other hand this proposed geological epoch has become a driving force underlying a multitude of social, political and technological devices – the politics and ontologies of the Anthropocene are up for debate.

The panel "The Ontological Politics of the Anthropocene" stemmed from the recognition that there are many Anthropocenes, often illustrated by conceptual iterations such as the Capitalocene, Chthulucene or the Wasteocene. In his presentation, António Carvalho focused on how the Anthropocene can be understood as a driving force behind devices of self-regulation and self-organization, exploring the cases of mindfulness and Planetary Boundaries, thus delving into the articulations if bio and geopower. Camilo Castillo explored the case of the Páramos ecosystems in Colombia, reflecting on the interface of conservation policies and ontological politics in the Anthropocene, including the ways in which ecosystems are differently enacted by indigenous communities and the State. Adam John Standring and Rolf Lidskog, while reflecting on the current climate crisis, drew on Swyngedouw and Ernstson's work (2018) to argue that there should be a distinction between politics (as a set of practices) and the political (as a site of socioecological conflict). Stefan Schäfer and Cameron Hu explored some of the

theoretical intricacies of the Anthropocene, developing an ambitious theoretical framework that recognizes how the figure of the planetary became a recurrent trope for contemporary models – and workings - of sovereignty, the economy and geopolitics. Richard Randell and Robert Braun dialogued with Carl Schmitt's philosophy to suggest that during the 20th century we have witnessed the emergence of a new Nomos – the Nomos of the Anthropocene – anchored in technoscientific power/violence. Jacob Barton shared an original perspective on the climate crisis, informed by postcolonial and critical race theory, arguing that the term Blanco-finescene is more adequate than the Anthropocene to represent our current planetary zeitgeist.

These different presentations – and the ensuing discussion – reinforced how the Anthropocene – and the socioenvironmental crisis – have triggered distinct forms of practical and theoretical wordling. Although the presenters displayed distinct – and often conflicting – stances on how to make sense of the climate crisis – and even how to name this proposed geological epoch - all presentations recognized the multitude of hybrid forces shaping the Anthropocene, including economics, politics, technology, energy and human and nonhuman agency in general. The ontological heterogeneity of the Anthropocene is particularly well illustrated by the COVID-19 pandemic. As Bruno Latour suggested, the pandemic is embedded "in an ongoing, irreversible ecological mutation" (Latour, 2020). The current pandemic is a clear illustration of the great acceleration fueled by the Anthropocene, since "the pace of economic extraction virulently broke down ecosystems, releasing viral agents that threaten biological integrity" (Carvalho and Velicu, 2020). Entire economic, social and political infrastructures are disrupted by molecular entities, turning nonhumans into fully-fledged agents of history, inevitably vindicating methodological and theoretical approaches that attend to the multitude of dances of agency between humans and non-humans.

While, on the one hand, the current pandemic requires the reinforcement of biopolitical and immunological strategies to fend off the virus – through FFP2 masks, soap, physical distancing, respiratory etiquette and alcohol-based hand sanitizers -, on the other hand the "social" is inevitably affected by the capacity of viral, nonhuman agency – the economy crumbles, flights are cancelled, entire communities are put under quarantine and the virus becomes a novel meta-narrative. The ontological politics of the pandemic are complex. Its webs of associations entail smartphone apps, viral agents, political and ideological stances, information and media flows, epidemiological models, mobility and the State. While it is recognized that the time is out of joint, we witness an attempt to manage uncertainty and the unknown through the State of Exception and by maximizing double delegation processes (Callon, Lascoumes and Barthe, 2009), relying on scientific and medical authorities to deal with the current crisis. While this could be yet another sign of the current "post-political" climate, with the reliance on technical authority presenting a governance bottleneck supported by the biopolitical rule, virus denial seems to be the strategy followed by those who also happen to deny the dangers posed by climate change.

The practical, everyday life implications of the pandemic have turned our lives upside down. Conferences were either postponed or went online. That was the case of the EASST/4S 2020 conference. Airplane tickets, hotel reservations and coffee breaks were replaced by Zoom calls, never ending email exchanges and SlidesLive presentations. How should we make sense of this? What does it tell us about ontology, the pandemic and the Anthropocene?

In order to safeguard our immunological integrity, we have surrounded ourselves with cell phones and laptops and a wide range of technological apparatuses. Digital life is apparently immune to the biological threat – although it presents threats of its own – and it has been turned into the ideal milieu to cope with

physical distancing. Online conferences present a number of challenges – chairs have to be trained on how to moderate a session through Zoom, assigning all presenters co-host status; presenters need to be able to record and upload their communications. During the session, one has to make sure that chat messages sent through the SlidesLive link reach all participants, and that everyone is able to use their microphones to pose questions.

Zoom meetings are the trope of our current condition – the embodied experience of everyday webs of associations is now mediated by a digital layer, an extension of our quarantined selves. Our academic lifeworlds become software affordances. Just when we thought that the managerial and normative machine of Academia couldn't get any worse, we are thrown into a biopolitical dystopia that replaces physicality by haptic and audiovisual engagements with technologies. No longer physically together, virtual conferences require a careful crafting of our academic avatars and even of our Skype/Zoom backgrounds.

Although safer and even more "sustainable" – think about the tons of CO2 emissions saved – online conferences are deprived of the fleshy and lively dimensions that often trigger novelty. Think of the *eventful* dynamics that can lead to collaborations, innovative projects and new theoretical directions. Although it is certainly possible to reinvent academic rituals through digital technologies, pandemic ontologies of isolation (Carvalho and Velicu, 2020) foster a pasteurization of academic interactions.

If the Anthropocene has been widely criticized for naturalizing the "human" as a whole, thus justifying the expansion of the biopolitical domain to the planetary realm – through techniques of geoengineering (Swyngedouw and Ernstson, 2018) - it is also critical to rethink the technologies – platforms, software, media – that enact the virtual. After all, we can think about the virtual as the condition of real experience (Deleuze, 1991), and as Haraway constantly reminds us, "It matters what matters we use to think other matters with". In sum, the virtual is immanent to the webs of associations – and technologies – that are put in place to assemble the social, and by engaging with new technologies and software we can look at the virtual as a site of playful speculation, generating new formats for academic interaction beyond "speech" and "discourse", such as songs, videos, games, virtual reality, etc. – the list is endless.

In that sense, the ontological politics of the pandemic include the wide range of new webs of associations established between human, viral and technological assemblages, the various interventions that are put in place to manage the public health crisis (quarantines, contact tracing, surveillance technologies, denial) as well as changes related to the ways in which we work and live. The 2020 4S/EASST conference can be understood as a case study to imagine new forms of academic collaboration and engagement, and the STS community should delve into the new ontologies triggered by the current pandemic, namely into the articulations of non-humans, digital technologies, work and emerging forms of expression and academic communication.

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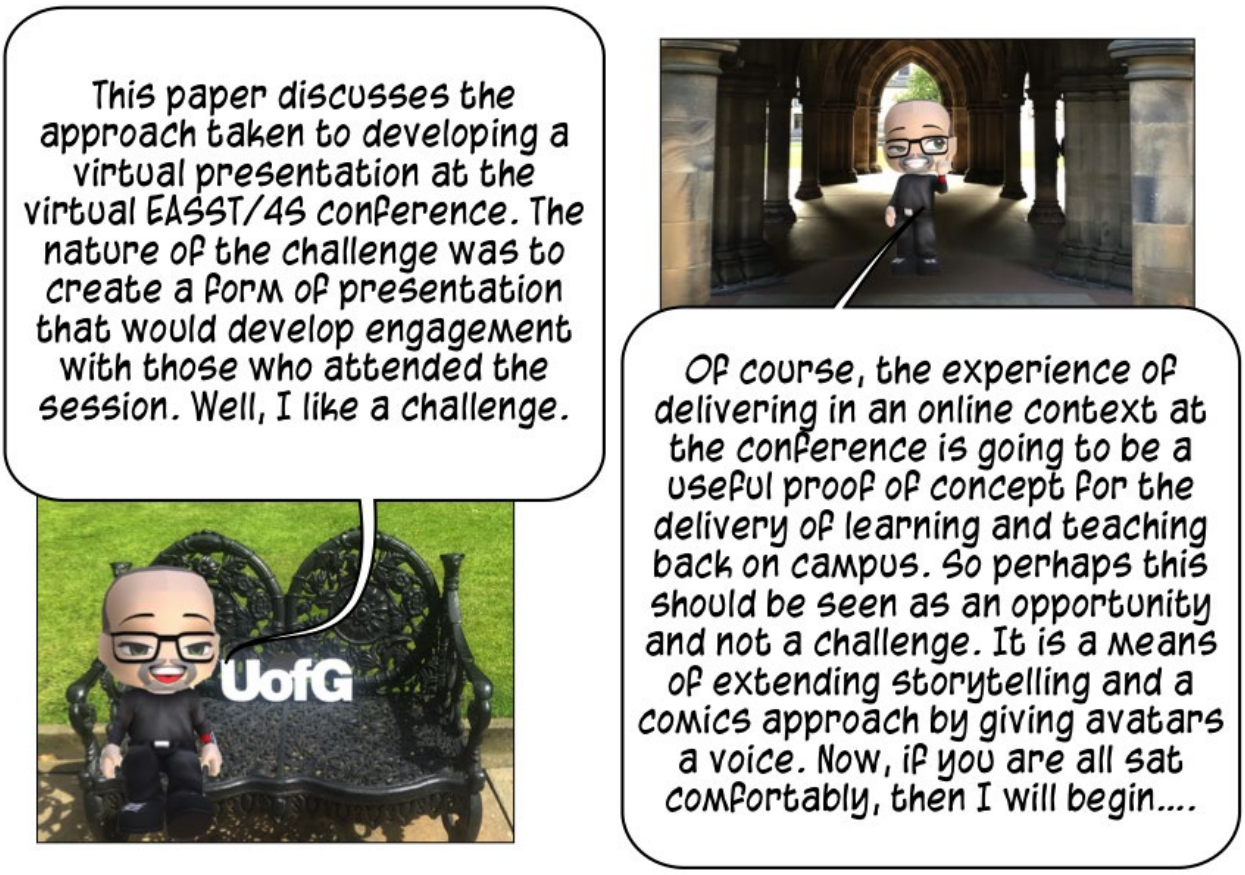
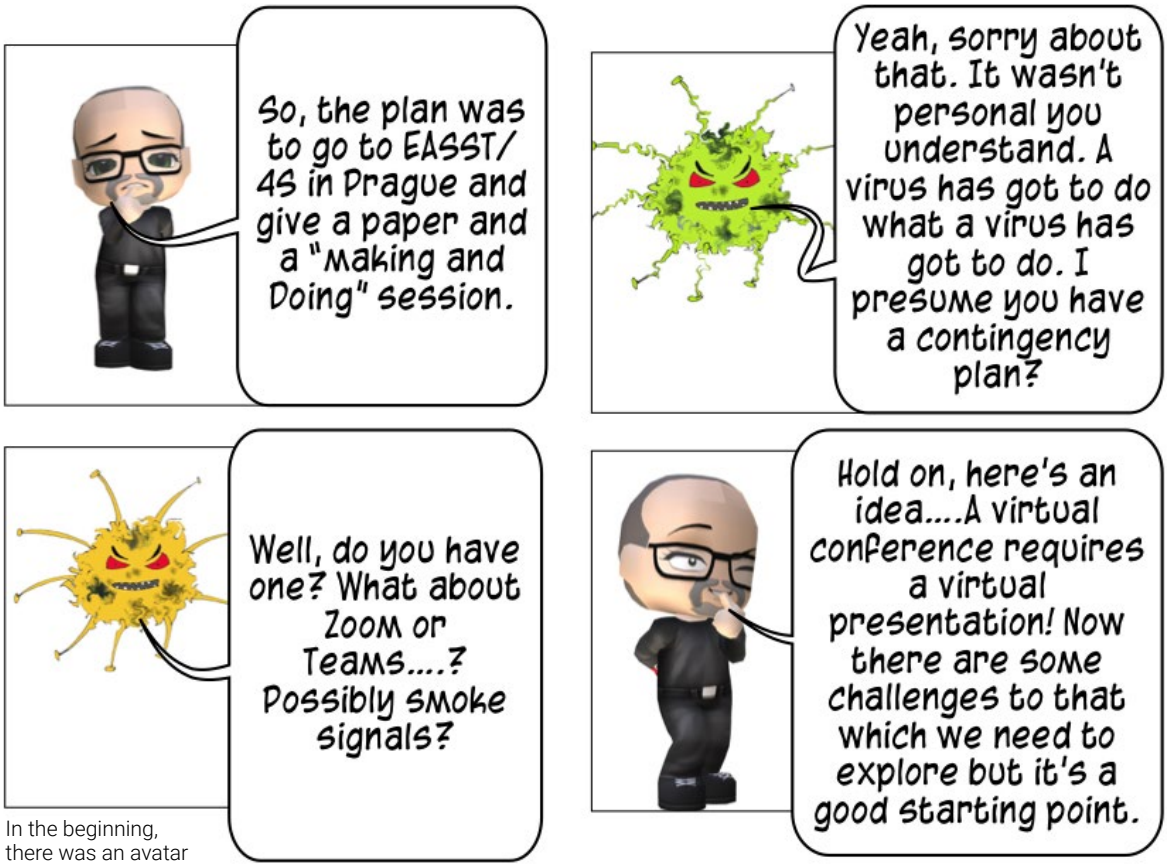
Presenting a 'virtual' paper in a 'virtual' conference: adapting to the challenges posed by a pandemic

Denis Fischbacher-Smith

This paper provides an overview of the approach taken at the 2020 EASST/4S conference in (virtual) Prague to develop an animated approach to the delivery of both an academic paper on the management of risk and uncertainty and a "Making and Doing" session on the use of comics in learning and teaching. The overarching goal was to embrace the uncertainty that COVID-19 had generated by trying to develop a different approach to the presentation of academic material that had the potential to engage an online audience. This was to be delivered in conditions that were far from optimal and had to do so in a way that the experience could be transferred to the on-campus teaching environment. The paper highlights the approach taken to the development of an animated approach which integrates comic characters into academic material as a means of developing engagement with an audience.

The plot beckons……..





In the beginning, there was an avatar

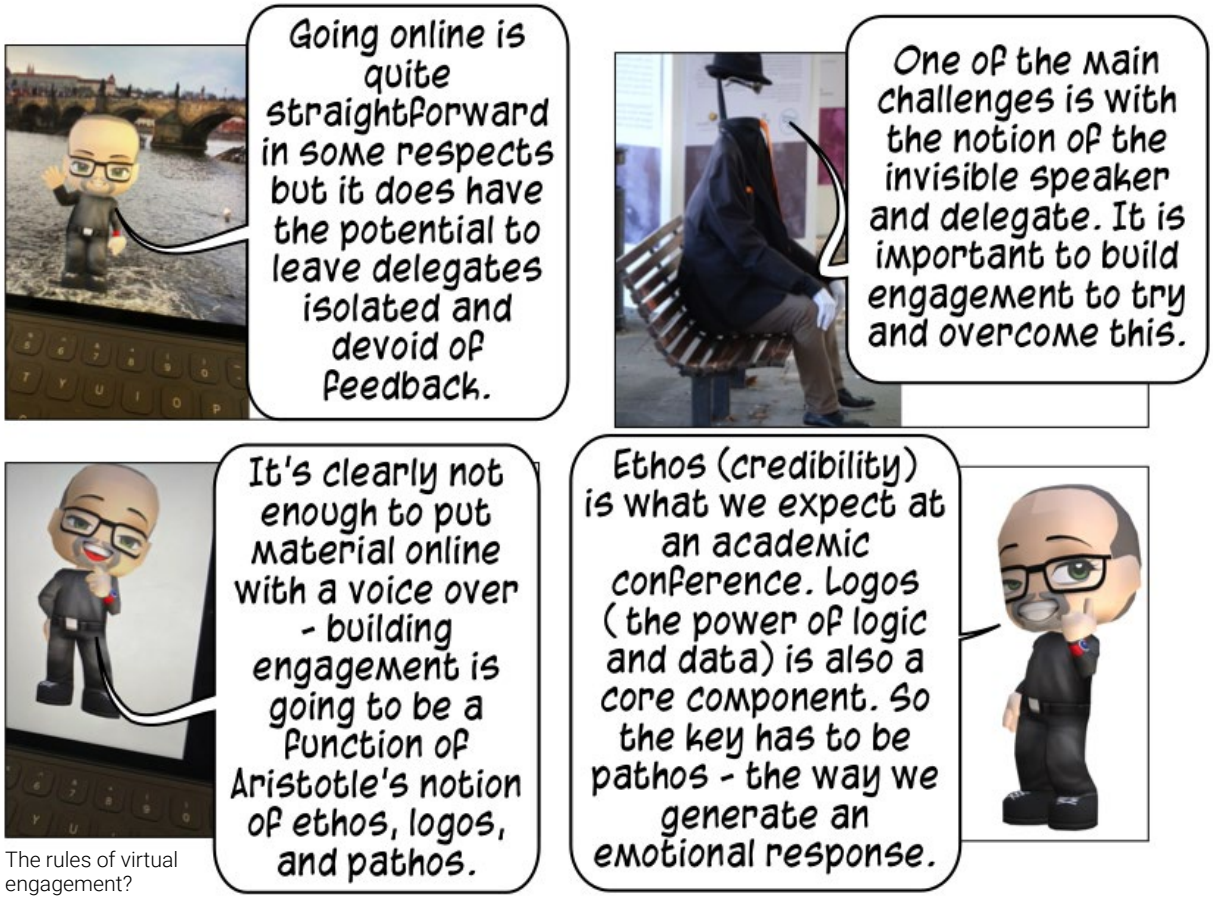
Introduction

This paper is concerned with a reflexive account of the experience of both delivering and listening to presentations in an online environment and the changes that it has generated in terms of pedagogy. In particular, it considers the experience of the use of comics and associated videos as a means of delivering learning (whether this is framed within a conference environment or a more conventional on-campus teaching context). The starting point for this discussion is with the EASST/4S Conference as it was one of the first large-scale, on-line conferences attended by the author. The paper also reflects on some of the other conferences and workshops attended in a virtual format and with the subsequent early experience of on-line post-graduate teaching based on this early conference experience.

EASST was to be east but in reality it went everywhere

As the conference went virtual it, de facto, changed the rules of 'engagement' around the delivery of papers and how we communicate complex issues in, what could be seen as, a fractured environment. We rely on visual cues from those that we communicate with as a means of assessing understanding, but the flow of most conference presentations doesn't allow for a fully interactive session due to time constraints. So, what if we could have the best of both worlds. Having a presentation but with the opportunity to answer questions in real time and within the various flows of the presentation.

There is an obvious challenge associated with a virtual conference. How do we ensure that there is sufficient engagement from those who attend the session? Is it enough to simply turn up and present a presentation over the appropriate conference platform? How do we get engagement from those in the audience and, perhaps more to the point, how do we gauge the effectiveness of that engagement



The rules of virtual engagement?

when we are busy making a presentation? Finally, how do we design into conference presentations the potential for chance meetings in the virtual coffee breaks? These are things that we often take for granted when attending a conference as we are 'in the room' and have a range of visual cues that provide us with feedback. The key challenge of a virtual conference is, therefore, around the processes of engagement. It was as a means of trying to address that issue that we need to look to the work of Aristotle (Gallo 2017).

If we take on Aristotle's' arguments to heart, then the development of pathos is likely to be a key component of delivering in an online environment as it will allow for a greater sense of engagement from the audience with the presenter. It was an attempt to explore the notion of pathos that drove the underpinning pedagogical approach that is discussed here.

One of the approaches that the author had trialed before the conference was through the use of visualisation - initially as a means of storyboarding the academic content of slides - along with that of storytelling. The next logical step in that process was to develop 'stories' that were bespoke to the course being taught. An obvious extension of the visual storytelling approach was though the use of comics as a medium for communication and so a series of avatars were created to provide an additional commentary on the slide deck - usually as a means of provoking and questioning the speaker! The avatars were also embedded in a series of bespoke academic comics that were designed as the spine of the teaching approach. The purpose of attending the EASST/4S conference was to deliver an academic paper, but also to present a Making and Doing session on the use of those bespoke academic comics. The aim was to outline how comics theory could be used as a means of shaping the structure of a lecture, or presentation, and how the comics approach could be used to explain models and concepts in a

concise manner. The approach was aimed at providing a more accessible means of delivering learning to those students who were studying in a second language. Then along came COVID-19 and the impetus changed considerably!

A comics-based approach to uncertainty

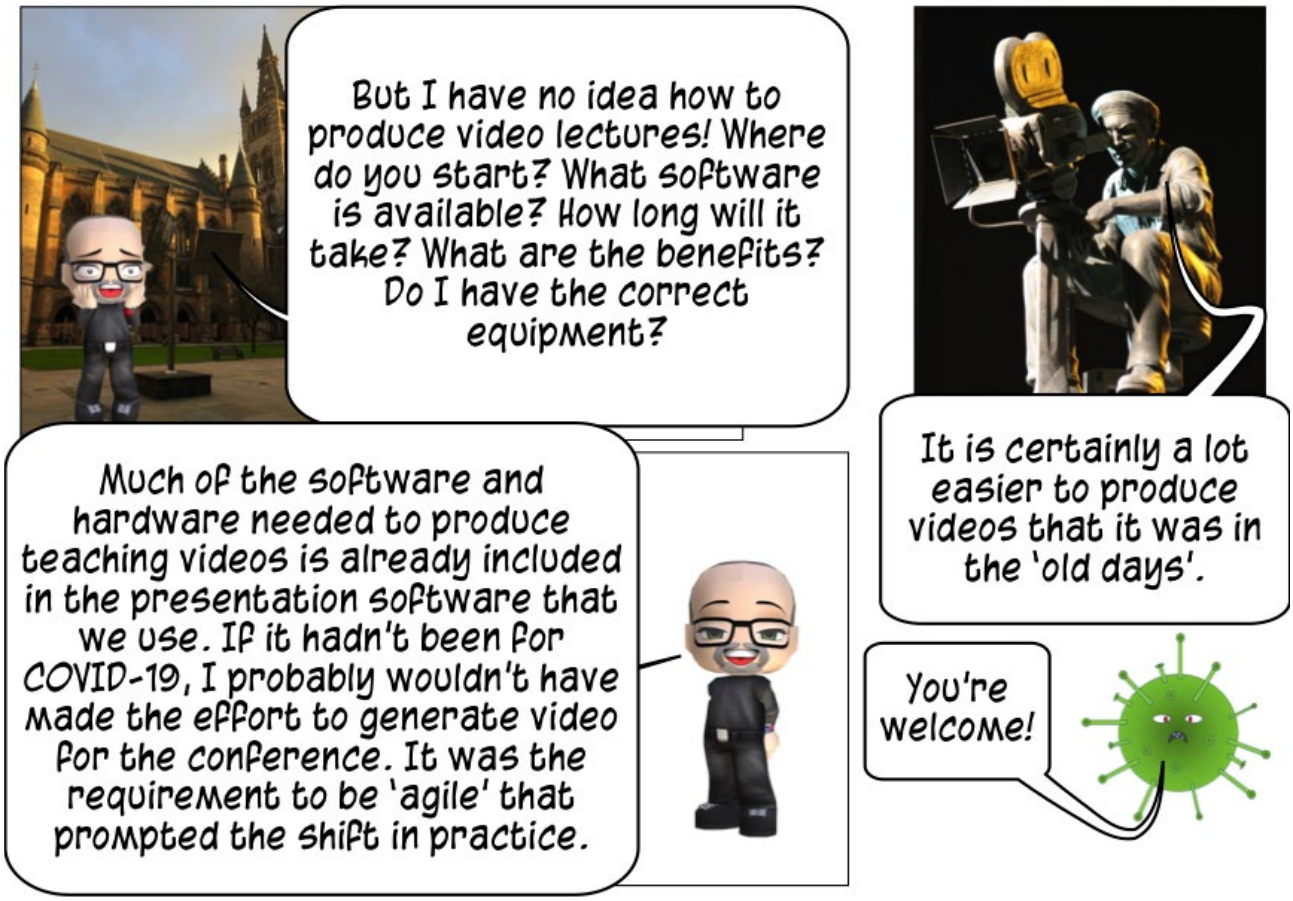
The theory of comics provides some insights into the ways that visual storytelling can be used as a means of communication (Potts 2013; Eisner 1996). The main elements of a comic-based approach are shown above and consists of images and words being used in a self-reinforcing way to enhance recall and understanding. There is a strong psychological basis for using the ways in which we process information via our cognitive short-cuts (heuristics) and we can use these processes as a means of developing understanding (through the visualisation of the narrative) and developing recall (Cohn 2013; Eisner 1996). These images and words are framed into discrete elements that are designed to develop meaning within the narrative structure (McCloud 1993). Each of these frames are linked together by the flows of the argument within the overall narrative, thereby allowing for the progression of ideas and concepts. The final element of comics theory relates to the gutters - the spaces between the frames. These can be seen as spaces of emergence in which additional issues can be raised or developed as a function of the interactions between frames to create moments that matter or to offer the potential for alternative interpretations within the narrative structure (see, for example, Berlatsky 2009). Taken together the comics approach provides for a means of providing insights into academic issues and developing insight and understanding. The COVID-19 changed that dynamic and led to a shift from the 'static' form of the comic to a more dynamic approach which required the animation of the avatar as a means of addressing the pathos element highlighted by Aristotle.

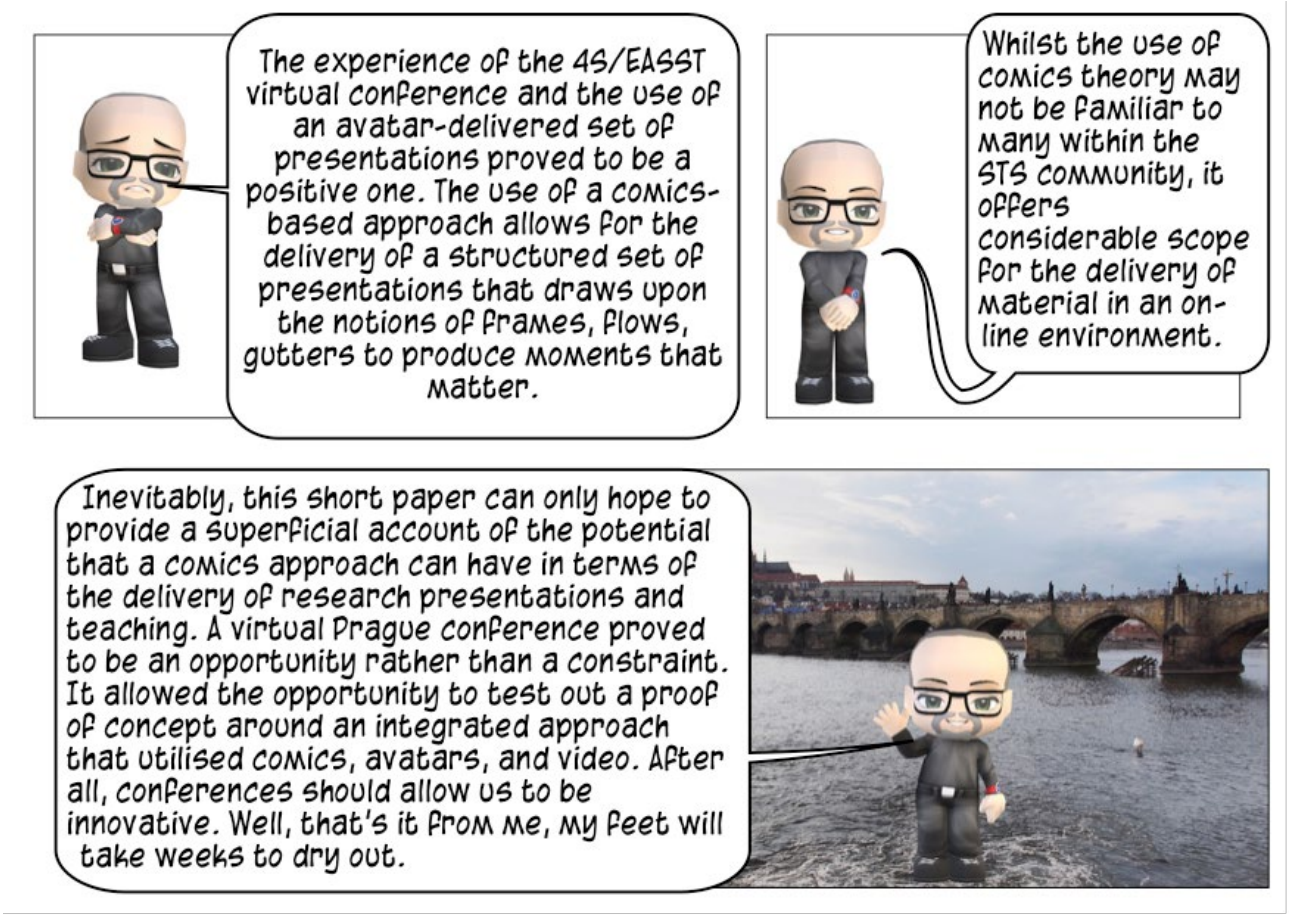
The underlying comics approach to visual storytelling

Animating the avatar and the emergence of Avatar TV

Right at the outset it needs to be stated that I had not produced a video lecture before COVID-19. This wasn't a case of tapping into an existing skill set to turn conventional lecture material into video that could be delivered on-line. The need to pivot from a face-to-face form of delivery under the pandemic generated the impetus to use the software that produced the avatar to generate a talking avatar. That was then inserted into the slide deck and a script produced that allowed the avatar to take over as the presenter.

The delivery of the presentations took place in two discrete sessions - a formal academic panel and a Making and Doing session. The experience of both sessions was quite different. The panel session was a formal 15-minute presentation which was timed when producing the video. Questions were asked both within the session via the chat function but also at the end in a more traditional way. The impression was that the panel session went well and there appeared to be considerable engagement from the audience. The Making and Doing (M&D) session was a different experience. First of all, the author had limited experience of such a session as it appears to be unique to EASST/4S. Secondly, the time allocated for the session was 60 minutes and this generated logistical challenges in terms of breaking the presentation down into 15/20-minute blocks. The timing is important as 20 minutes appears to be the optimal time period for an online presentation. With hindsight, this introduced uncertainty into the timing as the questions occurred after each block. The level of engagement was such that the presentation came close to overrunning the time slot due to the extent of the questions from the audience in the period between the block delivery. With hindsight, it might have made more sense to deal with the M&D session by utilising a





blended approach where the videos were made available prior to the session and this would have allowed the delegates to use the time available for the discussion. This would have been more effective but presupposes that the delegates would watch the videos prior to the session.

Concluding Comments

The move to an online format in which the avatar is given voice and put into a self-contained video lecture offers considerable benefits in terms of developing engagement (pathos) compared to a voice-over presentation and, possibly even an on-line, face-to-face lecture. Whilst the start-up cost of producing an avatar-led presentation are higher, if this is part of a wider approach to learning design then the material could be current for several years before it needs to be re-developed. In contrast, a 'live' on-line face-to-face session will incur the same time-related costs every time that it is delivered. In addition, the use of the avatar can generate the pathos that was highlighted earlier, especially if the avatar can be given a personality that is different to that of the lecturer. For those who are nervous about appearing 'on-line' in a video, the avatar-led approach offers some additional benefits. In terms of a conference presentation, the benefits are not as obvious and the main one is in terms of controlling the timing of the presentation to the timeslot that is allocated. It remains to be seen how this approach will develop in the future, but it could be argued that our institutions will change as a function of the COVID-19 pandemic and we will need to explore new, more student-centred approaches to learning and teaching as a consequence. This is a first step in a brave new (avatar-led) world.

Acknowledgements

The author would like to thank Will Varner and Carl Potts of the New York School of Visual Arts and Alan Irwin from Copenhagen Business School for comments on the underpinning construction of the comics approach which is described in this paper. Needless to say, all errors of omission or commission remain those of the author, although a certain avatar may also bear some responsibility as well.

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On (not) feeling virtual vibes: An academic mother's EASST/4S online conference experience

Susanne Koch

COVID-19 has led the STS community to submit to an experiment, namely to meet in virtual space for the EASST/4S joint conference "Locating and Timing Matters: Significance and agency of STS in emerging worlds". In this piece, I provide a personal account of how I experienced this experiment as an academic mother attending the conference mostly from home.
Relating to colleagues' talk on affects and disconcertment in interdisciplinary collaborations, I describe how I perceived the absence of bodily presence as complicating the situation of speakers and listeners: the affective dimension of research and the immediate reaction of others could hardly be felt. Against this downside, I realised the potential of digital encounters and started sensing virtual vibes, which turned the event into a valuable experience.

"I can't feel the panel." This is how I summarised my first day at the EASST/4S conference taking place in "virPrague" to my partner. Put frankly, I felt a bit frustrated. I had been looking forward to the conference for quite a long time, excited that it would offer me multiple chances: the chance to share findings from my research in a panel on inequality I had set up together with my colleague Nelius Boshoff from Stellenbosch University, whom I was really looking forward to meet again in Prague; the chance to present myself to the STS community, which I am trying to connect with and make myself belong to. Being a post-doc whose affiliation provides a highly interesting space to carry out science studies, yet is not linked with STS institution-wise, I am tasked to build up my scholarly network somewhat on my own – and the EASST/4S conference promised to be a great opportunity to progress in this regard. As much as I was curious about the research presented at the conference, I was curious about getting to know people personally – and, admittedly, as an academic with care responsibilities, I was also curious about having some days abroad, just for myself, even if it was for work.

These were my expectations, before COVID-19 changed life substantially. When the organisers announced the conference would not be cancelled but shift into virtual space, I was happy and relieved that the efforts of application had not been in vain, yet also wondering which of my initial expectations would materialise, as 'face-to-face' interaction would be mediated by technology.

'Locating and timing matters', also for virtual conferencing

Now the conference started like this for me: I was waiting for my mum to arrive to look after the children, so that I could eventually finalise my presentation scheduled for day two, while I had also selected ten panels (for day one only) which I deemed highly relevant and thought I shouldn't miss. The first sessions, then, felt rather odd. I was sitting at my desk at home, with an unstable internet connection, trying to follow talks while hearing my children play outside. This was when I first realised how 'locating and timing' mattered – also with regard to participating in a

virtual conference. My timing had been bad due to the delay in preparing my talk. And my location made it rather difficult to concentrate.

I found it somewhat hard to switch my mind into a conference mood, and suddenly realised how much it makes a difference to physically 'be' somewhere. The presentations I listened to were most interesting; however, I couldn't 'feel' the panel. Over the course of the conference, the informal rule and habit emerged that listeners switched off videos and mics during the talks, and only turned them on for asking a question or making a comment afterwards. This was for good reasons, including to save privacy and bandwidth. However, I perceived a downside to this practice, namely that the reaction of the audience during the talks could hardly been grasped. One could not see facial expressions, hear murmurs or laughter in the room, see people taking notes or sending bodily signs that show their intention to engage in interaction. I realised that active listening is obviously only one of various bodily actions which usually take place when I am in a room with a speaker in front. What it also does at a subconscious level is absorbing the ambiance and the audience – and this is what I was missing.

Physical presence matters for discursive exchange

How much such bodily perceptions matter for the scientific discourse, albeit in a different context, was broached by a panel organised by Mareike Smolka, Ricky Janssen and Cristian Ghergu from Maastricht University, which dealt with "Affects, emotions, and feelings in data, analysis, and narrative". In the first of two sessions, Mareike Smolka presented insights from on-going research on the relation between affect and collaborative action in interdisciplinary collaborations carried out together with Erik Fisher (Arizona State University) and Alexandra Hausstein (Karlsruhe Institute of Technology).[1] They highlighted how tensions that emerge in interdisciplinary collaborations are as much cognitive as they are bodily felt by providing auto-ethnographic experiences such as the situation when Erik Fisher was challenged by a senior member of a research group he was meant to collaborate with in the context of Socio-Technical Integration Research. The text passage they used for illustration is captured by the screen shot below:

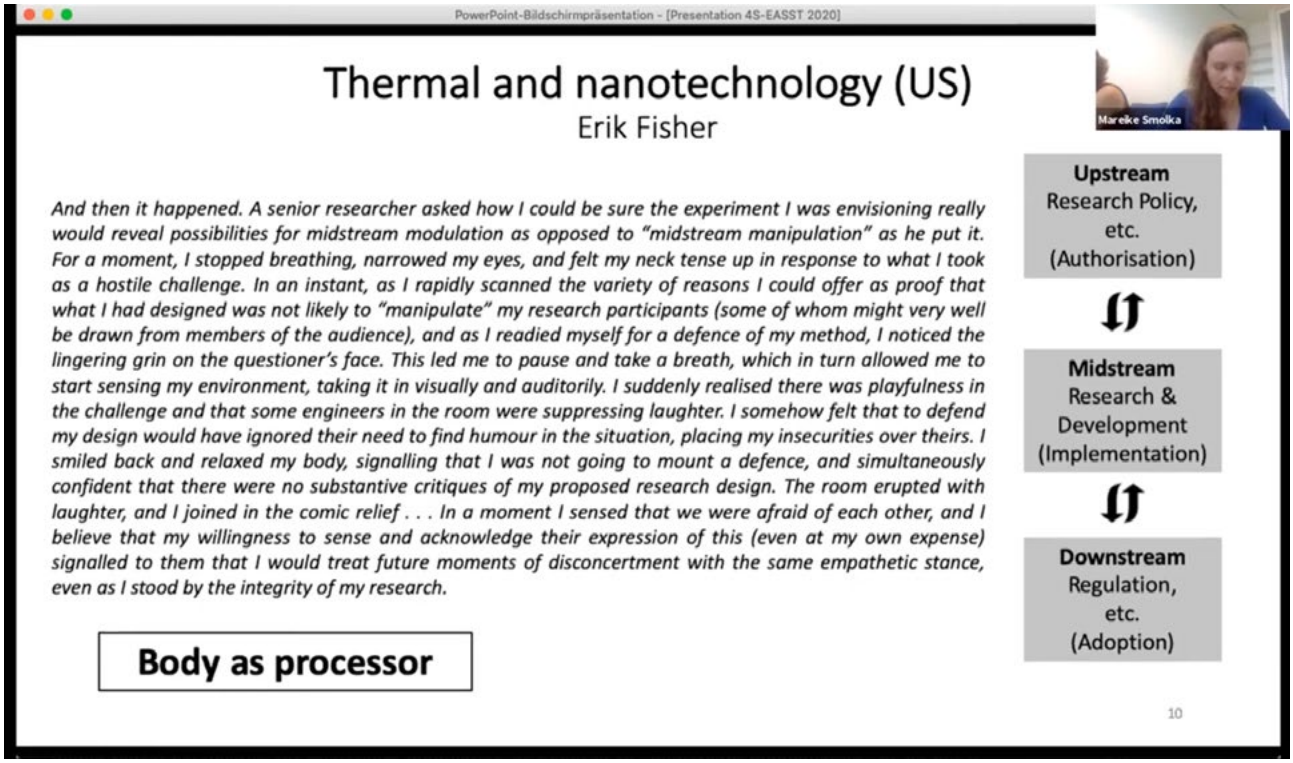

Figure 1: Screen shot of Mareike Smolka's talk "From Affect to Action: Choices in Attending to Disconcertment in Interdisciplinary Collaborations" (with Erik Fisher and Alexandra Hausstein).

1 Their conference paper was titled "From Affect to Action: Choices in Attending to Disconcertment in Interdisciplinary Collaborations".

While I was listening to Mareike reading out this passage loudly, I thought: Yes, this is exactly what is lacking in the virtual conference space – the ability to "detect" and "process" the affective dimension of colleagues' reactions (these are the terms used by Mareike, Erik, and Alexandra), to feel how their comments resonate with my own questions, assumptions, and interests. In a virtual space where you only see one or two faces on a screen surrounded by black squares with white letters, it is hard to feel the affective dimension of our research – "to move with and be moved by" (Mareike, Erik, and Alexandra citing Myers, 2012: 177) other bodies and their curiosities.[2]

The absence of physical presence complicates the conference situation not only for speakers, but also for listeners, particularly first-time participants who would benefit from experiencing how peers in a scientific community react to each other. This is difficult to grasp on a screen where people appear only to ask the speaker their question. And it also makes it more challenging for 'newcomers' to get into the conversation. Not being physically together in a room made it considerably more challenging to sense when the right moment has come to raise my hand (i.e., to click on the blue hand in Zoom), ask a question or make a comment (which in the realm of scientific conferences is also a performative act with image-building effects; see Hitzler and Hornbostel, 2014: 71). Some moments of awkward silence following the end of talks made me think I may not be the only person insecure in this regard.

Feeling virtual vibes, finally

What I described so far, however, is not the full picture of my conference experience. During the first two conference days, I somewhat struggled with the lack of immediacy sitting alone in my room while listening to scholars' presentation. But then on Thursday something unexpected happened: I started to feel conference vibes. It happened while I participated in the panel on affects, emotions and feelings, and in hindsight, I think it happened not only due to the inspiring talks and lively debates starting off in the panel, but also as its topic made me reflect about my own affects as conference attendant. This reflection helped me to reconcile the fact that I was bodily at home, which also meant my kids would sometimes come for a cuddle or climb on my knees, but that I was somewhere else mentally at the same time. On Friday, when I attended the last sessions, the virtual vibes of the conference even made me write some enthusiastic and personal tweets (which I usually refrain from posting):

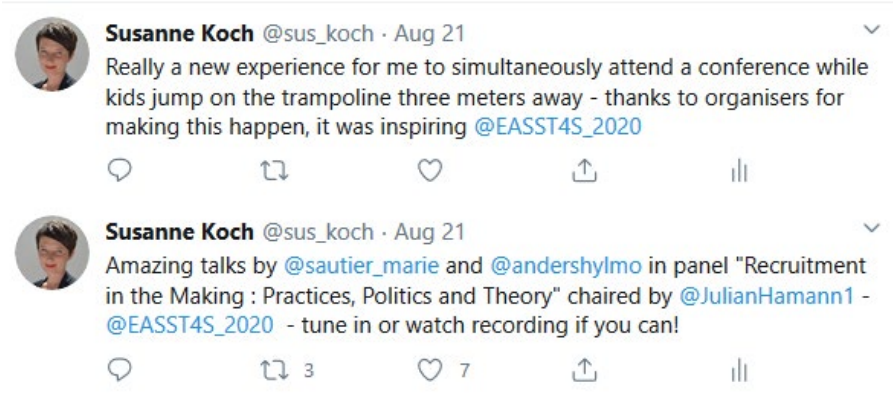

Figure 2: Some enthusiastic tweets I posted on the last conference day

2 I want to thank Mareike Smolka, Erik Fisher and Alexandra Hausstein for granting me permission to incorporate the screen shot including the vignette, as well as for clarifying concepts and making instructive comments on an earlier version of this text.

All in all, and with a bit of time having passed, I see that the EASST/4S conference in its virtual format has actually met a lot of my initial expectations. Although I did not encounter scholars face-to-face, I was able to connect with colleagues and continue exchange via emails, which partly offered more substantial exchange than small talks at a coffee break. This is not to say that I would not have loved to have a coffee break in Prague. However, in hindsight, I see more and more the advantages this virtual format has offered – such as being able to bring my kids to bed after the conference days were over, and to watch recorded sessions I was unable to attend simultaneously. Eventually, the conference made me aware of the fact that I am able to feel virtual vibes, which was truly a new experience to me.

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A digital conference as a digital object
How EASST/4S went online with success and some liveness and accessibility challenges

Nils Matzner

On May 17, the EASST president Ulrike Felt announced that cancelling the EASST/4S conference "was never seen as a real option" and that they are looking for the "best socio-technical option to go virtual". The conference organisational committee promised to "make the best of the situation" implying the digital format to be less favourable for a conference. The transformation of a standard conference into a digital conference eschews the question what a good conference is. The organisers tried to maintain the structure of conventional conferences, successfully establishing a stable presentation framework, but missed some chances to explore new digital formats – which, however, a few sessions applied.

Digital conferences are often discussed regarding their pros (cheaper, recordable, family friendly, eco-friendly, Corona proof, etc.) and their cons (time zones, no immediate 'liveness', exhausting, etc.) with a tendency towards a 'better than nothing' sentiment. The business world discussed digital conferences from the beginning of the Covid pandemic with great openness. A Forbes writer lowered expectations, stating that organisers "may not have the know-how or capacity to throw a 5-star digital event together on the first round".[1] The same applies to participants, who sometimes struggled with the tools used for the conference. I must say I was astonished that basic 'Zoom skills' are not yet part of everybody's presentation repertoire. Consequently, the next digital EASST/4S (if and when performed) will benefit from our learnings this year and make an even better conference.

However, digital conferences are no technical fix to professional meetings and exchange. The EASST/4S conference gathering – as well as other (digital) conferences – hereby offered insights into the limits of digitalization. Evidently, not everything that constitutes a good on-site conference can be digitalised. Especially the informal interpersonal communication, the 'immediacy' and 'liveness' that accompanies a physical participation, or even the 'feeling' of being in a foreign city and eating the local dishes – these physical experiences make the travel worth, and are all excluded when meeting online. The mediated 'liveness' of TV, live stream, social media or digital conferences is part of society's current 'reality' (van Es 2017) but it lacks the sensorial and emotional components of being on-site and in a local event. However, mediated live events are to some extent more accessible (no travel, usually less costs, etc.) than on-site events (travel, expenses, time investment, etc.).

Digital conferences seem to be similar to digital objects. They are both 'real' and 'material' (Rogers 2013, S. 19). An online conference paper, a tweet, a like-action, etc. are all objects that inhabit our world. Consequently, a digital conference is not 'representation' of the 'real world' but a manifestation of socio-technical interaction itself. However, a digital conference is different from a non-online, on-site conference, as it requires different infrastructures and interactions. An online conference can imitate a conventional conference by having a speaker and Q&A format, but there is still a need to adapt all known formats. For instance, voting tools for polls on topics or other choice making procedures are much easier online whereas informal communication is much harder to achieve. Using the known interaction formats of presentation and discussion is a possibility but not in any case the best choice.

1 Daniel Newman: Events Are Going Digital: Should Your Company Follow? Apr 6, 2020, https://www.forbes.com/sites/danielnewman/2020/04/06/events-are-going-digital-should-your-company-follow/

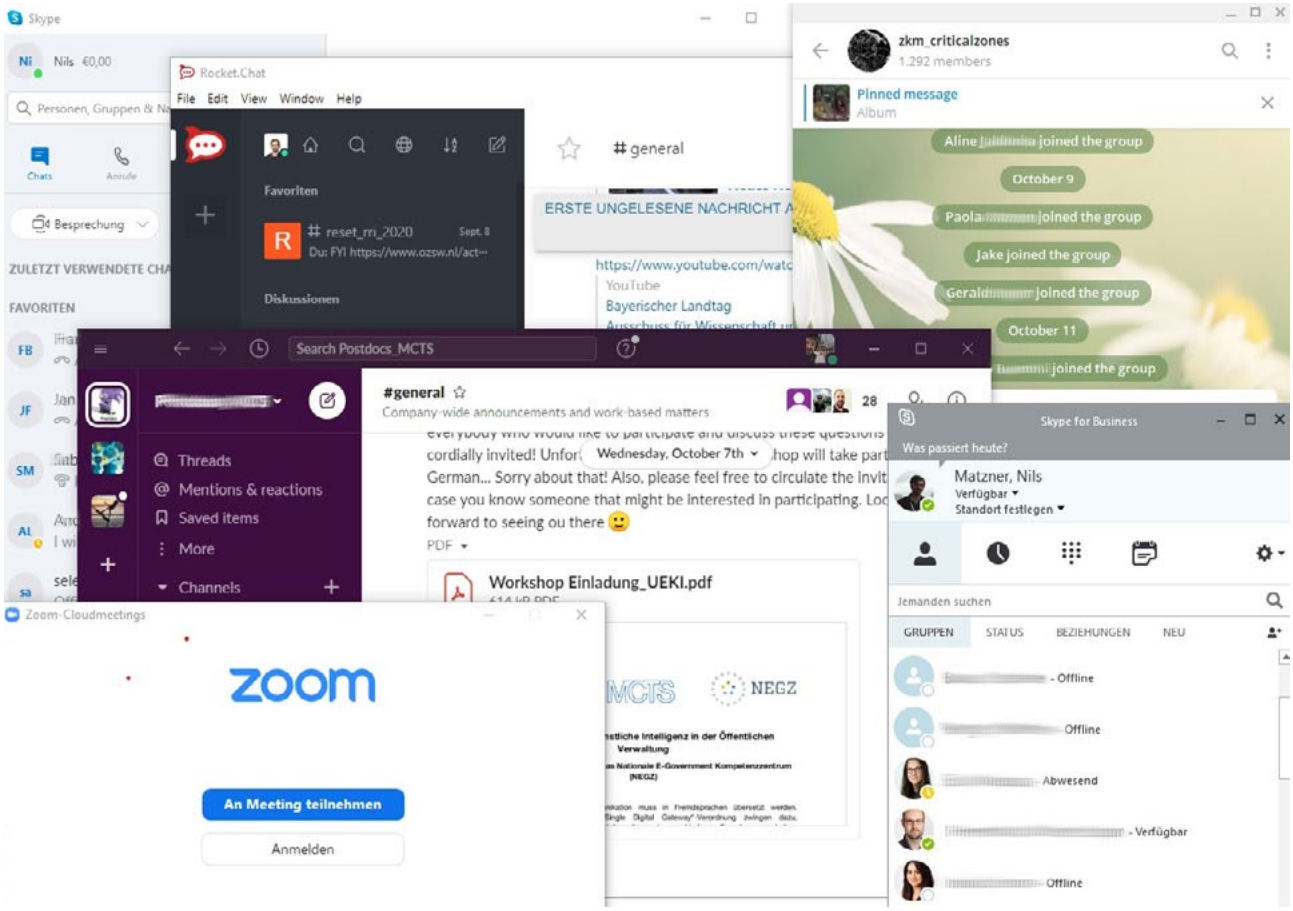

Fig. 1: EASST/4S used mainly Zoom out of the wide variety of available tools.

The organisers cared for stability of knowledge transfer when they offered participants the opportunity to record presentations, which everyone could watch before the respective sessions or in retrospect to the sessions. The conference program contained Zoom links for every one of the 400 sessions which were only accessible for those who paid the conference fee. This fee, which could not be reduced due to cheap online communication, had to be used for paying already made reservations for Prague, cross-finance other expenses, and buying software, apart from other reasons (as stated by Ulrike Felt). The next digital conference would assumable be cheaper due to experience and infrastructure build up this year.

Although all conference sessions were live (some using recorded presentations in addition), the practices and performances of video conferences were improvable. The organisation committee expected to "see various novel approaches coming from the Making and Doing presenters". However, many sessions I visited were standard Zoom meetings with a simple mode of presentation and discussion. I can only speculate that session chairs saw the standard Zoom meeting as sufficient or were overwhelmed with organising different formats. The conference succeeded in giving a good structure for those Zoom meetings, which worked out fine most of the time but were exhausting for a whole of four days. Some sessions made use of recorded presentations to avoid bandwidth problems. When the chairs asked everybody to click on a link for a recorded presentation, a strange situation emerged: Everybody in the Zoom meeting was quiet while watching the presentation video in their private browser video. In addition, presenters watched themselves in their own video. These awkward moments of co-watching a video while watching the other Zoom participants watching their video stream could be avoided in the future by either going live with all presentations or making watching

the videos prior to the sessions mandatory. Live streaming is not comparable to an in-person experience but it is preferable to recorded talks.

Live streaming requires adequate platforms. Even though STS scholars are very aware of "platform economies" (Kenney und Zysman 2016) and their power, they are hard to avoid building a communication structure for a live event. Streaming of live subplenaries and recorded presentations was supported with a proprietary version of SlidesLive, which ran YouTube in the background. Following and commenting ongoing discussions worked well on the technical as well as the side of discussion flow. However, the platform might not have been the best choice because participants e.g. from China could not access the service – without hacking. Commercial digital platforms offer the best service with robust data traffic and easy to use software, but they set limits to the accessibility. The accessibility limit in the case of China was even for political reasons, whereas other limits were just non optimal usage or lack of bandwidth.

Most of the formal activities of conventional conferences – such as sessions, subplenaries, and even exhibits – were transferred to Zoom or SlidesLive/YouTube streams. New formats were mainly explored within sessions. One interesting session (by Paula Bialski und Mace Olja) organised a podcast on their panel topic "Hacker Cultures". The content about nostalgia in hacking, cyber security experts job changes, or experiences in hackerspaces, was interesting and not unusual STS content, but the format of a well-produced podcast was very refreshing. The podcast is still available and I listened to the interviews of the presenters on a bike ride. It distracts one from the usual Zoom fatigue.

According to the Twitter livestream, this EASST/4S was mostly normal: Chairs advertised their sessions, presenters their presentations, and some minor discussions took place on social media. However, a few local STS communities announced their 'public viewing' of conference events. It seems that some tried to fight the isolation one felt participating in a large conference within a tiny office.

Fig. 2: The conference podcast is still available on http://www.buzzsprout.com/1323889 and Spotify.

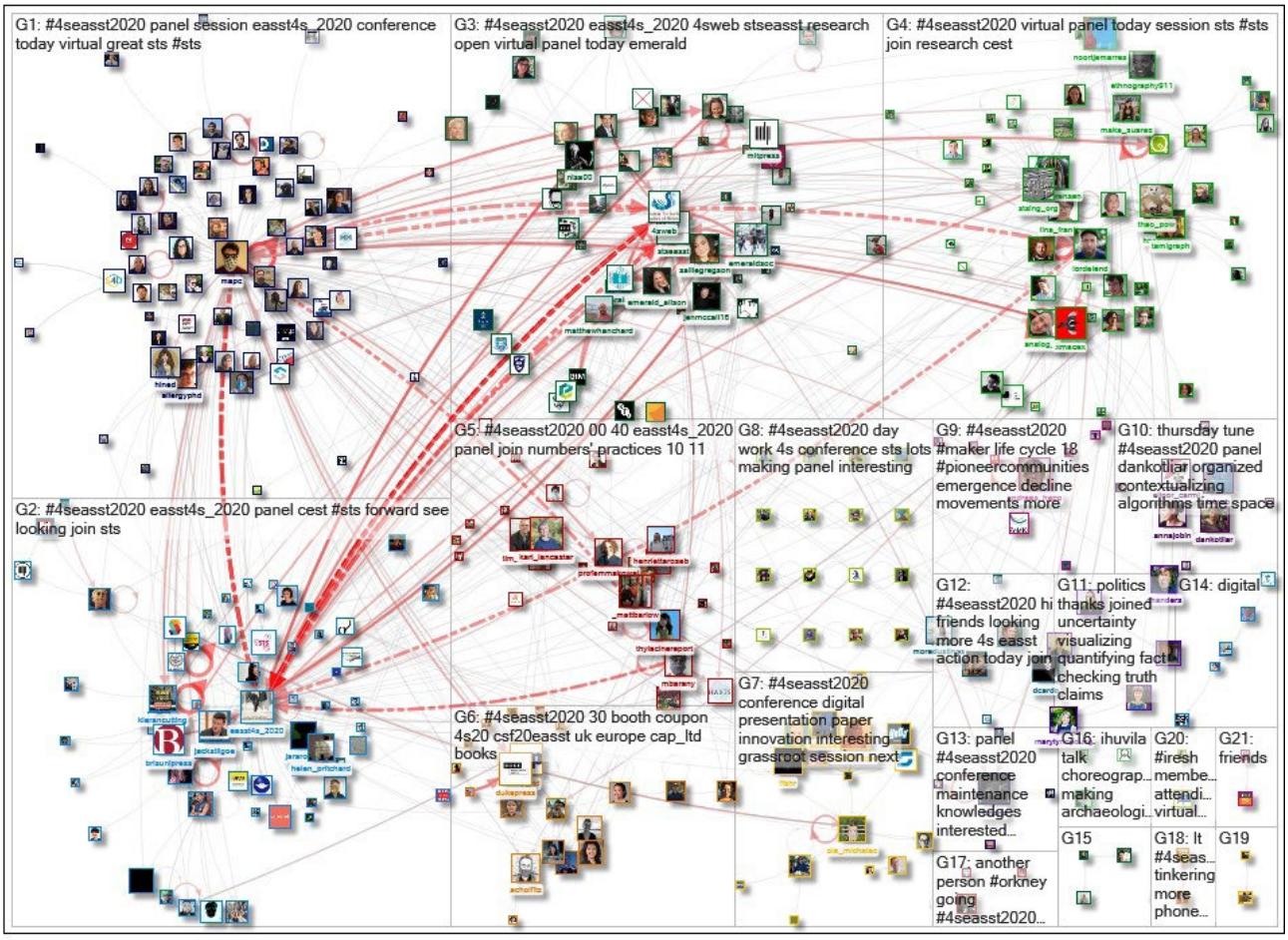

Fig. 3: Twitter communication was not much different from previous years. Twitter network graph from NodeXL, https://nodexlgraphgallery.org/Pages/Graph.aspx?graphID=232972.

According to colleagues, the workload one had to wrestle with during conference week felt different on a digital conference. An on-site conference in Prague would have distracted academics from their always too busy schedule and would have kept them much more 'in the moment', to borrow a phrase from Yoga philosophy.

I emphasised before that digital conferences should be seen as an object in itself and not a representation of a 'real' event. A digital event comes with a different, more mediated live experience. These events have the tendency to be more accessible and are based on different practices and infrastructures. I would like to close with some ideas for future digital conferences:

- A lobby could be a meeting point where you might find old conference acquaintances and come back to every time you are not participating in an event. This could be a Zoom meeting or a simple chat or take place with the help of other digital tools.
- 'Idea speed dating' could bring back the randomness of interactions: Shuffle all participants and pair them in a breakout session for 7 minutes.
- Assigning a random conference buddy with whom you should have a virtual coffee break or lunch meeting with.

- Using a business matching platform (somehow similar to a romantic dating platform) to find colleagues with similar academic interests (e.g. via https://converve.com/).

- Conference packages with refreshments to be consumed at digital coffee tables could be sent via mail to all participants in advance (although this is costly and comes with organisational obstacles).

These practices might fulfil some of the needs conference participants have in one way or another. There are grounds on which we can be optimistic that future digital conferences will give an integrated live experience, which is more accessible, affordable, and eco-friendly than an on-site conference.

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A Question of Sport: Opening a New Research Agenda in Science and Technology Studies

Michiel Van Oudheusden, Gian Marco Campagnolo

Sport is increasingly shaped by science and technology; yet, it remains an understudied topic within science and technology studies (STS). Building on observations from a panel on sport, science and technology at the last EASST/4S conference, we take initial steps towards outlining a future research agenda on sport and STS. We invite others to consider with us which topics could, and should, be covered in such a research program – and articulate why it matters.

Why have so few STS scholars taken up the study of sport? This question came to mind upon hearing five excellent talks on sport on the 2020 EASST/4S Science, Technology and Sport panel, organized by Jennifer Sterling (University of Iowa), Mary McDonald (Georgia Tech) and Gian Marco Campagnolo (University of Edinburgh). Panel presenters described and questioned ongoing developments in professional and recreational sport, such as the relentless tracking of health, diet, and distance data in intercollegiate athletics, gender classifications of athletes, the gamification of running and basketball, and the use of patents in the sporting industry.

By engaging with these topics empirically and by critically exploring their social and ethical implications, the panellists illustrated how sport is increasingly shaped by science and technology, and why sport demands (more) attention from STS scholars. Presenters highlighted the unmistakable trends of 'datafication' and 'scientization' in sport and the imperative to accelerate sport innovation, often in opaque and unanticipated ways. Sportspersons (including recreational athletes) now routinely operate in a technological environment of devices, data flows, laboratories, and scientists. Across the globe, sports-tech industries are rapidly growing, bringing together businesses, sports clubs, research institutes and governments, with the purpose of delivering better innovative products and services to sports people and sports audiences. With increasing frequency, public authorities and industries are launching initiatives and technologies (e.g., smart watches, pedometers, aerodynamic clothing, and sports nutrition) to encourage the average citizen to live an active and healthy life. The media is reporting in ever increasing detail on issues such as medical support for footballers, the use of performance-enhancing drugs in cycling, and even 'mechanical doping' through the use of hidden motors in bikes and the use of technology to support referees (see Fig. 1).

These and many other issues receive only scant attention within the social sciences and are not publicly debated – despite their social significance. Does bringing science into sports enhance sports performance and user experience, as is often proclaimed? Does it open opportunities for continuous improvement and learning? Given the rapid advance of sports science, how will new developments like genetic talent screening affect sports and society? How do each of these developments affect athletes' sense of identity and wellbeing? STS scholars have studied technological artefacts and fields that touch on sport, such as health, medicine,

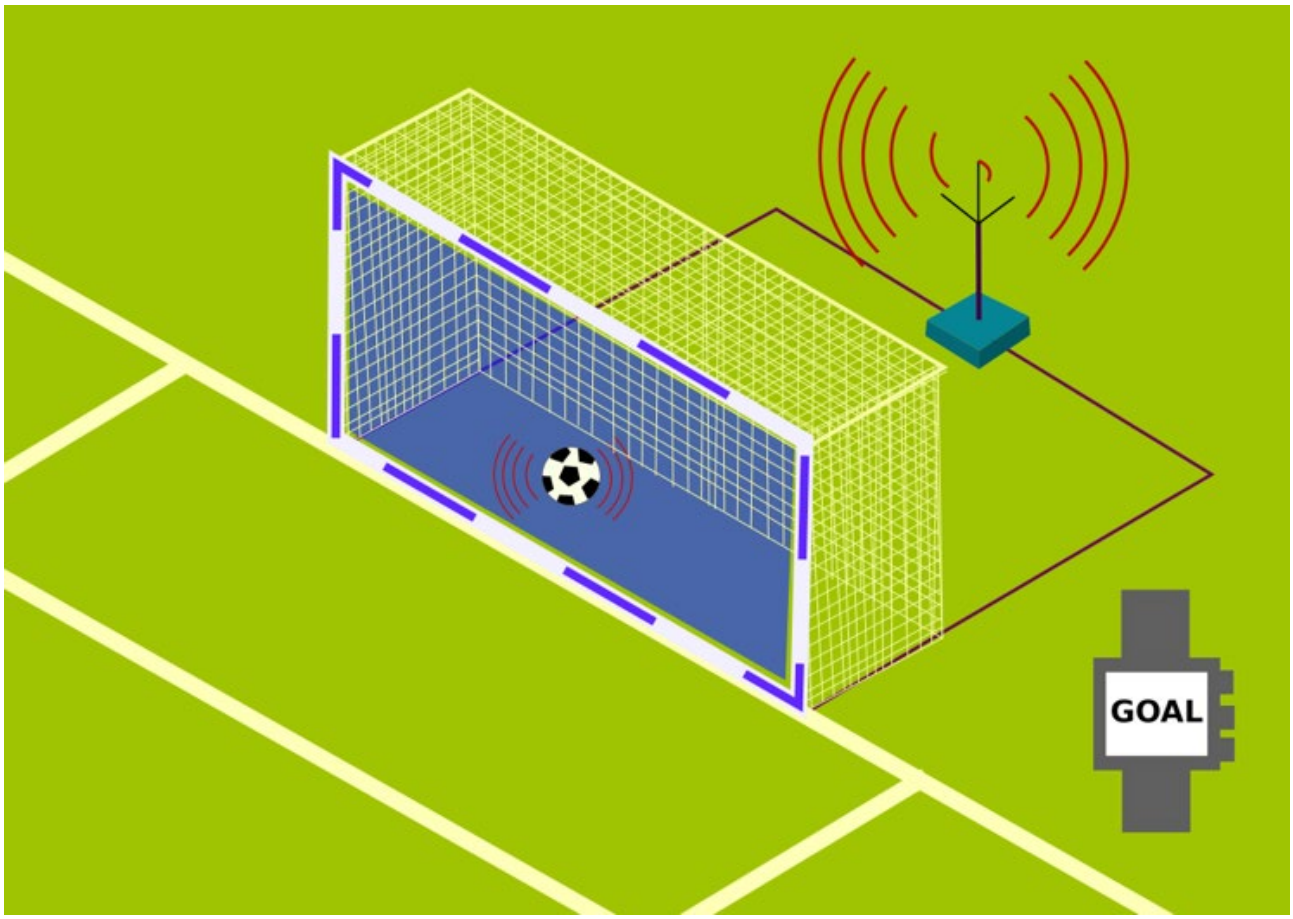

Figure 1: Goal Line Technology Diagram by Ranjithsiji (CC BY-SA 4.0). Taking the Hawk-Eye Goal Line Technology as an example, Collins & Evans (2008) and Collins (2010) have argued that the visibility of the role of technology in sport events can help inform public discussion of its use and accuracy.

biotechnology, and nutrition but have yet to inquire into these and related questions, found at the intersection of science, technology, innovation and sport.

This is why the Science, Technology, and Sport panel at the conference proved relevant and timely. It arose from the idea to establish a STS & Sport presence at EASST, complementing what US-based researchers are doing at 4S, and previous efforts by STS researchers to bring STS into sport at the 2016 4S/EASST Conference in Barcelona.

More research is needed

This short piece is intended to encourage STS researchers in Europe to fully engage with sport and sport-related matters by considering with us which topics could, and should, be covered in future STS research programs. (Incidentally, it was written just a few hours before marathon runner Mo Farah would break the one-hour running record over a distance of 21.33km, aided by the latest shoe technology and by green flashing lights at the side of the running track; and before new doping accusations were made against him.) As a first step towards a broader consultation, we have asked STS & Sport scholars in our networks to outline their research interests on sport and STS. Ideally, these and related topics would be further developed in collaboration with the STS research community at large, and in consultation with sports stakeholders (sports practitioners, scientists and technologists, clubs, policymakers, and others) at a time of increasing technological proliferation in sport and the prolific growth of a global sport(tech) industry.

Statements from researchers in STS & Sport

Alex Faulkner (University of Sussex) co-led the ESRC-funded BioSport Project, which investigated the intersections of biotechnologies and their significance for sports and sports ethics, the life science sector, and society more broadly. He has interests in: competing sports decision technologies (e.g. Hawkeye in tennis); sci-tech aspects of how sports law is made; and biotech medicine in elite sports.

Using ethnographic methods, *Alexandre Hocquet* (Université de Lorraine) studies the increasing use of data in football and the mutual shaping of scientific modelling and software. One of his case studies is Football Manager, a videogame in the genre of sports management. He is also interested in endocrinology and the question of sex testing in sport.

Anne Marie Dahler (UCL University College) and *Sara Malou Strandvad* (University of Groningen) research the entanglement of 'human' and 'nature' in outdoor sport practices. Their research case is freediving, a sport in which practitioners combine inner, outer and otherworldly sensations and mediate their encounters with nature by way of technological devices, scientific theories, and syncretic forms of knowledge.

Gian Marco Campagnolo (University of Edinburgh) takes football analytics as a field to develop a sociology of algorithms. As part of his Alan Turing Institute Fellowship, he is currently studying the use of random forest algorithms to analyse football data. Using ethnographic methods, he is also looking at the distribution of data science expertise within coaching teams in professional football. With *Giolo Fele* (University of Trento) he writes on how sport data is used in TV broadcasting to make performance visible.

Ivo van Hilvoorde (Vrije Universiteit Amsterdam) has published on how technology shapes our understanding of sport and how it can contribute to the popularization of new sports, such as eSport. He studies the interpretations of the moral dimensions of sport, such as the organization of equal opportunities and an equal distribution of means for playing sports; and how new technologies influences learning in physical education.

Markus Stauff (University of Amsterdam) and *Carlos d'Andréa* (Federal University of Minas Gerais) research the ongoing public observation and evaluation of new technologies by a usually partisan audience in competitive spectator sports. The ambivalent relation between sports, media and technologies regularly triggers controversies about the appropriate use and the implicit biases of technologies, and about technologies' ambivalent relation with the presumed physical authenticity of sports. Sport thus contributes its own dynamics to the wider public engagement with new technologies.

Michiel Van Oudheusden and *Ine Van Hoyweghen* (KU Leuven) seek to examine how science and technology are integrated into sport in Flanders (Belgium) and how this integration affects sport practices, such as talent screening; ultimately with the aim of developing responsible forms of sport-innovation with sportspersons and other stakeholders.

Mike McNamee (KU Leuven, Swansea University) has published extensively on the use of novel therapies and nanobiosensors in elite sport. His research interests include the bioethics and social science of sport medicine, and the use of technology for integrity threats. He has worked with and for national and international sport associations in relation to ethical issues, including anti-doping.

Sachit Mahajan (ETH Zürich) seeks to examine how wearable technology and data analytics could assist in injury prevention and rehabilitation in sports, especially focusing on grassroots sports. He is interested in exploring a potential integration of grassroots sports and AI that could lead to better training and development practices and decision making.

With their colleague *Vidya Subramanian* (Indian Institute of Technology Bombay), *Marianne Noel* and *Harmony Paquin* (Université Gustave Eiffel) have examined how technologies such as RFID chips, screen interfaces, more powerful racquets, and social media (re)shape the relationships between spectators, players, matches, tournaments and elite tennis.

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Understanding post-truth times to navigate the Anthropocene
An interview with Michael Kilburn

Meghie Rodrigues

This interview follows the panel "STS for a post-truth age: comparative dialogues on reflexivity (I)", held at the EASST/4S Joint Meeting in 2020. The session had several discussions intersecting disinformation, post-truth and the way we deal (or not) with some of the greatest challenges of our time, such as the Anthropocene. Michael Kilburn, professor of Politics and International Studies at the School of Arts and Sciences of Endicott College in Massachusetts (USA), posed a series of questions around "the avant-garde of a global crisis of civilization" in the thought of Czech politician Vaclav Havel. He also brought about how some of Havel's ideas to deal with crises in a post-communist regime can help us think of the current ecological crisis we face in the present.

In your presentation at the 2020 EASST/4S, "Living in post-truth in the Anthropocene", you chose the words of Czech playwright and former president Vaclav Havel to conduct your line of thinking. Havel was the last president of Czechoslovakia and the first president of the Czech Republic, an icon of the Velvet Revolution in 1989. Why did you choose Havel to think of post-truth and the Anthropocene? What can we learn from him to help us navigate the crisis that brings post-truth and the Anthropocene together?

The first link is the conference was supposed to be held in Prague -- and I'm familiar with Havel's work, so it seemed to be a nice connection to make, especially because of the conference's theme, "Locating and timing matters"... so it seemed like a good place to start. Also, I was very impressed and struck by the interdisciplinarity in science and technology studies (STS), being new to the field. Havel, in a sort of *ad hoc* fashion, represents that, too: he is best known as a playwright, and was always interested in the Humanities.

He was born in a bourgeois environment but couldn't enjoy it because of political turmoil: first, the Nazis invaded Czechoslovakia, then the communist regime rose to power. He wasn't able to study Humanities at university like he wanted because his family was a "class enemy", so his options were rather limited. He managed to study civil engineering and later worked as a technician for a chemical laboratory and later got other working-class jobs until he ended up in a theater as a technician (and later became a playwright). So Havel, in a way, embodies STS, with his philosophical, humanistic tendencies but also draws from his experience. He met lots of different, interesting people from whom he could learn from and thus built his self-education in a sort of "soup" to understand the world. So I thought he would be a good figure to explore.

Also, the panel was about post-truth. I teach American politics and we're struggling with many issues around that term. In Havel's time, the condition of what he calls a post-totalitarian regime was the greatest challenge -- to which he suggests should be faced with the living in truth, a capital T "Truth". And it would be interesting to bring him forward to the present and think of the current scenario. Havel dealt with ideology in his writing -- but how to deal with this "ideology 2.0" or wherever we are right now, where truth has so many suspicions around it?

Havel doesn't give us any answers [on how to deal with post-truth or the Anthropocene]. The historical context shifted, he died ten years ago and finished his philosophical works three decades ago. But one thing that might be useful for us today is his idea of hope. The idea that even in the most desperate circumstances -- like communism seemed to him at the time or the Anthropocene seems to us today -- there's still hope for change. There may be a way out if we change our way of thinking. We once believed the Cold War would go on forever, but in the end it didn't. Life ultimately is bigger than the "system". It precedes it and will continue after it's gone. So trying to fix things by engaging directly with the system is to validate the system itself, and it really narrows the field of vision. Whereas if you just see the system as a symptom of a larger problem and try to work around it might be better. Maybe our way to survive the Cold War despite all despair and cynicism was to focus on life itself.

In his 1979 essay "Power of the Powerless", Havel makes a difference between the "objectives of life" and the "objectives of the system" – the system being, in the case, a society he strongly wished would come out of the communist regime (but would take at least another decade to do so). He said Eastern Europe was living under a "post-totalitarian regime" at the time. What is this regime he talked about and how is it related to the notion of a post-truth society?

The "objectives of life" and the "objectives of the system" was a strict dichotomy to Havel. When he referred to the "objectives of the system" he was talking about the post-totalitarianism system, which was one example of all other systems -- or architectonics of power, which was a bad thing (and it's curious because he couldn't have imagined he would become president years later). They were trying to boil things down to their own essence. Science in the 1960s was pretty much about simplifying things -- there wasn't as much appreciation for chaos, interdependence or intersectionality. Science has learnt a lot with complexity, especially with the environmental sciences. It's learnt that perhaps just isolating the active ingredient of a plant to get a compound for a pill is not enough. Maybe it should be in combination with its organic context, and that's what makes it effective. Science has got there, but maybe politics hasn't yet.

So when Havel talks about the system, he means anything that reduces complexity to its most probable state. And if individuals are more complex than the system, then they'd have to be forced to conform. That was definitely true in the communist system. It is curious because they construed communism to be like a science -- like marxism was supposed to aggregate the scientific laws of history. And if the individual doesn't fit the system, there's something wrong with the individual because you can't question the system. This was the situation Havel was in, questioning systems thinking, and comparing it to the aims of life, which sought to be beautiful, diverse, organic, complex -- at the individual and systemic levels. So to him, any system would strive to reduce complexity and thus, would be automatically anti-beauty, anti-poetry, anti-ambiguity. To him, all systems are dehumanizing.

The Prague spring was an attempt to escape the dehumanization of the system in place then -- it was what they called "socialism with a human face." They tried to do the Perestroika in Czechoslovakia in 1968 and it was beautiful -- but it freaked the soviets out, who crushed the movement with an attempt for "normalization", trying to go back to the "normal" pre-Prague spring as if it had never happened. But it had. And this attempt is what he calls the "post-totalitarian regime". He was not saying totalitarianism was over, but it had evolved to something else -- a bit more sophisticated than communism 1.0, a system that obliged people to comply. But once you recognize you're being morally compromised, you can't do it anymore. And that's the role of ideology -- it allows you to maintain your dignity by allowing you to lie to yourself, and it's a big price to pay for people with principles.

As to its relation to post-truth… that's an excellent question and I haven't figured it out yet. It seems to me there are two sides to it. Right now, post-truth is usually referred to as an epistemological crisis. Everyone used to agree on what the truth was -- so that when someone lied, you could call them on it. It seems like you can't do it anymore because truth isn't the reference point it once was. The communists were terrified of being found out, exposed in their ideology. In the communist regime, power and truth were the same thing. So they cracked down pretty heavily on dissidents that could expose them. So I guess they were fostering some sort of post-truth regime by then.

And this comes to what we have in place today. Trump for example, has no epistemology. It's Trump's world. He doesn't understand the difference between a truth and a lie. And still he's got 42% of support in this country. Probably we have almost half of the population living in a post-truth world as well. Conspiracy theories and QAnon give people something to believe in -- something that is totally disconnected from a shared reality. Are we living a break or an evolution of what we consider the truth to be? I am not sure, but looking closely, there's nothing new in the way populist leaders handle the truth. They had to recycle several things (from neofascist movements, for example). It's a kitschy pastiche of old ideas. And maybe what defeated those old ideas will defeat them again. In the end of the day, facts are stubborn things -- one can deny gravity and jump off a building and see what happens…

In that regard, there's a recent piece for the Financial Times in which economist Noreena Hertz makes the case for the epidemics of loneliness that is feeding the vortex of extreme right-wing populism in the West. She recalls Hannah Arendt and some of her ideas in *The Origins of Totalitarianism* in the sense of ideology as a means for isolated individuals to regain and "rediscover their purpose and self-respect". To Havel, ideology is a technology of power that demands conformity and acquiescence. Where do Havel and Arendt meet in today's society?

It is interesting that they seem to have different views on ideology, but there's a lot in common, too. Havel does talk about how seductive ideology is and how people can find power in it. Most people are quite at home in joining a club or a gang -- you give up some of your individuality. And this is a weak point of his theory of living in truth. He had the idea that you could forgo ideology but express yourself living in an authentic community.

I think Arendt was also anti-ideological -- she talked about the importance of truth, integrity and standing up to ideology. Certainly her life experience spoke to that. But Havel saw all ideologies as illegitimate. And I think Arendt saw many of them as evil, but also that they were not necessarily illegitimate: they were immoral, but they functioned very well and were very attractive to some groups.

In your presentation you mention that Havel's critique of ideology did not really work in real life – his anti-political approach to politics proved to be not effective enough in running a government and a country. So anti-politics is very possibly not the best path to face the Anthropocene, which is a political problem par excellence. What alternatives do you see to facing the Anthropocene today?

My first point is: we don't know yet. We're trying to solve questions to which we don't even have language to formulate, much less institutions to deal with them. We're trying to solve a present and a future problem with the tools of the past. Anti-politics might be unworkable -- and Havel himself learnt to do politics later on.

It's not just simply about keeping carbon emissions low. We cannot solve the problems with electric cars -- we cannot change our lifestyles enough to solve this problem. Maybe the ultimate answer might be that this problem is going to solve us. Because… even calling it the "Anthropocene" is too anthropocentric. There's a great article in The Atlantic by Peter Brannen, "The Anthropocene is a joke", in which he wasn't denying the science or that the Anthropocene is here -- but he said it's ridiculous to call it the "Anthropocene". It's too self-aggrandizing for us. Geological epochs are normally millions of years long, and the Holocene just started a few thousand years ago.

Maybe a lesson I take from the geologic time perspective to think of the Anthropocene is that we're a very small part of the whole system and maybe have done more damage than we can fix. Maybe the only solution is to let the environmental system play out. We have created hyper objects (like the Great Pacific Garbage Patch) that are way beyond our current technology and capacity to solve them. Maybe the only hope I can pull from this is to try to reimagine what it means to be human and see ourselves as part of a system -- and manage to integrate ourselves to it, like mycelium, which are totally integrated with other life forms, even at the cellular level… and then let the system adjust. And maybe even get comfortable with the idea that there might not be a place for humans in the post-Anthropocene.

The post-Anthropocene has got to be post-anthropocentric.

Meghie Rodrigues is a science journalist and researcher based in São Paulo, Brazil. She has a Master's degree in Science and Cultural Communication from the University of Campinas in Brazil, where she studied the changes of models of public communication of science (deficit, dialogue and engagement) within the rise of the networked society.

Learning while doing: engagements and interactions during a virtual conference

Dani Shanley

Virtual conferencing will undoubtedly reshape academic practices in multiple ways. My own experiences with this year's EASST4S stimulated reflection on engaging and interacting, specifically with regards to my own listening practices. For others, concerns about the ability to engage with conferencing at home, or the desire to interact in physical settings inspired them to create alternative conference settings. Drawing on my own conference experiences and correspondence regarding the experiences of others, I reflect on how virtual conference going affords way of listening and doing differently.

As the 2020 EASST4S conference ever closer, my colleagues and I became ever more bereft at the loss of our much anticipated pilgrimage to Prague. We bemoaned the loss of bustling from session to session, exchanging panel reviews over coffee breaks and lunches. We banged on about how great it would have been, how so many people we knew would have been there, all coming together for this short time in the same space. Most of all (of course) we bewailed the loss of early evening beers sat gossiping on sun-drenched squares, and as nights progressed, the dinners and later libations, which so often serve to cement new friendships and ignite new collaborations. Though this was to be my first EASST4S conference, I had heard plenty of stories from previous conference goers. So, I wondered, how was this 'fully virtual' version going to measure up? While virtual conferencing will undoubtedly fuel more thorough STS analyses in the future, in this review I will briefly outline some observations regarding my own practice(s) of listening and the different ways of engaging and interacting that virtual conferencing affords.

Figure 1: Conference engagement: at work (while at play?) Image courtesy of Christian Katzenbach.

Figure 2: A walk in the woods and hands in the soil—listening all the while. Images taken by author.

Attending the conference fully virtually meant quickly becoming aware of the spaces that participants occupied both online and offline simultaneously. From day one, I noticed how for many conference going had become a family affair. I witnessed the demands of those with care responsibilities delicately juggling conference participation with moments of play (see figure 1). While for others, the ability to be in two places at once meant no reprieve from the daily tasks of academic life. For example, a post on Twitter read, 'Pros of online conferencing: Attending a panel while writing a grant proposal. Cons of online conferencing: Attending a panel while writing a grant proposal'. As the days progressed, I saw other activities becoming a part of the conference experience, from cooking and child-care, to (home) hair-cuts and gardening. Pragmatists like John Dewey suggest that nothing has meaning in itself, but only in the context of a larger social practice, which accentuates the importance of what we are doing, and where we are doing it. Of course the notion of learning by doing, or learning at play are nothing new, each being part of an enormous literature which spans multiple disciplines. But what about learning *while* doing? That is, how we make meaning and process new information, while simultaneously engaging in habituated, perhaps mundane tasks, like walking, gardening, or cleaning the house?

By the second day of the conference, already experiencing zoom fatigue, and tired of staring into my monitor for hours on end, I found myself doing general chores while listening to Langdon Winner's Bernal Prize Lecture. Every now and then I found myself stopping what I was doing, pausing to sit down and listen more carefully. I noticed how, without thinking, these very immediate bodily responses told me something about my relationship to what I was hearing.

The next morning, I explored the 'Making Clinical Sense' sensory exhibit, one of the numerous 'Making and Doing' sessions available throughout the conference. The 'sensorially-immersive (online) installation' only heightened my sensitivity to my own movements, as well as to the sights, smells and sounds around me (Making Clinical Sense, 2020). Providing snapshots of three research sites through videos, drawings, photographs and soundscapes, the project primarily seeks to explore the ways in which bodily knowledge is communicated in medical education. However, it also asks questions about how we, as STS scholars, produce knowledge. How do we enter our research sites? What do we attend to and what do we ignore? And what modes of storytelling (such as creating sensorial exhibits) do we select?

Later that day, I tuned in to the panel on 'RRI Beyond Growth: Can a Case be Made for Responsible Stagnation?' While listening, I sat pulling weeds in my garden, turning the soil that had recently produced the last of the summer lettuce, and to which I would soon be introducing the next crop of garlic, onions, and shallots (see figure 2). Feeling the earth in my hands, I heard questions about stagnation and de-growth, and critiques about the pro-innovation bias (which still seemingly underscores ideas like that of 'responsible innovation'). Doing so, I became increasingly mindful of my own practices of maintenance, repair, and care. The combination of listening and doing reconfiguring my thoughts about the relationships between work and play, theory and practice, thought and action.

The following afternoon, I listened to the panel on 'Affects, emotions, and feelings in data, analysis, and narrative'. Like the Making Clinical Sense team, many of the panellists questioned the production of 'clean, linear and self-sufficient texts' as the final output of complex, messy, and affective research experiences (Ghergu, 2020). Listening, as I walked through some nearby woods, I noticed the bright sun flickering through the leaves above me. Dappled shadows being cast beneath the canopy which hung high above my head (see figure 2). As I walked, I became highly attuned to the crunch of gravel beneath my feet and to the cool breeze that provided a few moments respite from the relentless heat of the August sun. As speakers paused, I tuned into the rhythm of my steps, becoming aware of my physical movements, and the environment through which I was passing. I also began to think more about how I felt—as I listened. About the ways in which I was responding to what I heard. I noticed the moments at which I had started to walk faster or at other moments, how I appeared to have slowed to a shuffle. I recognised, as Tim Ingold and Jo Lee Vergunst write, that 'the movement of walking is itself a way of knowing' (2008: 5). As in the garden the day before, the combination of familiar experiences (listening to a conference presentation and walking), now in a somewhat unfamiliar constellation, appeared to produce new ways of making sense of what I heard.

My listening practice throughout the conference would likely be described as 'distracted', given that I was engaged with other activities at the time. As Karin Bijsterveld explains in Sonic Skills, in the nineteenth and early twentieth centuries, most taxonomies of listening deplored 'distracted listening', advocating 'attentive' or 'absorbed listening' as the 'gold standard' (Bijsterveld, 2019: 63). Taxonomies of listening have since evolved to include a variety of modes: 'exploratory listening' resonated most with my own practice. Exploratory listening refers to the way in which we listen out for something new, described as an exploration of the unknown, requiring focus and attention in order to identify novel, rare, or unique sounds or information (Douglas, 1999; Bijsterveld, 2020). Yet, my listening was not always focused, nor attentive. I shifted gears between focus and distraction, making note of what it was that would draw my attention away or toward different stimuli. Through beginning to recognize these shifts, I became attuned to my own relationship with what I was hearing. Finding that I was making new and unexpected connections, even forming new ideas about my own research practices in the process.

The 'Making and Doing' exhibit, the 'Affect and Emotion' panel, and numerous other sessions throughout the conference, all indicated that as STS scholars we are becoming increasingly sensitized to the ways in which we as researchers listen to our participants, our field sites, and ourselves, as a part of doing research. Through online installations, podcast panels, and other creative outlets, research projects are constantly being reimagined in ways that afford new types of engagement and interaction (see Downey and Zuiderent-Jerak, 2016). Methods like ethnographic walking have also begun to receive attention recently. These sorts of experiments, often designed to question the way academic output is created and produced, also provoke reflection on how it is engaged with and listened to.

Figure 3: A (more) relaxed recreation of that 'conference feeling'. Image courtesy of Lisa Reutter.

Bijsterveld suggests taxonomies of listening practices typically take into account both '*purposes* of listening (the why) and *ways* of listening (the how)' (2020: 62). With regards to virtual conferencing, the purpose of listening (to exchange and collaborate) is clear, but the *how* of listening is perhaps yet to be fully explored. Experiencing EASST4S virtually made me rethink how I, as a listener/participant, consume the material produced by others, making me consider how experimenting with my own habits could disrupt or otherwise reshape my own practices of 'meaning making'.

As we know from controversy studies, and as recently put by Anand Pandian in her recent reflection on the American Anthropological Association's redesigned annual conference, 'crises bring habits into focus'. As Pandian suggests, asking whether traditional conference going is the most effective and ethical means of academic exchange, is undoubtedly an important and necessary question, beyond the immediate situation brought about by COVID-19. Conferences provide the opportunity to share work, and meet colleagues and potential collaborators, all of which are essential to the development of any field. Experiments with alternative conference formats are fast becoming plentiful, as are online guides and manuals which describe various ways and means through which conferencing might be done differently (Pandian, 2020).

During the EASST4S conference, at the Vrije Universiteit (VU) in Amsterdam, Teun Zuiderent-Jerak organized a small satellite event inviting STS researchers from across The Netherlands. As soon as the question as to whether the conference might have to be cancelled or otherwise go online, Teun 'couldn't help thinking that it shouldn't be either-or'. He thought 'how lovely would it be if, in these bizarre circumstances, an international society could also help strengthen local ties?' Teun surmised that for many, attending an international conference from their bedroom/living room/kitchen or other workspace, would be unfathomable, due to space restrictions, wandering attention, or the competing commitments of parents and other caregivers. According to participants, while the magnitude of conferences like EASST4S provide unique opportunities for engagement and interaction, the small-scale setting of the Amsterdam event often lent itself to deeper, more extensive conversations.

Via Twitter, I saw that another local group had organized a small-scale get-together. Lisa Reutter and her colleagues in Norway hired a small cabin in an attempt to recreate that 'conference feeling' (see figure 3). She described the familiar zoom fatigue, suggesting following paper presentations in general remained a challenge—'despite the view'. However, the experience on the whole was 'more relaxing than a normal conference'. Having forgone the stress of travel and the pressure to engage as much as possible, she noted not feeling the exhaustion that typically follows the experience of conference going.

Concerns about the ability to engage with conferencing at home, or the desire to interact in physical settings inspired some to create alternative conference settings. The creation of events like these appear to offer realistic alternatives to large-scale, international meetings. When held simultaneously, they could complement the broader exchange between colleagues taking place online, with opportunities for regional networking, and slower, more intimate-scale interactions offered nearby.

While most of us would hope to see the return of a more traditional EASST4S at some point, we are at the same time all too aware of the need to seriously rethink the necessity of the megaconference model. Alternating between in person, and virtual meetings, supplemented with localized hubs, would certainly seem to provide an attractive alternative. Whatever the future holds, virtual conferencing will undoubtedly reshape academic practices in multiple ways. My own experiences with this year's EASST4S stimulated reflection on how we listen and feel our way through conferences, as a part of doing academic research. Thinking about how we listen to, and engage with, each other from a distance, opens up new ways of thinking about what conference going could, or perhaps even should, look like in the future.

Thank you to Christian Katzenbach and Lisa Reutter for permission to use their tweets. And thank you to all those who contributed their thoughts and reflections via email, twitter, zoom etc., especially Teun Zuiderent-Jerak, Lisa Reutter, and Ricky Janssen.

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Knitting unruly kinships through design, a world-making assemblage

Burak Taşdizen

In this article, I discuss my afterthoughts following my participation in the EASST + 4S Joint Conference "Locating and Timing Matters: Significance and Agency of STS in Emerging Worlds." In the article, I do not reflect on a particular session. Rather, I assemble my reflections on scattered yet related discussions around design throughout the conference, from designing for disability to everyday graphic design and design for multispecies worlds, under the concept of 'design as assemblage'.

De-centering the human is vital in order to recognize that the human is never an isolated, individual entity, as imagined in mainstream design practice (Forlano, 2017), but a material body. A body as any material, embedded within the material currents of our lifeworld (Ingold, 2007, 2010), including socio-technical systems, or the natural environment. Moving into the realm of materials requires also a critical distance to the words of design and making both of which denote certain intentional undertones such as a mental plan on part of the practitioner (Keller, 2001) subscribing to hylomorphic model of creation (Ingold, 2010). Far from shaping matter that is inert, practitioners are "itinerants" (Guattari & Deleuze, 2000) and "wanderers, wayfarers, whose skill lies in their ability to find the grain of the world's becoming and to follow its course while bending it to their evolving purpose." (Ingold, 2010, p. 92). In that sense, instead of merely being designed or being made in a passive state, materials grow (Ingold, 2007), resist (Şahinol & Taşdizen, 2020) and become elements in *assemblages* in *natureculture*s, linking and unlinking (Taşdizen, 2020a, 2020b).

An assemblage is ever-becoming and never stable. It is a constellation of heterogeneous elements, both *assembled* and *assembling* (Deleuze & Guattari, 2000), meaning, each element is being shaped by the context it is placed (or places itself) in, but also shapes that very context it is a part of (Beaubois, 2015). Following this, I introduce the concept of design as assemblage, in which any practitioner (designer and user) is only a moment in the life trajectory of creation process, and not the focus, in an attempt to challenge approaches that have prevailed mainstream account of design writings (Julier, 2000). In that sense, design as assemblage provides a leap through which to escape the long-standing and most often unquestioned design matrix of the designer and his regimes of function for the imagined needs of a priori human user. By moving away from the abled, European, white, male human designer/user paradigm that is prevalent in conventional Ergonomics, design as assemblage takes pride in its materiality, and the *affordances* that unfold (Gibson, 1977), and become *affordance assemblages* (Taşdizen, 2020a). Design as assemblage shuns away from crafting a specific audience or a user group, and it does not insist on a formulated vision in the form of a use scenario, determining each and every possible script. It is born out of and gives further birth to function regimes (Beaubois, 2015) yet does *not* target for it is unfinished, open, and entangled in the multiplicity of material flows, inviting "queer uses" (Ahmed, 2019), "non-compliant knowing-making" (Hamraie & Fritsch, 2019) and knitting unruly kinships in ways unfamiliar to a trained eye. The *human*, then, is not the sole user, but just another user whose agenda is usually just louder. When leaving the terrains of the *human*

for crip, multispecies, citizen worldings, design as assemblage casts itself adrift into the unknown, the multiple, the unanticipated, the whatever-you-make-of-it, the "ocean of materials" (Ingold, 2007), and it never stays still. It is vulnerable against the material currents and is willing to shape and be shaped whatever comes its way. An ecological lens at the co-shaping of materials not only de-centers the *human* as the only actor, but also recognizes the agency of *other* humans and non-humans within socio-bio-technical entanglements (Şahinol, 2016). Such an approach helps surface both the resilience and obstinacy but also the emancipatory plasticity of the material in-question, moving consciously away from hylomorphic accounts and the notions of materials as passive matter (Ingold, 2010) which have downplayed their significance for decades resulting in anthropocentric frameworks. Similar to the sand slipping through the fingers while some of it sticks and remains, design as assemblage not only shifts the minute if one were to approach, albeit temporarily, but one would then become an element oneself, a participant who has shaped and is shaped. Design as assemblage is unfinished and *messy*, emergent and ever-changing. Unruly kinships, then, occur first and foremost through unconventional yet *affording* assemblages of materials of various histories and of diverse non/human qualities, which are brought together by other materials such as non/human bodies or the environment.

The emphasis on the body is significant as it reorients the gaze on bodily skills rather than professional titles. These kinships, then, help to dissolve the established, the most visible and the professional in design research and practice. It rejects knowledge hierarchies and the marginalization of novel making practices, and is attuned to grassroots imaginaries, queer uses, knowledge ecologies, skilled practices and alternative future-makings. Thus, they include grassroots citizen initiatives regarding the care for nonhuman animals (Figure 1) (Taşdizen, 2020a, 2020b), for they challenge and complexify the conventional definition of the user/designer of the city by including citizen as the designer, and an animal as both the designer and the user. The citizen or the animal as the designer is a radical step moving away from notions of regulated participation towards more contested territories in which multivocality is abound as the animal in-question shapes design directions (Westerlaken, 2020). In a similar vein, the Internet, with its prolific tools such as the Wix.com, which provides templates for non-designers to design websites, enables anyone with access to Internet to participate in shaping

Figure 1. A re-purposed yoghurt packaging that accommodates dry cat food and serves as a food container for the street animal. The food container is placed in the middle of two columns, each of which is made with three pavement stones. The columns are covered with a kitchen tray to prevent weather conditions, such as rain, spoiling the food. On top of the tray, another pavement stone is placed utilizing its weight to capture balance in the design. The entire assemblage resides on a corner pavement behind three internet and telephone infrastructure boxes placed in an L-shaped layout, creating a safe space for the street animal and its food. Photograph: Burak Taşdizen, 2019, Istanbul.

its landscape and eliminates the necessity of "expert knowledge" (Owens, 2020). Design as assemblage muddles boundary work efforts through its rejection of the hierarchization and dichotomy of professional vs amateur, as there are no separate designers and users but rather designer_users, IKEA hackers, Zoom (co) hosts who are also participants.

Design as assemblage is *zoe*-centered (Braidotti, 2019) instead of human-centered. It is a multispecies knitting community, an orchestra of skilled bodies and materials, a spectrum of non/professionality. It is an arrhythmic rainbow spinner of companion species, amateurs, crips, urban infrastructures and wastelands, all of whom amalgamate and *become with*, only to stop and move in separate directions. It is the emergent Zoom culture wherein academics with Internet connection together with endless universe of PDFs, PowerPoints and YouTube tutorials lead to international conferences. It is a swarm of Hornet users and the hashtag technology finding a crack against recurring pride bans to flourish into online publics, contested spaces for (un)learning masculinities (Taşdizen, 2020c). It is the hand, the needle, and the working yarn going into flow, which is interrupted by yet another knitting pattern (Taşdizen, 2017). It is arrhythmic but constant, temporary yet abundant, repetitive yet resilient. It is everything but professional, rejecting the meta-narrative of creativity that has colonized design practice, although it could be poetically creative and *beautifully strange* (Fuad-Luke, 2013). It is a queer teacher encouraging disruptive uses to dismantle the existing in order to open up spaces for those bodies that have been historically excluded and marginalized (Ahmed, 2019). It is not only world-making, but also *world-dismantling* (Hamraie & Fritsch, 2019). Design as assemblage, in a repeating yet resilient manner, knits unruly kinships across bodies of different species, of different abilities, of different categories of scholarly ordering. It does not *cast off*, so what has been *(in)scripted* further unravels and entangles…

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Transplanetary Ecologies: A New Chapter in Social Studies of Outer Space?

Matjaz Vidmar

Social Studies of Outer Space are emerging as a critical field of analysis of scientific and technological "frontiers" in space exploration. Through an evolution of space research over the past 40 years, an interdisciplinary systemic focus on (trans)planetary ecologies is now starting to examine the co-construction and co-existence of (multiple) perspectives on places (and their inhabitants) as "environments" which combine physical, biological and social phenomena. These (trans)planetary ecologies are beginning to dominate scientific and public discourse, raising numerous controversies, which proves a fertile ground for STS study, as explored in a series of events at the 2020 EASST conference.

Social scientific research of the related disciplines of Astronomy and Space Science, Exploration and Industry has already emerged early in the history of Science and Technology Studies (STS). In fact, one of the first monographs specialising in a sociology of a scientific discipline presented a detailed study of the development of Radio Astronomy in Britain (Gieryn and Merton, 1978). As these fields are often considered at the forefront of scientific research, it is perhaps no wonder they have a particular panache for stirring up interesting controversies, while capturing the imagination of both STS scholars and various public(s).

The STS interest in the field has particularly intensified with the increase of scientific "presence" in outer space. Whilst the 1960s Space Race may have been a fruitful field of study for (geo)political reasons, the wider social studies interest in Space Exploration begun once its pool of participants moved beyond the young, male, military pilots of those early years. In particular, the idea of the space "shuttle" and research-oriented space stations has renewed STS interests in the societal co-construction of knowledge and technology off-Earth. Hence, since the 1980s, a steady stream of STS(-related) research interests and literature has emerged (as shown in Table 1).

Table 1 - An evolution of social studies of outer space since 1980s and towards transplanetary ecology. Source: Author.

	Concerns	Phenomenon	Technology	Focus	(STSish) Literature
1980s	Space Exploration	Perspective Shift	Shuttle	Philosophy	Overview Effect (1987)
1990s	Space Habitation	Inclusivity	MIR	Politics	
2000s	Space Travel	Interconnectedness	ISS	Sociology	Cosmic Society (2007)
2010s	Planetary Habitation	Localisation	Curiosity	Anthropology	Placing Outer Space (2016)
2020s	Transplanetary Ecology	Systemisation	… Data/AI	Interdicsiplinary	…

In particular, the shift in scientific interest from "observing" space to "exploring" it, coinciding with the loss of Astronomy's socio-politically prestigious time-keeping role, changed the perspective on Astronomy as the dominant space science and gave rise to "Space Science" instead. Astronauts' accounts of the "experience" of the Universe - in contrast to astronomers past relational positioning within it - invited a shift in perspective on the Earth as well as towards the Cosmos (White, 1987). These new perspectives were "socialised" with the opening up of international cooperation in the post-Cold-War era, bringing to bear the "overview effect" of the visual experience of the Earth from Space, transcending (national) borders and highlighting the fragility of the biosphere.

This also led to a shift in social perspectives on space exploration, leading to a focus on global interconnectedness and wider citizen participation in science and technology development via the Internet. Although notable conflicts remaied in play, such as the divisions over the rising tide of private actors' involvement in potential commercial projects from "space tourism" to resource extraction, i.e. "space mining" and a new geopolitical rivalry (i.e. US vs China). Together, these developments gave rise to sociological studies of a broader range of current and proposed space-related activities, termed as studies of "Cosmic Society" (Dickens and Ormrod, 2007) or "astrosociology" (Pass, 2006).

Moreover, since the 2000s and with the quickly expanding number of extra-solar-system planets being discovered, Astronomy and Space Science turned towards localisation of life (elsewhere) in the Universe and its associated place-making (Messeri, 2016). As place-making is a complex and deeply rooted cultural practice, social scientific research of such extra-terrestial life turned to anthropological methods and participatory studies, combining novel types of laboratory studies with the examination of public discourse and imaginaries. For STS scholars, these deeply personal experiential journeys within already exploratory science contexts brought to the fore the interest in studying the art and science of domesticating the unknown through age-old techniques of visualisation and storytelling.

More recently, STS studies of Outer Space sciences are taking the systemic turn, as through expansion of those place-making tools and near exponential increase in interest and perspectives, *places* are fast evolving into *environments*. This interplay between natural and social phenomena in the highly contested yet vastly open-ended Universe gave rise to an ecology of (trans)planetary systems – biological, technological and intellectual. Such synergic, yet also conflicting, presence of multiple interests led to the need for a more interdisciplinary set of STS enquiries, combining multiple social scientific approaches and often crossing – ontologically and methodologically – into the natural sciences.

One attempt at coordination and mutual support of these new efforts is the Social Studies of Outer Space network (www.ssosnetwork.org), formed following the 2018 EASST conference in Lancaster. The network experiments with topics as well as methods, for instance through taking part in the *Innovating STS* exhibits on the STS Infrastructures platform at the 2019 4S *Innovations, Interruptions, Regenerations* conference in New Orleans (Alvarez et al., 2019), using visuals and textual metaphors to explore the socio-political materiality of the "empty vacuum" of outer space.

As showcased and discussed in the "Exploring Otherworldly Ecologies" panel at the 2020 *Locating and Timing Matters: Significance and agency of STS in emerging worlds* EASST/4S conference, STS work in this area comprises of innovative and peripatetic studies. These cover significant ground, from the analysis of the social (co-)construction of specific (trans)planetary environments (Mars, the Moon, etc.) and their relational position vis a vis the Earth, to the use of space technology

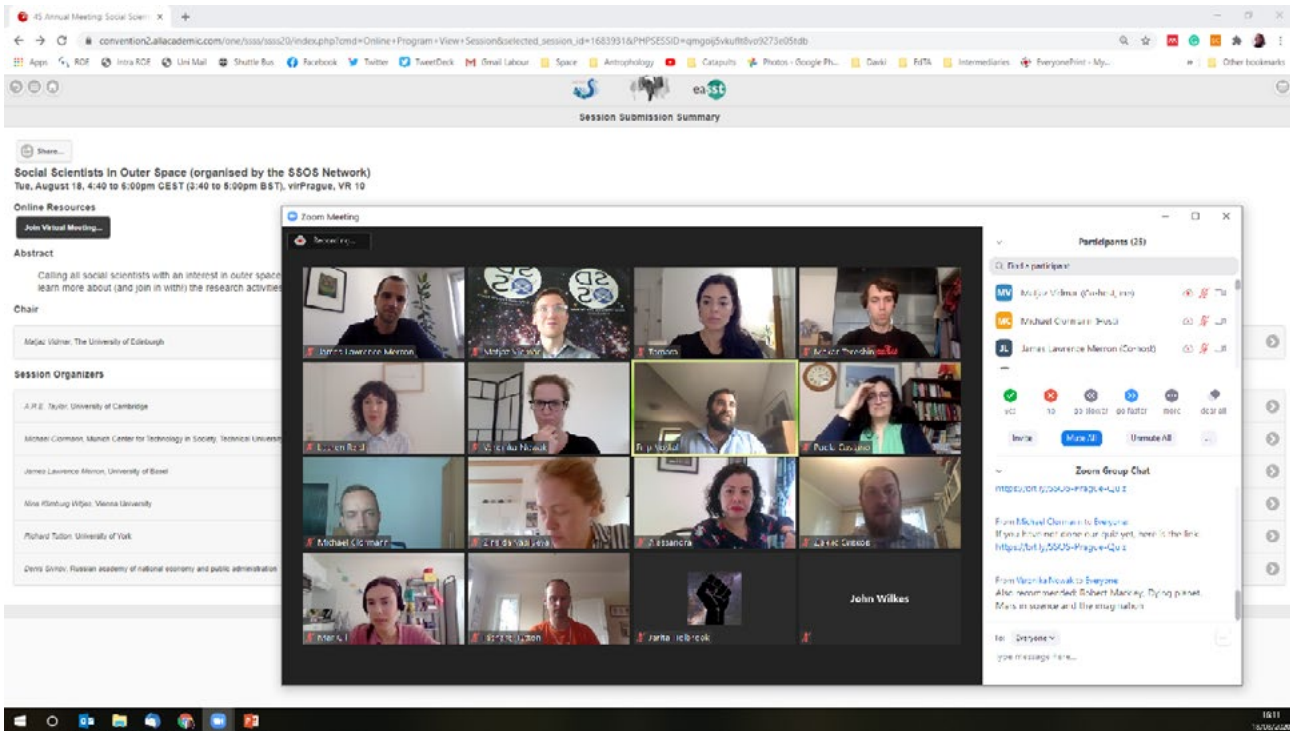

Figure 1 - A capture of the Social Scientists in Outer Space social event at EASST 2020 (virtual) conference. Source: Author.

closer to "home" in co-shaping social and political perspectives on our environment. In either case, technology and knowledge exists in their own (eco)system – raising questions of appropriation (i.e. whose interest they serve), appresentation (i.e. how are they "behaving" when deployed/envisaged) and approbation (i.e. what are the issues at stake).

Similar interests were also discussed by colleagues in the "Who are the Publics of Outer Space?" panel, in particular the interplay between participation and farming of present and future technoscientific projects and visions. Critically, actor groupings (i.e. space agencies, citizen scientist, billionaire entrepreneurs, scientific communities, minority groups) are often interchangeably both protagonists and audiences of outer space imaginaries, often simultaneously (re)producing and disrupting institutional regimes. These contested, yet symbiotic, relationships fold into an ecology of actor engagement. In these complex contexts temporal, geographical and cultural environments interact to co-produce structures of social power, which (uncomfortably for many of us who study this field) sits at the core of societal "expansion" into outer space.

Aside from examining it, is this expansion into outer space to be celebrated, condemned or should we try help to co-construct it? As such discussion fell a little outside the "official" remit of our panel sessions, these normative challenges were explored as part of "Social Scientists in Outer Space" networking event (see Figure 1 below). In a bout of STS-inspired reflexivity, we also had to acknowledge our fascination with the subject matter field (and knowledge thereof, as shown in a virtual quiz!). This echoes the initial assertion that this "final frontier" attracts not only curiosity, but also a degree of admiration. The inherent mystery of what is unattainable by direct experience has been an age-old source of social power – and the technoscientific means with which it is exerted give rise to similar phenomena.

After all, having discussed all of the above at the first virtual EASST/4S conference, we had first-hand experience of the (awesome?) impact of technological mediation – both in its inclusivity as well as exclusivity – as we gazed from cyberspace to outer space.

The development, organisation and delivery of these events and encounters would be impossible without an amazing group of dedicated colleagues who deserve a special mention – Michael Clormann (Munich), James Lawrence Meron (Basel), Lauren Ried (Berlin), Denis Sivkov (Moscow), Alexander R. E. Taylor (Cambridge), Richard Tutton (York) and Nina Witjes (Vienna) – as well as all our presenters and participants.

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Everything you ever wanted to know about hacking (not Ian)

Sally Wyatt

When the inevitable announcement came that the EASST/4S conference would be online due to the Covid19 pandemic, my heart sank. Of course, it was absolutely the right decision but having spent many weeks in online meetings with colleagues and students, I could not imagine that I would voluntarily spend four days zooming into virtual Prague. Spoiler alert - I did not manage four days. I tried, but was easily distracted by other work, and frustrated by seeing names and faces of dear friends and colleagues in little rectangles on my screen. Plus there was the perennial EASST/4S problem of too much choice, and not being able to visit those particularly fascinating sessions scheduled at the same time.

Thus I am very glad that the organisers of the panel *Hacker Cultures: Understanding the actors behind our software* decided to go a different route. The panel was organized by Paula Bialski (University of St. Gallen) and Mace Ojala (IT University of Copenhagen). With funding and technical support from the University of St. Gallen and Height Beats, Bialski and Ojala produced a series of podcasts. Instead of simply asking the panelists to prepare 15-20 minute audio presentations, the organisers conducted interviews with each of them. This resulted in a series of podcasts, providing a rich collection of insights into hacking, its history and future, its technologies, standards and practices, the implications for work and learning, and more.

> Episode 1: Morgan G. Ames (Berkeley) - Throwback Culture: The Role of Nostalgia in Hacker Worlds
>
> Episode 2: Minna Saariketo & Mareike Glöss (both Stockholm) - In the Grey Zone of Hacking? Two cases in the Political Economy of Software and the Right to Repair
>
> Episode 3: Annika Richterich (Sussex and Maastricht) - Forget about the Learning: On (Digital) Creativity and Expertise in Hacker-/Makerspaces
>
> Episode 4: Alex Dean Cybulski (Toronto) - Hacker Culture Is Everything You Don't Get Paid For In the Information Security Industry
>
> Episode 5: Jérémy Grosman (Namur) - Algorithmic Objects, Algorithmic Practices
>
> Episode 6: Stéphane Couture (Montréal) - Hacker Culture and Practices in the Development of Internet Protocols
>
> Episode 7: Ola Michalec (Bristol) - Hacking Infrastructures: Understanding Capabilities of Operational Technology (OT) Security Workers
>
> Episode 8: Sylvain Besençon (Fribourg) - Securing by Hacking: Maintenance Regimes around an End-to-End Encryption Standard

> Episode 9: R. Stuart Geiger & Dorothy Howard (both San Diego) - "I didn't sign up for this": The Invisible Work of Maintaining Free/Open-Source Software Communities

In keeping with hacker ethics (and yes hackers have ethics, they are not all criminals), the podcasts will remain open to anyone who is interested. The organisers and panelists are happy for the podcasts to be shared with students and colleagues. A short description of each episode is provided in the podcast description. This is a great resource for teaching, not only while we are all trying to offer education online. The podcasts individually or in combination could be incorporated into syllabi and resources for students long into the post-covid future. I've already recommended these to colleagues who are planning to incorporate it in their courses, aimed at computer scientists as well as those studying STS-informed courses in the humanities and social sciences. It is also an inspiration for how we could think differently about the form that online events take.

The *Hacker Cultures* podcasts can be found here: http://www.buzzsprout.

News from the Council

Upcoming EASST elections

Dear EASST community,

end of this year EASST will call for elections for new Council members. The Council manages and governs the development and priorities of EASST as a key infrastructure for supporting STS in Europe.

Please consider running at this election, and motivate your peers - students, postdocs, lecturers, professors. Do chat with current council members if you want to learn more - see for the current members https://easst.net/about-easst/easst-council-members/

All the best
Ingmar Lippert

What is a scientific society for?

Miquel Domenech

Traditionally, scientific societies have been conceived as organizations whose main mission was to defend the interests of their members. Consistent with that vision, when it comes to publicizing them, much emphasis has been placed on the advantages they offer to those who become new members.

However, if I had to encourage joining the EASST, I would focus not as much on the benefits that it can bring to its members, but for the contributions to the common good that the existence of this association makes possible.

Certainly, there are benefits, but they are not only for members, but for the community of reference of that society as a whole. This is especially important in our case, because we are not a big community. It is true that STS has been gaining practitioners throughout its not very long history, but it is obvious that it does not constitute a field of study around which are gathered a number of academics comparable to other scientific disciplines. Therefore, a scientific society like EASST allows to start and/or sustain initiatives that are absolutely necessary for the maintenance and recognition of the community.

Whate are these EASST contributions?

- EASST organizes periodic scientific meetings that allow not only the dissemination of knowledge, but also the establishment and consolidation of collaborative relationships between colleagues from different countries.

- It contributes to make possible the publication of an open access quality journal such as Science and Technology Studies.

- It gives out awards that recognize the trajectory or achievements of academics in this field of knowledge.

- It assists local organizations with financial support for symposia or other academic activities. For instance, it played a key role in the support of the first meetings of our REDES CTS, the STS network established since 2011 between Spain and Portugal.

- It supports young people at the beginning of their academic careers by ensuring that they have a voice on their Council and that they find the support they need to participate in community events.

- It publishes and distributes an organ of expression, EASST Review, which has as its main objective to make visible the activity and concerns of the community

Obviously, to make all this possible, people are needed to support the association. Being a member is, without a doubt, already a contribution. But it is also obvious that membership alone is not enough. We need a strong Council to develop so many crucial activities. This is why we need people who are willing to give a little more. A little bit of their time, a little bit of their work capacity, a little bit of their enthusiasm to enable everything good that EASST does to be realized and, if possible, to go even further.

We want EASST to become a privileged interlocutor for all those actors who understand the importance of the interactions between science, technology and society in the contemporary world, whether they are government agencies or activists and members of social movements. Because to understand our present we need more science and technology studies, we need more EASST, we need you.

EASST Review (ISSN 1384-5160) is published quarterly and distributed digitally to all EASST members.

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EASST Review on the Web: http://easst.net/easst-review/

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The Association's journal was called the EASST Newsletter through 1994.