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Playgrounding Techno-Anthropology

Abildgaard, Mette Simonsen; Birkbak, Andreas; Jensen, Torben Elgaard; Madsen, Anders Koed; Munk, Anders Kristian

EASST
Review

Netherlands 0 | 3

Switzerland 0 | 4

Denmark 5 | 7

United Kingdom 16 | 14

Austria 10 | 0

France 4 | 1

Germany 12 | 9

Hungary 0 | 2

Croatia 0 | 1

Italy 5 | 4

Serbia 0 | 2

Portugal 2 | 1

Russia 2 | 0

Spain 1 | 0

Bulgaria 1 | 3

Canada 1 | 1

Greece 1 | 0

United States 0 | 4

Israel 0 | 1

India 0 | 2

Ecuador 0 | 1

Brazil 0 | 1

Australia 2 | 0

Chile 0 | 1

Authors of Last 10 *EASST Review* Issues
STS affiliation | Other affiliation

List of Contents

STS Multiple

Det Teknoantropologiske Laboratorie (TANTlab) på Aalborg Universitet i København har siden 2015 fungeret som samlingspunkt for arbejdet med digitale metoder blandt forskerne på Teknoantropologi, Institut for Læring og Filosofi, AAU. TANTlab blev grundlagt med afsæt i flere års forudgående arbejde med at forske og undervise i digitale metoder, ikke mindst på bachelor- og kandidatuddannelserne i Teknoantropologi på AAU. Samtidig blev labbet grundlagt for at facilitere en voksende portefølje af samarbejdsrelationer med aktører uden for universitetet. TANTlab har en bevidst legende attitude i denne position mellem forskning, undervisning og eksternt samarbejde - udtrykt i sloganet 'den teknoantropologiske legeplads'. En fordel ved legeplads-metaforen er, at den peger på hvordan man tage indgå i legeaftaler og venskaber formet på forskellige måder, hvor der er noget på spil, samtidig med at legen er eksplorativ og sjov. Samarbejdet med forskellige aktører fremhæver også spørgsmålet om hvordan vi som STS-forskere intervenerer i verden med vores arbejde. TANTlab arbejder ikke med én rigtig model for digitale interventioner, men er et rum hvor praktiske erfaringer og refleksioner følges ad. I denne præsentation af labbet giver vi fem eksempler på projekter vi har været involverede i over de seneste år. Projekterne spænder vidt og vidner om forskellige erfaringer med samarbejde og intervention - fra en datasprint om fedme med andre forskere til en Facebook-drevet intervention i Aalborg kommunes proces omkring folkeskolereformen. Således håber vi at have illustreret hvad vi mener med at TANTlab er en teknoantropologisk legeplads.

TANTlab fact sheet:

Who: The lab comprises members of the Techno-Anthropology Research Group

What: A digital methods lab that works at the intersection between STS and participatory design.

Where: The lab is located at Aalborg University's Copenhagen campus on A. C. Meyers Vænge 15, DK-2450 Copenhagen SV, Denmark.

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Playgrounding Techno-Anthropology

Mette Simonsen Abildgaard, Andreas Birkbak, Torben Elgaard
Jensen, Anders Koed Madsen, Anders Kristian Munk

Since 2015, TANTlab has served as hub for experimentation with digital methods among the researchers in the Techno-Anthropology Research Group at the Department of Learning and Philosophy. TANTlab was founded on the basis of several years work on researching and teaching digital methods, not least for the bachelor and master programs in Techno-anthropology at AAU. At the same time, the lab was founded to facilitate a growing portfolio of collaborative relationships with non-university actors. TANTlab has adopted a deliberately playful attitude in this position between research, teaching and external cooperation - expressed in the slogan 'the techno-anthropological playground'.

The Techno-Anthropological Laboratory (TANTLab) was founded in 2015 as a response to what we saw as a growing need to road test digital methods and its associated styles of analysis with non-university partners. Located as part of the Techno-Anthropology Research Group at the Department of Learning and Philosophy at the University of Aalborg in Copenhagen, and thus part of thriving research and educational programmes in STS, we had been developing an interest in digital methods over a period of five years. These methods were relatively new to STS, where they had been developed under headings like issue mapping and digital controversy analysis (Marres & Rogers 2005, Venturini 2010). At the same time, STS more broadly had been asking itself how it means business and what kinds of interventions it wants to make. Our intuition was that digital methods in STS were now coming sufficiently of age to answer some of these questions more directly and in practice.

From the very beginning we decided to signpost this mission with two words: laboratory and playground. We called ourselves TANTlab and we adopted the tagline *The Techno-Anthropological playground*. In the following we will try to convey our sense of what it means to be a laboratory-playground.

Labs and serious play

We live in the age of labs. For someone taking an outside look at Academia these days, it quite possibly seems as if we've all contracted a contagious case of 'laborangitis'. A new lab springs to life almost on a weekly basis (Smith et al. 2013, Ehn et al. 2014). On the relatively small campus of Aalborg University Copenhagen, we can think of at least 6 entities that call themselves labs, including a biotech lab, a food lab and a lab for physical prototypes.

Visitors coming to the TANTlab are not greeted by classic lab equipment. We have no petri dishes or microscopes, no animal models or bunsen burners, and no strangely looking blackboxed pieces of equipment. The physical space of TANTlab is a relatively conventional place - a room with screens, tables and chairs. You will find students mingling with researchers, and academics mingling with practitioners. You will hear people claiming to be makers and doers first, and thinkers or critics second, people claiming to be designing things, prototyping things, exploring and experimenting with things, although often 'digital' things that are only visible on screens and on large print-outs attached to the walls.

When you walk down the hallway, you will see the lab's tagline in bold print on the glass wall: *the techno-anthropological playground*. It is only fair to ask if it is all fun and games?

Our response is that laboratories are indeed serious business. But so are playgrounds. Anybody who remembers being 5 or sending their kids off to kindergarden for the first time will know this instinctively. The transition from playing on your own, or under the close supervision of an adult, to holding your own against peers your own size, age and ferocity is a tough and challenging experience. And it takes place on playgrounds.

At the techno-anthropology lab we contribute to a young degree programme – only 6 years of age, in the middle of kindergarden, in fact – and we face all sorts of formative playground trials all the time. Our students face them in the college bar late at night, or at the family dinner, talking to that friend or relative who got into anthropology proper or decided to become a doctor: 'So, what exactly is a "techno-anthropologist"'? They face it at their job interviews and when they negotiate a semester project with a company or a public agency.

Our researchers face it when they justify themselves to their colleagues in more established disciplines. But they also, and increasingly, face it when they strive to translate the societal relevance of their findings and methods. And, not least, our collaborators and future employers face it when they have to decide if we are worth playing with?

An age old tactic of the playground is of course to rely on your friends and your older siblings, if you have any. At the techno-anthropology lab we draw inspiration and support from fields like Science and Technology Studies, Digital Methods and Co-Design.

The trouble with siblings, however, is that they are not always there. Try walking into a job interview and rely on Science and Technology Studies to cover your back. It's not bullet proof.

We – students, researchers, collaborators – need to work actively with how we are playgrounding techno-anthropology. That is the idea of the techno-anthropology lab.

THE BENEFITS OF PLAYGROUNDS

Playgrounding, or playground design, is actually a sprawling professional field now. In a recent paper on "The developmental benefits of playgrounds" Frost et al. note that:

"Among the benefits of unstructured outdoor play (…) are the abilities to make decisions, work and play within a community of others, and to try out ideas and explore the play environment. Also highlighted are the benefits of pretend play, which has recently been shown to further the development of brain synaptic connections. (…) "If children lack opportunities to pretend, their long-term capacities related to critical thinking, problem solving, and social functioning, as well as to academic areas such as literacy, mathematics, and science, may be diminished." (Frost et al. 2004)

That is surely something worth striving for! As a collateral bonus, the authors add that:

"Besides the social and academic benefits of play, research indicates that children with play opportunities are not likely to be depressed and hostile and generally do not exhibit excessive fear, rage, and worry." (ibid.)

What is not to like?

The crux of the matter seems to be that good playgrounds have to be thought through. A little bit of playground history is instructive here. The idea originated in Germany in the mid 1800s but only spread at the beginning of the 20th century. Here is what president Roosevelt had to say about the matter in 1907:

"City streets are unsatisfactory playgrounds for children because of the danger, because most good games are against the law, because they are too hot in summer, and because in crowded sections of the city they are apt to be schools of crime. Neither do small back yards nor ornamental grass plots meet the needs of any but the very small children. Older children who would play vigorous games must have places especially set aside for them; and, since play is a fundamental need, playgrounds should be provided for every child as much as schools."

You will notice that there is a classic dilemma lurking between the lines: How do you design something that is supposed to afford games, that are vigorous and likely to be against the law? Can you even design play?

Actually, we have quite a tradition for it in Denmark. The landscape architect Carl Theodor Sørensen pioneered the concept of the adventure playground, or junk playground, in the 1940's. He wanted to create imaginative environments, building on the pragmatist ideals of John Dewey. As pointed out by Kozlovsky, in a paper from 2008, it was the imagination of the child, not the architect, what Dewey would have called inquiry, that was supposed to unfold. We believe that is a good ideal to adhere to for a playground.

Carl Theodor Sørensen later said that: "of all the things I have helped to realise, the junk playground is the ugliest; yet for me it is the best and most beautiful of my works." (Kozlovsky 2008: 7)

It seems essential that playgrounding is about coming out. That it is about doing things with others, rather than on your own. At the lab we are trying to do that with our students, for instance, making sure not only that they work problem based – or simply with other people's problems – in concrete collaborations every semester, but also that this work is sign posted on our website as part of building a techno-anthropological identity.

And of course, when you play, you get invited home on play dates. We see this as a great opportunity. One of the things we did was to assist the municipality of Aalborg in developing a Facebook driven vision for the future of their schools. Going to other people's locations and work spheres means learning to play by other people's rules while honing and fine tuning your own position. The learning potentials are enormous, we think.

Often times, and again this is conveniently equivalent to actual playgrounds, this learning involves the simultaneous development of our imagination and our motor skills. At the techno-anthropology lab we work with a range of cutting edge techniques for harvesting and analysing large amounts of digital online traces. That is an ongoing process of acquiring tools and skills, while constantly maintaining a critical and imaginative perspective on their potential applications. And that is best done in a lab setting. It is together with other people's problems, so to speak, that the strengths and weaknesses of new methods can crystallize.

STYLES OF PLAY

On playgrounds, including ours, certain styles of play tend to emerge over time. Sometimes these styles are clearly demarcated. Kids who play football would NEVER join the roleplay with their younger siblings. In our case, the emerging styles of play overlap both in terms of participants, tools and ideas. And yet we can distinguish at least four different genres.

Re-tooling ethnography

This game explores how traditional ethnographic approaches such as interviews and participant observation can be enriched or challenged in conversation with analysis and visualization of large datasets, and vice versa.

Participatory Data Design

This game explores how digital methods can enter into collaboration with actors who are already substantially engaged in particular fields or issues. We engage the actors, whom we call issues experts, to understand the problem of the field,

and together we explore. Instead of just looking at data together, we take inspiration from participatory design methods and pursue the idea that decisions about datafication, filtering, analysis and visualization are never 'just' technical but more often where the scope and limitations of the project is laid down and blackboxed. We work actively with the data sprint format to facilitate participation in the early stages of a data project.

Media publics and democracy

This game is about assisting democracy. It presumes that new media has a variety of consequences for democratic practice and the formation of public opinion, some of which are adverse. The game is about providing meaningful interventions. It necessitates an ongoing discussion about normative commitments to particular styles of public deliberation and the goods that result from such commitments.

Critical metrics in organizations

This is a valuation game. It is about providing alternative metrics to help organizations make the quality of their activities visible in new ways. It draws on valuation studies and the sociology of markets to assert that the perception of quality depends on the devices available to perform it. Under an evidence based policy paradigm, to be critical can arguably be done at a distance or in proximity with the business of doing evidence (cf. Latour 2005; Birkbak et al.). This game pursues the latter option and embeds with the organization to do evidence in new ways.

Snapshots from the playground

In the following texts we present a set of case examples that illustrate the diversity of play from our first two years of operation. We have selected them to provide a tangible idea of what our playgrounding looks like in practice - the collaborators we engage with, the digital tools we deploy, and the emerging styles of play.

References

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Smith A, Hielscher S, Dickel S, Soderberg J, and van Oost E (2013) *Grassroots digital fabrication and makerspaces: Reconfiguring, relocating and recalibrating innovation?* University of Sussex: SPRU Working Paper Series.

Venturini T (2010) Diving in magma: How to explore controversies with actor-network theory. *Public understanding of science* 19(3), 258-273.

Five recent play dates

Mette Simonsen Abildgaard, Andreas Birkbak, Torben Elgaard Jensen, Anders Koed Madsen, Anders Kristian Munk

An advantage of the playground metaphor is that it comes with the activity of going out on 'play dates' and developing friendships. In such playful relationships, there is always something at stake, but the interaction is also fun and inherently exploratory. In the following, we take a tour of five recent collaborative projects that the TANTlab has participated in. The projects differ widely and testify to different experiences with collaboration and intervention - from a data print on obesity with other researchers to a Facebook-driven intervention in Aalborg municipality's primary school reform. Thus, we aim to illustrate what we mean by TANTlab as a techno-antropological playground.

Re-tooling cultural research on Instagram

A visit to the playground inevitably entails that one kid that brought along a cool new toy. She or he will usually succeed in getting the attention of most of the playground - for a while at least. While new toys, or tools, may cause frustration as they inevitably disturb the way play used to unfold, they can also lead to experiments that merge familiar games with new ways of playing. In our introduction, this genre of laboratory play was given the headline 'Re-tooling ethnography'.

An example of such work is a data sprint in 2015 where we worked with an interdisciplinary group of researchers from the Governing Obesity project at the University of Copenhagen (http://go.ku.dk/) on how to appropriate the social medium Instagram as a tool for cultural analysis. A theoretical point of departure was the notion 'obesogenic environment' as "the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations" (Swinburn et al. in 1999), which has led to researchers study which and how everyday settings and practices relate to obesity. We drew on a harvest of 82,449 geo-tagged instagrams from the five local authorities in England that reported the lowest average BMI, and five that reported the highest.

In a subsequent paper on the sprint (Munk et al, 2016), we presented three suggestions for how Instagram data can be of use for cultural research on obesity. The two first approaches entailed traditional ways of conceptualizing the obesogenic environment. The first by encouraging researchers to view 'Instagram as a camera' - as a way of gaining visual information about the environmental factors that might influence individuals. The second by approaching 'Instagram as part of the environment' - as part of user's everyday practices, almost inevitably leading to field research beyond the medium to gain information on how Instagram gives and holds meaning in everyday life.

The third approach, however, suggests that it is impossible to understand Instagram and its users as separate from their environments. Practices such as composing photos, tagging and commenting are not just content production, but analytical practices performed by Instagram's users, thus working with 'Instagram as analyst'. We therefore moved from an exploration of the productions of individual users to an exploration of co-occurring hashtags (that occur in the same post). In such an exploration, a network of hashtag relations was generated, where the tags were interpreted as part of different communities.
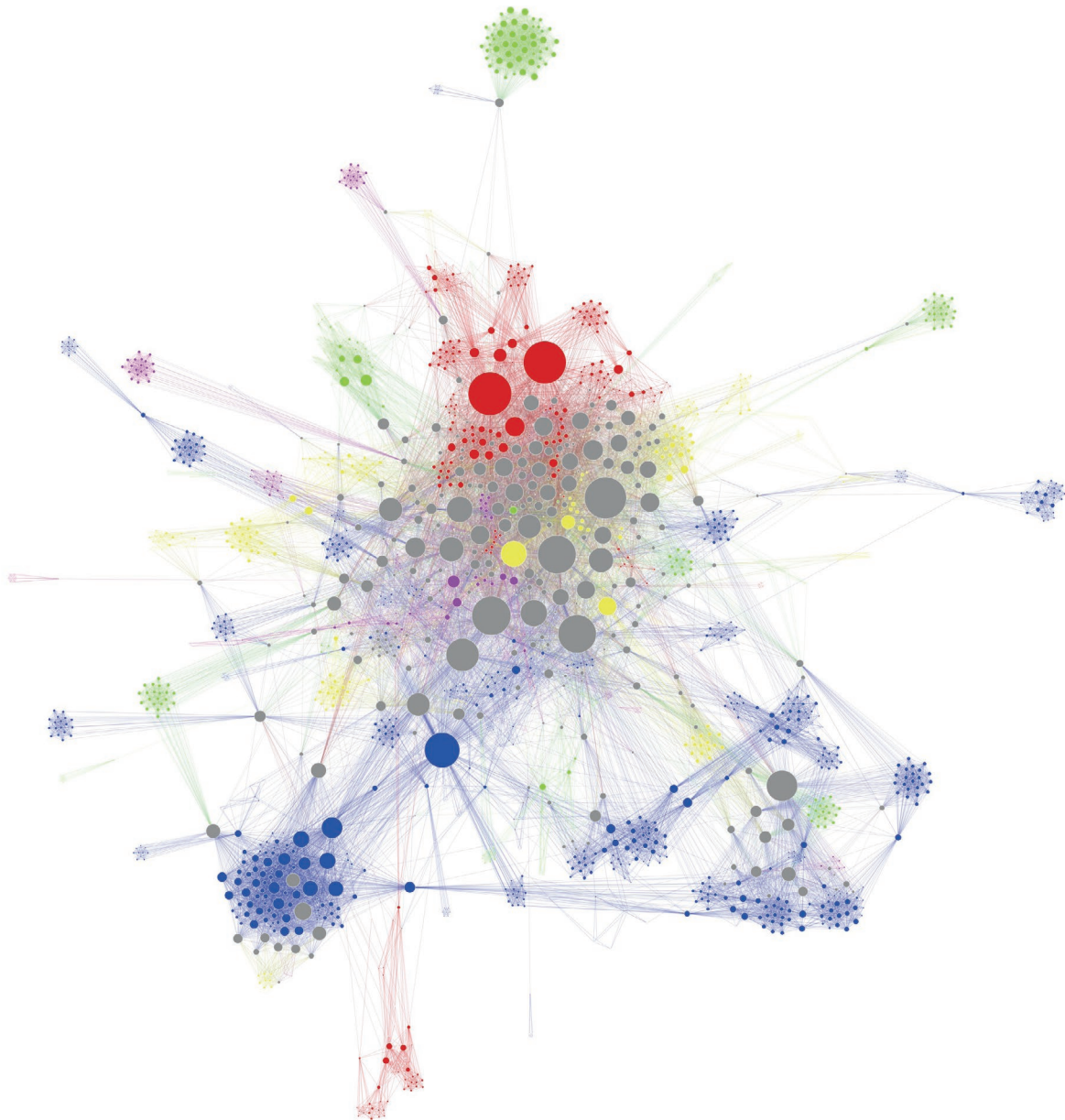
The figure above shows such a network of co-occurring Instagram hashtags in the five high BMI areas. Nodes are colored by local authority (grey nodes representing occurrence in multiple authorities) and sized by degree (representing volume of co-occurrences with other hashtags). The graph was spatialized in Gephi with a force vector algorithm, showing communities of hashtags frequently used together as visually clustered. Especially those hashtags that were 'media-syncratic', i.e. used across all ten areas, proved an interesting qualitative context that speaks to a difference in what is instagrammable (deserving of these tags) between geographic sites. The approach provided a promising alternative method for obesity research on Instagram in a cultural analytical context.

References:

Munk AK, Abildgaard MS, Birkbak A and Petersen MK (2016) (Re-)Appropriating Instagram for Social Research on Obesity: Three Methods for Studying Obesogenic Environments. *Proceedings of the 7th 2016 International Conference on Social Media & Society*, 1–10.

Swinburn B, Egger G and Raza F (1999). Dissecting Obesogenic Environments: The Development and Application of a Framework for Identifying and Prioritizing Environmental Interventions for Obesity. *Prev. Med*., 29, 6 563-570. DOI=10.1006/pmed.1999.0585.

A datasprint with The Royal Theater

In August 2016, we did a one-week datas print with The Royal Theater of Copenhagen. The background of the sprint was that the theater experienced a shift in the way they could account for the worth of fine arts in negotiations with politicians and sponsors. Whereas stories and anecdotes had previously been sufficient, the employees found themselves increasingly challenged to 'show' their value. For instance, it was no longer enough to claim that the Theater "occupied a specific place in the culture landscape" and had specific "emotional bonds to its audience".

The aim of the data sprint was to experiment with new ways of datafying such claims. Since both claims are relational – they say something about The Royal Theater's position in a broader landscape – we thought that digital methods might offer more interesting forms of visibilities than the focus group, which the employees had previously worked with. More specifically, we thought that a visualization of the way Copenhagen' culture users interact with Facebook content on culture, would be an interesting foundation for seeing relations in new ways.

At the sprint we tried out different ways of crafting a dataset that could underpin such a visualization. One of the prototypes comprised all posts and user interactions (such as likes, shares and comments) from the Facebook-pages of 550 cultural institutions in Copenhagen. We turned these interactions into a network of posts connected by shared user activity (shown to the left in the figure below). Each node represents a post and are colored by the page they were posted on (e.g. all pages from the music venue VEGA are orange). Nodes are connected if the same user has liked, commented or shared them and are stronger connected if this is the case for more users.

When interpreting the network we found that the cultural users on Facebook seems to be fall into the six clusters of interest written on top of the map. We thought of these as 'post-demographic' segmentations of these users because they are build on interactions – not demographic variables.

A central part of the sprint was to use this map to ask questions and use quali-quantitative methods to zoom in on other interesting aspects of the network. The close connection between the jazz audience and the maker-space was, for instance, surprising and required attention. It is in such 'conversations' with data that new visibilities can stimulate new modes of thinking and new forms of valuation.

For instance, the interaction with data made it clear that the employees of the Royal Theater sometimes had diverging interpretations of the cultural scene. Such differences became visible in mundane practices such a s pointing to places on the map, where they expected a specific cultural institution to appear.

TANT-Lab Publications on this sprint and the link between digital methods and valuation

Munk, AK, Jacomy M and Madsen AK (2017) Thinking through the data body. In: Mäkitalo Å, Nicewonger T and Elam M (eds.) *Designs for experimentation and inquiry: Approaching learning and knowing in digital transformation*.

Madsen AK (2015) Tracing Data – Paying Attention - Interpreting digital methods through valuation studies and Gibson's theory of perception. In: Kornberger M, Justesen L, Madsen AK and Mouritsen J (eds) *Making Things Valuable*. Oxford: Oxford University Press. Pp. 257-277

THE TWITTER-THING

Parliaments could seem to be highly issue-agnostic places. All sorts of problems move in and out. But issues make cuts. Some parliamentarians become attached to specific issues.

What if the parliament was approached not as a representation device for the national population, but as an assembly of multiple and constantly transforming issue-oriented publics? What kinds of issues come to the fore, how long does this last, and who associate themselves with them?

The aim of the Twitter-thing is to trace the cuts issues make in a parliament. Each time a parliamentarian use a hashtag in a tweet, a link is created between that hashtag and the parliamentarian. The tool then generates a network visualization showing how parliamentarians group around topics and issues. The version shown in the screenshot below was developed in collaboration with the Danish newspaper Politiken, which featured the tool and accompanying articles on its website in 2016.
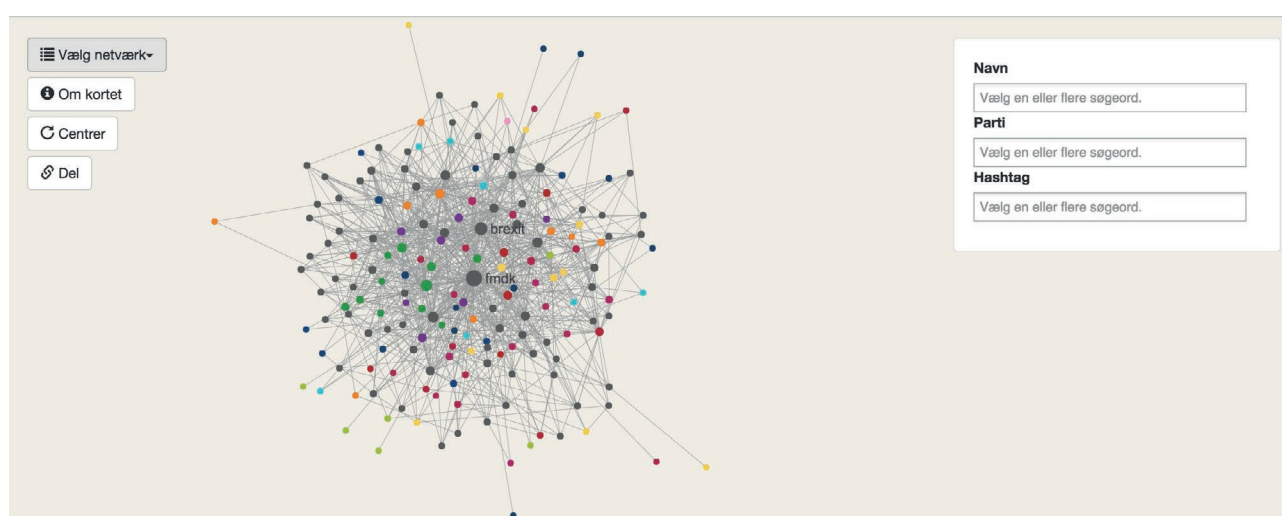
The resulting 'issue publics' – or *things* in the sense of a collective aroused by an issue – are also 'data publics' because they are not necessarily aware of themselves as publics. At the same time, it is possible to self-select membership of these publics by using a specific hashtag. This raises the question of what feedback loops are at work between visualizations and those being visualized. How might a tool like the Twitter-thing change (parliamentary) politics? More generally, the tool prompts us to think about the fate of issues in institutionalized democracy.

The Twitter-thing invites users to explore these questions by making the network available in an interactive format that makes it possible to zoom, search for particular politicians, parties or hashtags, narrow down the network, and follow it over time. It is part of ongoing efforts in digital methods to develop 'datascape' navigation tools.

Link to the interactive online tool: http://twitterting.cadm.dk/

Built with the Actor-Network NAvigator (ANna):
https://github.com/bornakke/ANna

PUBLICATIONS

Birkbak A, Bornakke T and Papazu I. (2017) The Twitter-thing: Retooling the parliament into issue publics. Exhibition presented at the *Data Publics* Conference, Lancaster, Great Britain. 31/03/2017 - 02/04/2017.

Responses to Airbnb: public issues and emerging policies

The rise of the collaborative economy has attracted a lot of interest in recent years, not least in relation to travel and tourism, with companies like Airbnb and Uber in the rise. In 2016, TANTlab participated in the production of a report on the topic to the European Commission. The project was headed by the Tourism Research Unit (TRU) at Aalborg University Copenhagen and involved researching and writing a so-called 'impulse paper,' which provides academic input to the decision-making process in Brussels.

The thrust of the TANT-Lab contribution was to utilize digital methods to map issues related to the rise of services like Airbnb. Airbnb is the most prominent example of how a shift towards a collaborative economy is changing tourism. A key question for the EU commission is how cities respond to this development, how they monitor and regulate this new type of business, and how they cope with or attempt to benefit from the new developments. Recently, services like Airbnb and Uber have caused a range of controversies, also in Europe.

In the impulse paper, we explore the issues that have arisen in four major European tourist destinations: Amsterdam, Barcelona, Berlin and Paris. We constructed data sets from Airbnb reviews, from Facebook, and from the news database Proquest. Based on the semantic analysis software Cortext, developed for research purposes by IFRIS and INRA in France, we constructed maps of the 'issue spaces' related to Airbnb and visualized how the four different cities were positioned differently in the maps.

The discussions and controversies in Paris and Amsterdam turned out to be associated more with tax issues, while Berlin focused more on land use regulation, and Barcelona was more strongly associated with an innovation agenda than the other cities. Each city is represented by its own cell in the visualization above, which uses a heat map technique in Cortext to show how each individual city is related to the overall issue space. The visualization was published as part of the 40-page report, which can be downloaded (link below) and consulted for a closer look at the visualization and the datasets and techniques behind it.
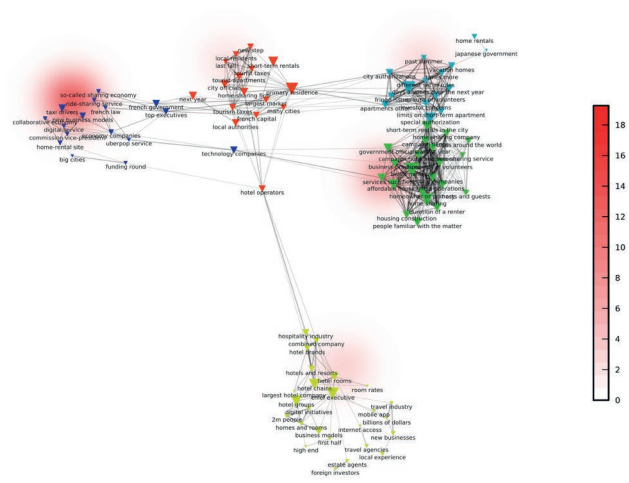
Publications

Dredge D, Gyimóthy S, Birkbak A, Elgaard Jensen T and Madsen AK (2016) *The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris*. Brussels: European Commission.
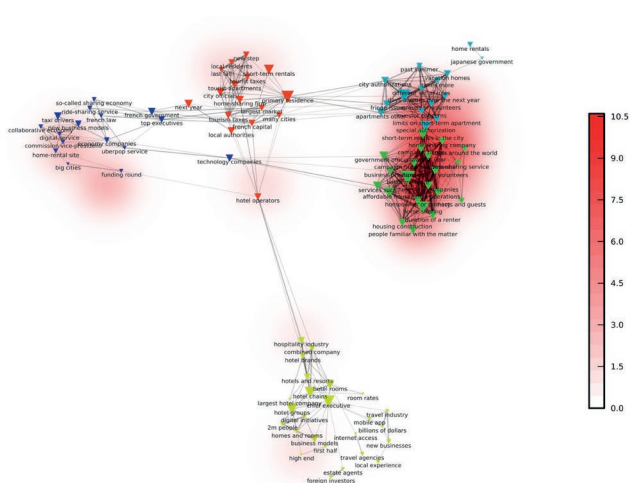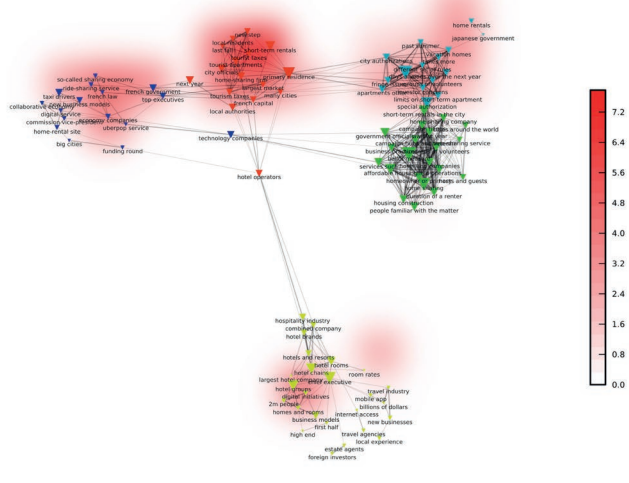
Amsterdam, 0-0
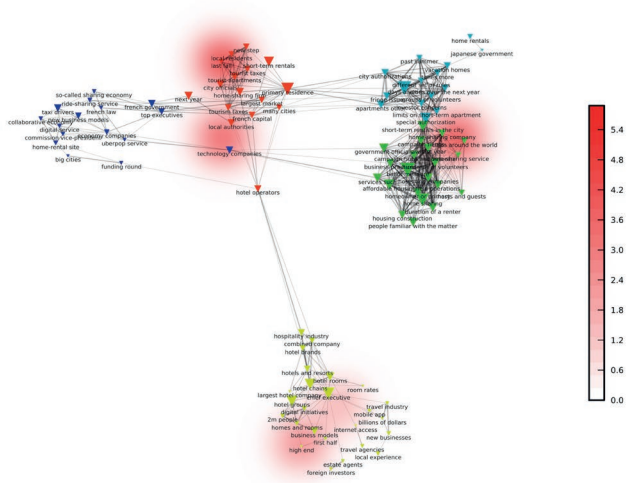
Barcelona, 0-0

Berlin, 0-0

Paris, 0-0

Engaging stakeholders in the implementation
of a new school reform

How do you engage citizens and stakeholders in developing a crowdsourced policy for the future of the public school system in a municipality? This was the challenge facing local politicians in Aalborg, Northern Denmark, when they approached the TANT-Lab together with the consultancy AGORA. It had been decided in advance that the process would have to involve the social media platforms where citizens were already making the school their matter of concern - in this case Facebook - but it was unclear how a messy social media conversation could be fruitfully hardwired into more traditional citizen techniques for public engagement.

Anders Kristian Munk and Anders Koed Madsen present the first results of the hashtagged Facebook conversation between 1600 school stakeholders in Gigantium Aalborg on January 8th 2015.

Throughout the fall of 2014 we helped the municipality collect and organize interesting conversations from their Facebook page and gradually cultivated a practice of users hashtagging their contributions, according to the themes the discussion had a bearing on, as well as the types of stakeholders involved in it. A school teacher might for example hashtag a post about physical activity in the classroom #physicalactivity #classroom #teacher allowing us to identify emerging thematic clusters in the debate and emerging relations between particular stakeholder groups and themes.

In early 2015 the municipality invited 1600 teachers, pedagogues, managers, students and other staff to a day of collaborative work at one of the major sports arenas in Aalborg. Based on our experiences from the more open ended online conversations in the preceding months we devised a short catalogue of best practices when hashtagging Facebook inputs. Organised around 150 tables the participants were then asked to collectively author visionstatements for the future, post them and discuss them.

The result of this work was a database of approximately 1.000 vision statements hashtagged by their authors according to their themes. From the data we identified a number of overarching thematic clusters and central hashtags that were deemed necessary to include in a crowdsourced political vision for the schools. Based around this analysis the database with the full statements was made available and explorable to the 150 school leaders who would sit down and formulate the eventual 2-page policy document outlining the vision.

The process proved an interesting experience for the researchers involved. A major reform of the school system in Denmark had preceded the vision process in Aalborg, and the topic was still sparking intense controversy, both locally and nationally. One important feature of opening up a conversation on Facebook was that the roaming issue-public that had sparked around the national reform found a temporary forum in which to express itself. Another and somewhat contradictory effect of these controversies was the considerable political potential with which the conversation was charged, and the implications this had for those participating in the discussion. It was not without consequence to make your voice public under such circumstances. These and other reflections are currently the topic of several paper projects in the lab.

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