

# The Co-Production of Knowledge:

Knowledge, expertise and authority

Commerce, politics and Web 2.0

Novel forms of knowledge creation

Co-production of knowledge in Web 2.0

National practices and global opportunities

Valuing knowledge

Scientific controversies online



A year in Amsterdam through Instagram  
2011-2012

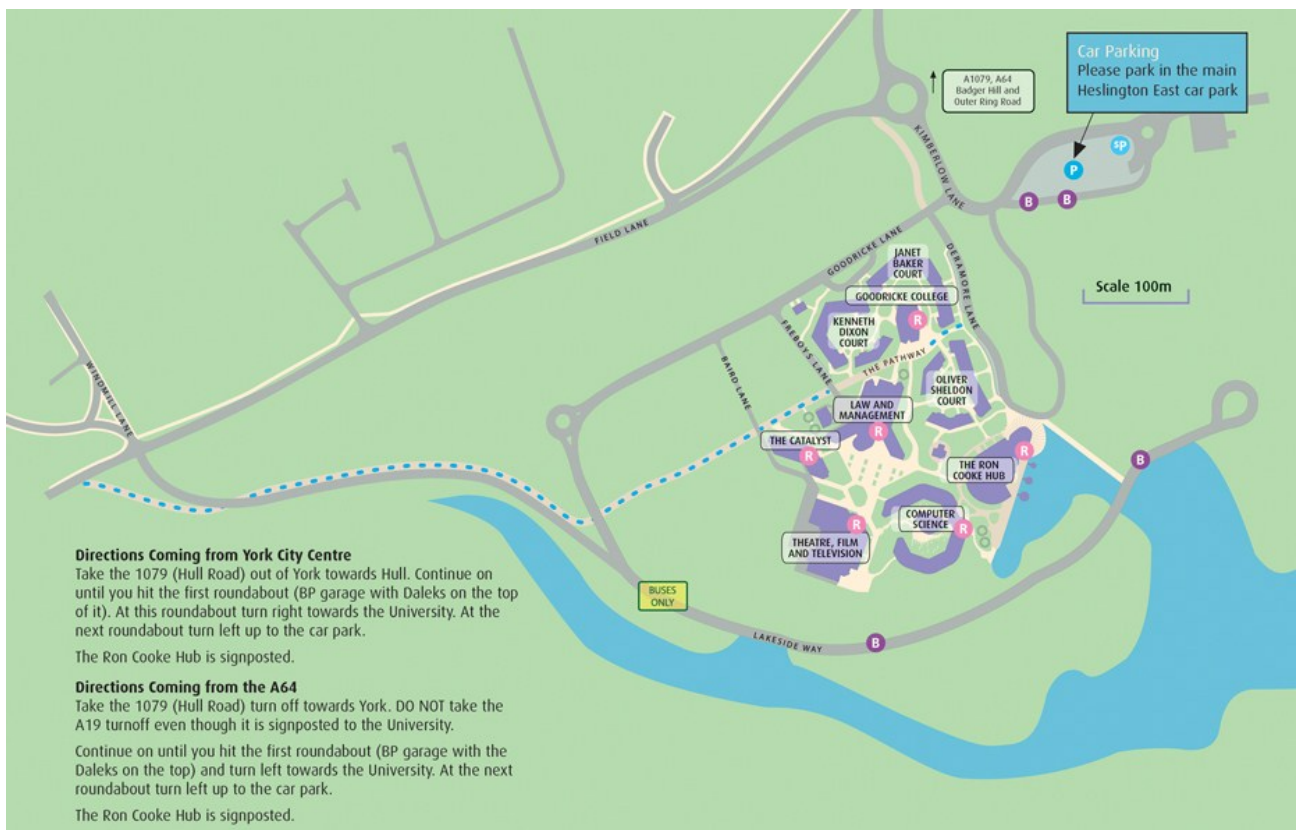
# Introduction

This three-day symposium (18-20 July 2012) is intended to explore the intersection between STS and social media, with a specific focus on how Web 2.0 is both generative and challenging of different forms of knowledge production and the authority it commands'

Questions related to co-production, citizen science, the power of data algorithms and metrics to shape or bypass human agency, and the possibility of participatory forms of surveillance are just some of the issues that are raised.

This conference brings together leading scholars in the fields of STS, communication and social media analysis, and the history and philosophy of science to critically explore these issues.

Location of Conference Venue: Heslington East Campus: The Ron Cooke Hub (further interactive maps can be found at <http://www.york.ac.uk/about/maps/>)



# **Welcome from the Editor of (*iCS*) *Information, Communication & Society***



It is a great privilege to welcome you to the Co-Production of Knowledge symposium which is taking place here in the historic city of York over the next few days. As Editor of Information, Communication & Society (*iCS*) I can say that we are delighted to be supporting this event and look forward to publishing many of the very best of what we are confident will be an excellent assortment of papers. Like me I am sure you will be impressed by the range and depth of analyses covering many aspects of this increasingly important interplay between social media technologies and knowledge generation, codification and epistemology.

The coordination and organisation of such an international endeavour requires, of course, a great deal of co-production between the participants. Credit for facilitating this activity rests with Sarah Shrive-Morrison, Mark Johnson, Darren Reed, Dave Beer and Josine Opmeer from the University of York, UK who have worked tirelessly and with great patience to put this programme together and I would like to congratulate them on the outcome. It has also been a great pleasure to work with Sally Wyatt from eHumanities at the Royal Netherlands Academy of Arts and Sciences and Robin Williams from ISSTI at the University of Edinburgh. I would like to give special thanks to Andrew Webster whose everyday enthusiasm and energy make him such a stimulating and great colleague to work with. Finally I would like to pay tribute to the thoughts and encouragement given by my late colleague and very dear friend Mike Hardey who has done so much over the years to shape my interest and work in this area.

We very much hope that the resulting discussion and publications which emerge from this symposium will contribute to our understanding of contemporary developments in new media technologies and inform current policy debates and practices. I wish you an enjoyable and co-productive stay in York.

A handwritten signature in black ink, appearing to read 'B. Loader', with a stylized, sweeping flourish extending from the end.

Brian D. Loader,  
Editor, *Information, Communication & Society*



# Keynote Speakers



**Adrian Mackenzie** (Centre for Social and Economic Aspects of Genomics, Lancaster University) researches in the area of technology, science and culture. He has published books on technology: *Transductions: bodies and machines at speed*, London: Continuum, 2002/6; *Cutting code: software and sociality*. New York: Peter Lang, 2006, and *Wirelessness: Radical Empiricism in Network Cultures*, MIT Press, 2010, as well as articles on media, science and culture. He is currently working on the circulation of data intensive methods across science, government, and business in network media, exploring how number, quality, space and feeling are re-configured through predictions and anticipations of change. He co-directs the Centre for Science Studies, Lancaster University.



**Robin Williams** is Professor of Social Research on Technology, and is founder and Director of the Institute for the Study of Science, Technology and Innovation (ISSTI), at the University of Edinburgh. His interdisciplinary research into 'the social shaping of technology' over 20 years has focused upon the interplay between business organisation and 'technical' factors in the development and implementation of a range of Informatics applications including Enterprise systems, Electronic Commerce, Finance Sector systems, and more recently upon the more dispersed 'social learning' processes involved in innovations in Multimedia, mobile, Internet and social networking technologies. He is currently involved in several interdisciplinary research initiatives, as well as being co-director of the ESRC Research Centre for Social and Economic Research on Innovation in Genomics (INNOGEN) (2002-7 and 2007-12).



**Dr. Leah Lievrouw** received a Ph.D. in communication theory and research in 1986 from the Annenberg School for Communication at the University of Southern California. She also holds an M.A. in biomedical communications/instructional development from the University of Texas Southwestern Medical Center in Dallas, and a Bachelor of Journalism from the University of Texas at Austin. Previously, she has held faculty appointments in the Department of Communication in the School of Communication, Information, and Library Studies (SCILS) at Rutgers University in New Brunswick, NJ and in the Department of Telecommunication and Film at the University of Alabama.

She has also been a visiting scholar at the University of Amsterdam's School of Communication Research (ASCoR) in The Netherlands, and visiting professor at the ICT & Society Center at the University of Salzburg, Austria. In 2006-07 she was the Sudikoff Fellow for Education and New Media at UCLA.

# Keynote Speakers



**Professor Sally Wyatt** is Programme Leader of the e-Humanities Group of the Royal Netherlands Academy for Arts and Sciences (<http://ehumanities.nl>), Professor of Digital Cultures in Development at Maastricht University, and Director of the Netherlands Graduate Research School for Science, Technology and Modern Culture ([www.wtmc.net](http://www.wtmc.net)). Her research focuses on digital inequalities and on the everyday uses of web-based technologies by people looking for health information and by scholars engaged in research.

Together with Paul Wouters, Anne Beaulieu and Andrea Scharnhorst she has edited *Virtual Knowledge*, to be published by MIT Press later this year.



**Rob Procter** is Professor of Social Informatics at the University of Manchester and Director of the Manchester eResearch Centre (MeRC). His research interests cover socio-technical issues in the design, implementation and adoption of ICTs, with a particular emphasis on computer-supported cooperative work and participatory design. His research has focused most recently on the application of innovations in digital technologies in research and scholarly communications.

He is co-editor of a forthcoming book for Sage on innovations in digital research methods.



**Professor Andrew Webster** is Director of the Science and Technology Studies Unit (SATSU), and Dean of the Social Sciences (comprising 11 Departments) at the University of York. He was Director of the £5m ESRC/MRC Innovative Health Technologies Programme, is member of various national Boards and Committees (including the UK Stem Cell Bank Steering Committee and UK National Stem Cell Network Steering Committee) and was Specialist Advisor to the House of Commons Health Select Committee. He was national co-ordinator the ESRC's £3.5m Stem Cells Initiative (2005-9), and

was a member of the Royal Society's Expert Working Group on Health Informatics. He is Co-Editor of the *Health Technology and Society* Series: Palgrave Macmillan (launched at the Royal Society, 25 October 2006). His most recent book is *Health, Technology and Society: A Sociological Critique* (Palgrave Macmillan) 2007 and *Global Dynamics of Regenerative Medicine: A Social Science Critique* (ed.) Palgrave Macmillan (forthcoming 2012). He was elected a Fellow of the Academy of the Social Sciences in 2006.

# Local Information & Conference Dinner

## Maps & Directions

Interactive maps and directions to the University can be found online at <http://www.york.ac.uk/about/maps/>

## Drinks Reception—18 July, 18:00 Ron Cooke Hub (Campus)

There will be a drinks reception on Wednesday 18 July in The Atrium, Ron Cooke Hub (Heslington Campus East). <http://www.york.ac.uk/about/maps/>

## Conference Dinner— 19 July, 19:30 Melton's Too (£28.00)

The Conference Dinner will be on Thursday 19 July at Melton's Too. It is a large Cafe Bar Bistro in York, specialising in homemade food using regional produce, set in a 17th century building.

Focusing on local seasonal produce in the bistro. There is also a ground floor bar and snug. Further information can be found here <http://www.meltonstoo.co.uk/>

If you have not registered for the conference dinner and would like to join us, please see one of the conference helpers, the cost is £28.00.

There will be a coach leaving from opposite the Library (Heslington Campus West) <http://www.york.ac.uk/about/maps/> at 19:00 or a short walk to town is only 10 minutes away

## York Guide—Interactive online guide to York

Should you wish to explore the City of York further then places of interest, places to eat and drink can all easily be found online at <http://www.visitthecityofyork.org/>

## WiFi Set up

Please refer to the University pages for WiFi set up <http://www.york.ac.uk/it-services/connect/wireless/>

## Log-in password/username

Soci514  
oor0asan

# Schedule: Wednesday 18th July

**9:00-10:00:** Registration

**9:45-10:00:** Introduction Brian Loader [Theatre]

**10:00-11:00:** Keynote Address:

**Adrian Mackenzie, *Machine learning vs. data geeks in social media*** [Theatre]

**Knowledge, Expertise and Disrupted/Disruptive  
Authority** [Theatre]

**11:00-11:30:** *Social Networks and E-Governance in University Spaces* (Jose Alvarez)

**11:30-12:00:** *Writing the Revolution: Social Network Sites and the Politics of Refusal* (Zeena Feldman)

**12:00-12:30:** *Accounting for what Counts? Exploring the Implications for the use of Open Data and Social Network Approaches in a Socially Excluded Community in the UK* (Rob Wilson)

**Capturing Social Media: the commercial/political  
exploitation by or empowering of Web 2.0** [Lakehouse]

**11:00-11:30:** *Social Media and Public Relations: from Asymmetric Communication to Co-Construction* (Patrícia Dias; Jose Andrade)

**11:30-12:00:** *Social Shaping, Social Customers and the Social Web: The Blurring of Online and Offline Worlds* (Jane Vincent)

**12:00-12:30:** *Winning Friends: The Measurement of Influence in Social Media* (Ian Graham)

**12:30-13:30:** Lunch

**13:30-14:30:** Plenary Paper:

**Robin Williams. Post-local forms of expertise: the case of virtualised technical support** [Theatre]

**The co-production of knowledge via Web 2.0  
platforms** [Theatre]

**14:30-15:00:** *The Nature and Types of Content Production on the Internet* (Grant Blank)

**15:00-15:30:** Bringing together science and Web2.0 (James Stewart)

**15:30-16:00:** *What would a Wikipedian do? Self-Organizing Volunteers, Cooperation-by-design, and the 'Free Encyclopaedia that anyone can Edit'* (Christian Pentzold)

**Capturing Social Media: the commercial/political  
exploitation by or empowering of Web 2.0** [Lakehouse]

**14:30-15:00:** *Social Media in Business as a Contested Space* (Jonathan Allen)

**15:00-15:30:** Always listening to the customer's (virtual) needs: Social Media Monitoring tools and the creation of 'authoritative' knowledge in marketing (Shamil Zainuddin)

**16:00-16:30:** Break

**16:30-17:30:** Plenary Paper:

**Leah Lievrouw, *Media and materiality in Communication Technology Studies: An Unfinished Project*** [Theatre]

**18:00:** Drinks (The Atrium, Ron Cooke Hub)

# Schedule: Thursday 19th July

## Novel forms of knowledge creation through group processes, archiving, digitization, etc [Lakehouse A]

**9:45-10:15:** *Niche Online Networks: Is now the Time when less is more?* (Carlos Osorio)

**10:15-10:45:** *The Hacktivist Heutagogy of Social Media* (Dan McQuillan)

**10:45-11:15:** *Co-producing bodies online: Social media and shifting practices of visibility and surveillance* (Ian Tucker; Lewis Goodings)

## The Co-production of knowledge via Web 2.0 platforms [Lakehouse B]

**9:45-10:15:** *The Circle of (il) Legitimacy and a Revised Agenda for Reputation Management in the Era of Social Media* (Vasiliki Baka)

**10:15-10:45:** *Beyond Epistemic Communities: FVI and the Affective Materiality of Socialcare Activism in Spain* (Israel Rodriguez-Giralt)

## National Practices and Global Opportunities [Theatre]

**9:45-10:15:** *Cowboy Paintings by Chinese as Western Art? New Digital and Global Learning in Rural India* (Payal Arora)

**10:15-10:45:** *Producing the Globalizable, Consumable Subaltern: Micro-Transactional Online Platform as Co-Producers of Knowledge about the Other* (Radhika Gajjala)

**10:45-11:15:** *Open Access in Poland – How Polish Scientists Use Open Access to Make Themselves Visible on International Science Arena?* (Dominika Czerniawska)

**11:15-11:45:** Break

## Novel forms of knowledge creation through group processes, archiving, digitization, etc [Lakehouse A]

**11:45-12:15:** *Participatory Surveillance in the Rotterdam Nightspace* (Tjerk Timan)

**12:15-12:45:** *Health and Illness in a Connected World: How Might Sharing Experiences on the Internet Affect People's Health?* (Sue Ziebland)

**12:45-13:15:** *Fostering Online Knowledge Sharing Behaviour Among Young People: The Investigation of Contextual Factors, Personal Perceptions and Outcomes* (Darja Leskovec)

## The Co-production of Knowledge via Web 2.0 platforms [Lakehouse B]

**11:45-12:15:** *Gender and Knowledge Co-Production and Sharing* (Leopoldina Fortunati)

**12:15-12:45:** *Knowledge Co-Production through Integration, Aggregation, Selection* (Judith Simon)

**12:45-13:15:** *Facebook Calls for Action* (Lonneke van der Velden)

## Valuing Knowledge [Theatre]

**11:45-12:15:** *'The Measure of Value. A Case Study of the Bristol Pound complementary currency'* (Andras Novoszath)

**12:15-12:45:** *Groundwork for a Political Economy of User Co-creation: Notes on the Value Logic of Social Media* (Thomas Rodgers)

**12:45-13:15:** *A Biography of Software Development: OSS for Microfinance* (Wifak Gueddana)

**13:15-14:15:** Lunch

**14:15-15:15:** Keynote Address:

Sally Wyatt, *Virtual knowledge: Emerging possibilities for the humanities and the social sciences*, [Theatre]

## Novel forms of knowledge creation through group processes, archiving, digitization, etc [Lakehouse A]

**15:30-16:00:** *Capturing Social Media: Sentiment Analysis and the Making-Meaningful of Social Media Content* (Helen Kennedy)

**16:00-16:30:** *Online Advocacy Networks, Issue Mobilisations and the Coal Seam Gas Controversy* (Asha Titus)

**16:30-17:00:** *Unary and Binary Trafficking via Closeting Interfaces* (Zselyi Ferenc)

## The co-production of knowledge via Web 2.0 platforms [Lakehouse B]

**15:30-16:00:** *The Frameworks of New Media* (Katalin Feher)

**16:00-16:30:** *Selective Distribution in Twitter: How Algorithms Shape our Digital Reality* (Mark Dang-Anh)

**16:30-17:00:** *Co-Creating Book Recommendation Networks: An Amazon-Google Algorithm Story* (Farida Vis)

## Scientific Controversies Online [Theatre]

**15:30-16:00:** *Anecdote and Evidence: Social Media and the Enactment of 'Proof' in a Controversial Theory about Multiple Sclerosis* (Fadhila Mazanderani)

**16:00-16:30:** *Climategate and the Creation of Hypes: How do Newspaper and Blogs influence each other?* (Iina Hellsten)

**16:30-17:00:** *Social Media and a World Risk Society: Contested Scientific Knowledge after the Tohoku Earthquake Disaster in Japan* (Akiko Hemmi)

**19:30** Conference Dinner (Melton's Too)



# Schedule: Friday 20th July

**10:00-11:00:** Plenary Paper:

**Rob Procter, Science 2.0: collaboration, co-production or crisis? Rob**[Theatre]

**11:00-11:15:** Break

## **The boundaries and future of social media as a medium of knowledge creation, dissemination, and regulation**

[Theatre]

**11:15-11:45:** Crowdsourced Maths (Ursula Martin)

**11:45-12:15:** *Non-Adoption 2.0: Understanding Non-Use of Social Technologies* (Ali Eshraghi)

**12:15-12:45:** *Using ANT and Practice Theory to Explore the Shaping of Participation and Non-Use of Social Media* (Gibran Gonzalez)

## **Public and Visible Science** [Lakehouse]

**11:15-11:45:** *Information, Scientific Citizenship and Prodisage: The Social Effects of the Collaboration and Horizontal Medias to Construction of Scientific Consensus in Digital Environments* (Maria Moura)

**11:45-12:15:** *Sourcing the Crowd in Healthcare and the Hierarchy of Pharmaceutical Knowledge* (Samantha Adams)

**12:15-12:45:** *How new developments in communication technologies are influencing public engagement activities in science: Citizen Cyberscience Initiatives* (Vickie Curtis)

**12:45-13:45:** Lunch

## **The boundaries and future of social media as a medium of knowledge creation, dissemination, and regulation**

[Theatre]

**13:45-14:15:** *Should we use Social Media for our Research?* (Yimei Zhu)

**14:15-14:45:** *Spectacular Secrets: Algorithms, Analytics, and 'The Need to Know' in Search Engine Optimization (SEO)* (Malte Ziewitz)

**14:45-15:15:** *Beyond the 'Feminist Blog': Navigating Web 2.0 Spaces within the Contexts of Global Feminisms* (Janan Dean)

## **Public and Visible Science** [Lakehouse]

**13:45-14:15:** *On the path to Cyberscience 2.0 – Will the Web democratise science? "* (René König)

**14:15-14:45:** *Active Genomes: Examining a Participatory Turn in Genetic Research* (Anna Harris)

**14:45-15:15:** *Peer to Patent Community Patent Review: History, Future and Suitability for Extension to Patents on Stem Cell Science* (Anna Hescott)

**15:20-16:00:** Closing Plenary Paper:

**Andrew Webster, STS and social media: methodological and epistemic challenges and the work of Mike Hardey**  
[Theatre]

**16:00:** Brian Loader, Close of Conference [Theatre]

**Wednesday 18th June**

**11:00—12:30**

**Track 1:**

**Knowledge, Expertise and Disrupted/  
Disruptive Authority**

**Room: Theatre**

*Social Networks and E-Governance in University Spaces*

**José Francisco Álvarez**

UNED Spain, jalvarez@fsof.uned.es

Digital technologies are causing transformations in higher education centres which basically affect all their activities. And yet, in spite of the fact that technologies are acting as a cross-cutting axis for change within the universities, institutional initiatives making effective use of information technologies to enable participation, transparency, monitoring of institutional objectives and the concern for the general quality of management do not seem to be sufficiently widespread.

In a broad sense, the governance of organisations, understood as an exercise of political activity and the relationship with users through various procedures and channels, could now be enhanced with the use of electronic mediating tools and devices within the framework of the so-called electronic governance.

Information technology-based social spaces can open up new ways to facilitate the university community's participation in decision-making processes. Although the appropriation of technology is very high and widespread among university groups, there is a very weak presence of suitable structures and processes that enable institutions to channel online participation, and to make use of such open processes as a means of generating innovations in their main lines of action. Our proposal is based on our research projects and experiences (e.g. Domínguez, Daniel; Álvarez, José Francisco (2012). "Social networks and University Spaces. Knowledge and open Innovation in the Ibero-American Knowledge Space" [online article]. RUSC. vol. 9, no 1. pp. 245-257 UOC). We advance some ways to nudge towards open-innovation processes in higher education institutions by taking the dynamics of participation in the Social Web as the point of reference

*Writing the Revolution: Social Network Sites and the Politics of Refusal*  
**Zeena Feldman**

City University London, zinaida.feldman.l@city.ac.uk

Social media are frequently linked to the twin discourses of democratic empowerment and counter-hegemonic resistance. This is seen clearly in the shadow of the 'Arab Spring'. Meanwhile, as Facebook prepares for its \$100 billion IPO, social media are increasingly entangled in capitalist frames of reference. This paper examines the relation between these discourses through what I term 'textual strategies of refusal' – mediated practices that articulate the emancipatory possibilities *and* limits of 'participatory' communication technologies.

I explore textual strategies of refusal through an ethnographic study of CouchSurfing.org, a popular social network site for travelers. From 2004 to 2011, CouchSurfing operated as a non-commercial platform for hospitality exchange. But following its conversion to a for-profit structure in August 2011, the site became a hotbed of anti-capitalist critique. Many read the site's commercialisation as a theft of member contributions and a capitalist appropriation of resources never intended for commodification.

In response, members of BS-R – a subversive discussion forum within CouchSurfing – became leaders of a text-based campaign of refusal launched against site management. This paper focuses on three BS-R practices that used writing to resist capitalist interpellation: (1) profile hijacking; (2) watchdog disclosure; and (3) reference warfare. Through the work of Maurice Blanchot, Andrew Feenberg and Patrick Hanafin, I argue that while writing in the BS-R case contributes to a project of rebellion, it also highlights the paradox of a campaign of refusal launched through the very rhetoric and structure whose legitimacy is under attack.

*Accounting for what counts? Exploring the implications for the use of Open Data and Social Network approaches in a Socially Excluded Community in the UK*

**Rob Wilson et al (James Cornford, Mike Martin, Ian McLoughlin, Conn Crawford)**

Newcastle University, rob.wilson@ncl.ac.uk

The rhetoric of open data approaches to government is that they will revive interest in the democratic process by making information (and thereby the machinery of governance) accessible to the wider community. However, social informatics and community informatics researchers make a strong distinction between data and information. "Data" is usually glossed as a set of discrete, measured facts about events – the kind of material which is increasingly available from information systems. Information, by contrast, implies the presence of a sender and receiver of information and that, if the communication is effective, that there is a change in the way the receiver perceives something. In short, information must inform somebody. A third term – "knowledge" – is critical to the process of transforming data into information, an active process of "sense making," of fitting the data into a wider body of knowledge, guided by a set of strategic, cultural and ethical priorities to produce and maintain a community's 'account' of 'what counts'. This paper will present a case study of an ongoing set of initiatives including an open data project with a socially excluded community in Sunderland, UK. This development is going on a backdrop of a wider set of radical social and welfare changes seeking to reduce the level of state intervention by devolving decision making to community level where possible. The authors are involved the work to varying degrees posing the question of how did the communities account for what counts?

**Wednesday 18th June**

**11:00—12:30**

**Track 2:**

**Capturing Social Media: the commercial / political exploitation by, or empowering of, Web 2.0**

**Room: Lakehouse**

*Social Media and Public Relations: From Asymmetric Communication to Co-Construction*

**Patricia Dias ( & José Gabriel Andrade)**

Catholic University of Portugal, diaspatricia@netcabo.pt

Digital technologies are causing transformations in higher education centres which basically affect all their activities. And yet, in spite of the fact that technologies are acting as a cross-cutting axis for change within the universities, institutional initiatives making effective use of information technologies to enable participation, transparency, monitoring of institutional objectives and the concern for the general quality of management do not seem to be sufficiently widespread.

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*Social Shaping, Social Customers and the Social Web: The Blurring of Online and Offline Worlds*

**Jane Vincent (& Lisa Harris)**

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This paper argues that as a consequence of recent changes in business approach to design, marketing and online delivery (Harris and Dennis 2011) there has been a move towards a new technological shaping of products that provide social features. We suggest this is due firstly to a wider range of choice from which the customer can self-select and personalise their services via their chosen communications medium (mobile phone; laptop, tablet etc). Secondly, as consumers have become more reliant on this "always-on" capability they have become more emotionally attached to it and perhaps more emotionally responsive to targeted marketing. This self-selection is thus the outcome of co-construction not only between the consumer and the technology – the prosumer, but also between the consumer and the business provider (in the form of their marketing). Significantly it now means that many consumers are seeking out and embracing new technologies and innovations with alacrity, generating electronic emotions that are lived and relived through the devices (Vincent and Fortunati 2010), and blurring their online and offline worlds in the process.

The paper explores the emerging marketing and social implications of these trends by examining a series of case studies tracking the online behaviour of contemporary consumers in terms of their interactions with new technology - such as through their use of Facebook and i-Phone Apps - and the companies supplying it.

*Winning Friends: the Measurement of Influence in Social Media*

**Ian Graham**

University of Edinburgh, i.graham@ed.ac.uk

The widespread uptake of social network services, including Facebook and Twitter, has led to a resurgence of interest in social network analysis. In marketing interest has centred on assessing the influence of bloggers, tweeters and Facebook accounts. The calculation of influence scores has been addressed in a long-standing discourse in social network analysis. The two most established methods to measure influence are the *connectedness* and *betweenness* of nodes. In 2010 Kitsak et al proposed in their paper "Identifying Influential Spreaders in Complex Networks" a methodology, k-shell decomposition, for measuring the influence of nodes. In parallel with the development of the methodologies for measuring influence we have seen the emergence of companies analysing social network service data to produce indices of *influence*. Marketers use these measures of influence to target high influence scoring individuals with offers in the expectation this will lead to positive coverage in tweets and postings, while social media participants are encouraged to monitor and attempt to maximise their scores. The methodologies of these social media analytics services are opaque to users and the definition of *influence* left unclear. The activities of these firms has led to criticism that they are harvesting personal data without consent and distorting the social networks they claim to be monitoring.

The paper will critically summarise the emergence of *influence* as a property of social networks within social network analysis discourse and use a case study of the scoring of influence by Klout and PeerIndex to uncover the performativity of influence scoring.

**Wednesday 18th June**

**14:30—16:00**

**Track 1:**

**The Co-Production of knowledge via  
Web 2.0**

**Room: Theatre**

*The Nature and Types of Content Production on the Internet*

**Grant Blank**

University of Oxford, grant.blank@oii.ox.ac.uk

Until the Internet arrived, content production and distribution was always an expensive, difficult process. With the Internet it is dramatically easier, faster, and cheaper. Some argue (e.g. Benkler 2006) that this will move production out of the hands of elites and lead to wider participation in the public sphere and to enhanced democracy. This paper makes three contributions. First, it uses a random sample of the British population. This is a much broader population than most prior work. Second, using principal components it creates the first evidence-based typology of Internet content production. The three types named “skilled content”, “social and entertainment content” and “political content”. Previous research or theory does not anticipate this result. The implicit assumption of most researchers that only one type of content exists is not accurate. Third, using multivariate logistic regression it shows the characteristics of different populations that produce each type of content. Elites have no impact on creation of skilled content. Social and entertainment content is more likely to be produced by non-elites. Only production of political content is significantly and positively associated with elite status. These results are consistent with many prior studies, but the distinction between types of content means that they are more nuanced. The different relationships between elite status and content production suggests that it is important for future research to pay close attention to the type of content under study when considering possible democratization of production. The Internet is likely to have different effects in different spheres of life.

*Bringing together science and Web 2.0*

**James Stewart**

University of Edinburgh, j.k.stewart@ed.ac.uk

In this paper we explore how two leading scientific publishers have attempted create a 'Web2.0' version of scholarly communication, a field that has always been characterised by 'user production', but whose idealistic aspirations have come under fire in recent years with electronic publishing and metrification of scientific production.

We describe some of the ways that these publishers have tried to exploit social software and stimulate 'web2.0' practices among the scientific community, authors, readers and editors, while attempting to maintain their central role in scholarly communication. Using a Social Shaping/Social Learning approach, the paper reports on how PLoS (an open access publisher) and NPG (a subscription publisher) attempted, and largely failed, to first make Web2.0 services for science, then slowly explored the ways the could exploit the social web outside their platforms, and put in place some key parts of the technical infrastructure that may both improve discoverability in interdisciplinary science, and feed the metrification of science practice.

A 2010 study of Web2.0 use by UK researchers showed enthusiasm for social software and media, but little practice beyond use of Google Scholar. In the face of criticism of the role of scholarly publishers we defend their role as key intermediaries in innovation in this field, who are able to put some of these tools in front of researchers as they go about their everyday work, and engage seriously with other stakeholders, such as scholarly societies, libraries etc in trying to promote useful innovation and improve the discoverability and communication of science.

*What would a Wikipedian do? Self-Organizing Volunteers, Cooperation -by-design and the 'Free Encyclopedia that anyone can Edit'*

**Christian Pentzold**

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Wikipedia is co-production of knowledge par excellence. With its numerous entries and users it epitomizes the potential and power of the ‘wisdom of the crowds’. That said, the paper asks how Wikipedia as an encyclopedic product and a producing collective comes into being. The paper’s key argument is that Wikipedia is done through the establishment of work routines that are organized in and through the institutional arrangement of understandings, rules, software, and teleo-affective structures embracing ends, projects, purposes, beliefs, and emotions. The project, then, is maintained by volunteers who commit themselves to the project’s goals and (self-)govern their engagement so to follow tasks, fulfil projects, organize their activities, as well as watch and sanction those who fail to do so. Thus, Wikipedia is neither mainly based on interdependent collaboration nor authoritative rule. Instead, it places the responsibility for the project’s success with a relatively small group of active volunteers who monitor, correct, align, and integrate their contributions to achieve the ‘free encyclopedia’.

More specifically, based on a three-year ethnography into Wikipedia’s arranged doings of authors and authoring tools, of work routines and coordinating ensembles, as well as of control relations and ethical commitments, the paper examines three stations: first, it explains how novices are made into ‘good’ Wikipedians through tutorials, mentoring relations, ethical labour, and practical trainings. Second, it outlines the institutional repertoire of tacit knowing how, explicit policies, ethical norms, and code. Third, it shows how these organizing structures become productive in editing and coordinating Wikipedia.



**Wednesday 18th June**

**14:30—16:00**

**Track 2:**

**Capturing Social Media: the commercial / political exploitation by, or empowering of, Web 2.0**

**Room: Lakehouse**

*Social Media in Business as a Contested Space*

**Jonathan Allen**

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In the part cooperative, part conflictual relations that consumers have with businesses, social media and online reviews offer the possibility of restructuring their relationships in ways that could promote mutual benefits ('co-production'), assert new control by one party over another ('negative reviews', 'reputation management'), or expand the influence of hidden algorithms ('rankings', 'filtered reviews'). Our strategy for analyzing these transformations is to examine the claims made by different groups about who has the knowledge and expertise to manage social media activity in firms.

Drawing from recent fieldwork on social media activity in luxury and upscale hotels, we can tentatively identify at least three sources of knowledge claims about business social media: expertise in branding, rooted in the centralized control philosophy of integrated marketing communications; expertise in authentic relationships and communication, based on word-of-mouth marketing and personal psychology; and expertise in analytics, based on knowledge of web traffic generation, experimentation, and data analysis. Each type of knowledge claim offers a different perspective on how, and to what extent, social media can be controlled by businesses. Our analysis looks at the processes through which different business groups try to validate their preferred approach to social media, as well as how they portray the two other main parties: consumers themselves, as either objective evaluators, sources of creative ideas, or cathartic self-expression; and social media platforms, as either communication tools or systems to be gamed.

*Always listening to the customer's (virtual) needs: Social Media Monitoring tools and the creation of 'authoritative' knowledge in marketing*

**Shamil Zainuddin**

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Using social media monitoring tools, which are essentially sophisticated online listening programs designed to conduct customisable and targeted searches, marketers are now able to gather and collate copious amounts of information on things such as brands, people and competitors from social media sites.

Unlike methods such as like focus groups discussions and streets surveys, social media monitoring tools conduct research on the consumer in online spaces and present it in a quantitative and qualitative way. This movement from "ask research to listening research" might raise ethical questions on consent as there is no consent request from the subjects. Further, the use of scientific idioms to present conclusions from online data can be seen as a way to lend legitimacy and authority to this type of research. This raises questions of what kind of authoritative knowledge is created from social media monitoring and how does this practice adds to and reconfigure the stock of existing knowledge on the consumer and the 'market'.

In this paper, I begin to address these questions based on my experiences working as a social media marketer in an international advertising agency and my on-going research in the area.

*Cumulative and Strategic User Involvement with Respect to Developer-User Social Distance*

**Mikael Johnson**

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Social media changes the conditions for user participation in service development. In this paper, we look at the factors that have shaped the forms of user involvement through an in-depth case study of Habbo Hotel by Sulake Corporation, popular among teenagers.

Early on the developers carried out their vision in close cooperation with users. The developers used the service themselves, active users helped with moderation, and user feedback was direct. It was difficult to estimate the popularity of a feature in advance, but through following use statistics, user forums, and online user activities, the developers optimized the service experience.

As the service expanded internationally, and both the user communities and service operator grew in size, the forms of user involvement changed. Informal ways of following use no longer sufficed, and systematic user research gained a foothold in the company. A few years later, automatic tools enabled user researchers to target surveys considering use history. Data mining of use statistics developed further, and qualitative user research complemented other data sources and methods.

Co-designing with user communities requires different measures in different contexts. This case study tells about how the circumstances for service development changed over time, and how it shaped the forms of user involvement. The actual combinations of user involvement methods remain particular to this case, but the factors shaping method choice can be generalised. Three important factors are: 1) developer-user social distance, 2) cumulated user knowledge beyond one project, and 3) user-generated content and user-owned services.

**Thursday 19th June**

**9:45-11:15**

**Track 1:**

**Novel forms of knowledge creation  
through group processes, archiving,  
digitization, etc**

**Room: Lakehouse A**

*Niche Online Networks: Is now the Time when less is more?*

**Carlos Osorio**

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The increasing number of users in Online Social Networks (OSN), as well as the creation of new OSN for all sort of interest and groups, are signs of how this media is becoming part of our lives. Research in this field is characterised by the focus on structural issues and the study of the big OSN.

Currently, the continuous appearing of specialised OSN (or niche OSN) is becoming a phenomenon that has started to compete with the large ones in terms of users, traffic and content generated. Nevertheless, the specialization of OSN affects not only the size of the network, but also other aspects as governability and more important, the users' attitudes and motivations to join this type of networks. Therefore, is necessary to contrast if the developments done focused in the large OSN can apply for the niche OSN.

Based in previous research, niche theory arise as a valid alternative to study these networks as part of a competitive ecosystem. In which the networks have to fight for the users as a resource, and moreover for their survival. Thus, the research question is why a user will prefer to join a niche OSN rather than a group in large OSN, which can offer the same characteristics, within a known environment.

Initially, the paper will be framed in the applications of niche OSN in marketing, given the crescent application of OSN as media to promote business, although the findings can be extended to other fields as social initiatives or politics.

*The Hacktivist Heutagogy of Social Media*

**Dan McQuillan**

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I will argue that social media is stimulating a shift in knowledge production through the spread of abstract hacktivism, which will be traced though early hacker definitions to a wider grounding in assemblage theory. By showing how web 2.0 is enrolled in the production of knowledge through collective interventions in the social, I will suggest that the pedagogy of Paulo Freire is becoming fused with the practice of prototyping via the affordances of social media.

However, I will also draw on William Whewell's (1794–1866) notion of idea-laden observation to critique the re-emergence of data empiricism via the embrace of web 2.0 methods. Following Stiegler, this will extend to a reading of social media as a form of a form of pharmakon (both poison and cure) through the work of W. T. 'Bill' Tutte, computing pioneer at Bletchley Park, who's later development of graph theory underpins the participatory surveillance of social network analysis.

*Co-producing bodies online: social media and shifting practices of visibility and surveillance*

**Ian Tucker (& Lewis Goodings)**

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Social media promote a networked form of communication that is now an integral aspect of everyday life, with the implication that for many people the network is always on and we are faced with the omnipresent concern of 'being online' and visible to others. Here, being online does not simply mean the practice of sitting at a computer, but refers to a wider sense of connection that is embedded in the use of a range of social media. Being online is primarily felt through connection with an 'imagined audience' (Marwick & Boyd, 2010) and includes an embodied sense of felt connection that is shared across a network of other users. The multiple forms of visibility made possible within the infospheres (Terranova, 2004) of social media introduce the potential for participatory surveillance, and the related co-production of bodies online. Here the making of individual bodies becomes a collective enterprise, produced in mediated techno-biological spaces. Process philosophically informed theories are useful ways to interpret and analyse the relational production of socially mediated bodies, which are subject to the converging tensions of the need for stability and fluidity. This paper will explore the ways socially mediated bodies need to be disposed for action in particular ways and explore how the subject is spoken through a range of social practices that are bound up with issues of power and conformity.

**Thursday 19th June**

**9:45-11:15**

**Track 2:**

**The co-production of knowledge via  
Web 2.0 platforms**

**Room: Lakehouse B**

*The circle of (il)legitimacy and a Revised Agenda for Reputation Management in the Era of Social Media*

**Vasiliki Baka (& Susan V Scott)**

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The emergence of new organizational forms, such as social media, is challenging the equilibrium of reputation management and legitimacy prompting widespread change and organizational restructuring. Social media and user-generated-content websites have added a complex layer to the constitution of legitimate content and to the creation of knowledge. Formal accreditation schemes mingle with non-institutionalized mechanisms which put users in the middle making them draw their own conclusions about organizations. Furthermore, the emergence of user-generated content and social media in general has brought about a new kind of a quasi-formalized knowledge generation. This new type of knowledge has gradually questioned institutionalized norms and created the need for new organizational practices to emerge. Based on an on-going research project we are proposing "the circle of (il)legitimacy", a circle through which legitimation and illegitimation are always in relation to each other, as a way of conceptualizing the current process of transformation in reputation management for the travel sector. This paper discusses the shift in power relations and the consequences for the sector as well as the theoretical implications for reputation management.

*Beyond Epistemic Communities: FVI and the Affective Materiality of Socialcare Activism in Spain*

**Israel Rodriquez-Giralt**

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This paper describes the emergence of el *Foro de Vida Independiente* (FVI), an influential group within the new activists groups around social care policies in Spain. In the first part, the paper shows how particularly through Internet discussion groups, collective learning result in the constitution of experiential knowledge, the appropriation of other forms of knowledge, including sociological, legal and medical knowledge, and the articulation of these different sources of knowledge in some new form of expertise around the notion of functional diversity (a notion which is used to replace the notion of disability). Drawing on that, the paper finally discusses the notion of "epistemic communities" (Hass, 1992; Akrich, 2010) by suggesting that the actors get engaged in a policy enterprise not only because of the knowledge shared and produced to confront with other professionals or experts but also because of the affective materiality of the attachments (Marres, 2007; Callon & Rabeharisoa, 2008) upon which this knowledge is produced.

*Issue Mapping Inside Out: Analysing Controversies in Digital Social Research, broadly conceived*

**Noortje Marres (& Carolin Gerlitz)**

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Digital social media are enabling new ways of organising social life as well as new ways of analysing it (Law et al, 2011). However, as digitization brings into relief the wider transformative potential of social research techniques, we are also confronted with the question of how digital devices affect relations *between* different agencies of social research. In this paper, we will focus on a particular social research method, that of controversy analysis, to explore this broader thematic. On the one hand, controversy analysis is a well-established tradition in social research and science and technology studies. On the other hand, technologies of issue mapping are today proliferating across social life, in the form of platforms and applications of information visualisation, among others. We will explore the relations between various different forms of issue mapping, with special attention to the question of whether and how relations between objects, techniques and audiences of issue mapping are being reconfigured. We will propose that perhaps the most interesting implication of digitization is the potential to reframe what counts as an 'issue'. Issue mapping has tended to uphold a strict separation between concerns that are internal to social research ('epistemic issues') and the social problems they bring into view. However, in the case of digital social research, research issues (like access to data) may be intimately related to the social problems of digital societies. A key challenge for issue mapping then becomes how to contribute to a productive articulation of such problematics.

**Thursday 19th June**

**9:45-11:15**

**Track 3:**

**National Practices and Global Opportunities**

**Room: Theatre**

*Cowboy Paintings by Chinese as Western Art? New Digital and Global Learning in Rural India*

**Payal Arora**

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Youth at a rural cybercafé in India browse through Google images for their school project on 'Western versus Indian' art. Images of cowboy paintings by Chinese artists surface, and gets demarcated as Western painting. While *Mona Lisa* is selected, Picasso's *Les demoiselles d'Avignon* is not. Raja Ravi Varma wins a place in the Indian art portfolio due to his depiction of classic Indian themes. Drawing from eight-months of fieldwork on youth digital engagements in rural India, this paper grounds current enthusiasm on eLearning and global knowledge through a postcolonial lens. As 600,000 villages are currently being connected in India through cybercafés, this serves as an opportunity to delve into how youth in villages are taking to these new technologies and facilitating online knowledge circulations. Specifically, we investigate what constitutes as 'classic' Indian and Western art in this novel context. New media spaces allow for new opportunities for learning; yet, it is seen that this is subjective to mediations that are historical, political and technical. Informal learning appears to be liberated from formal curriculum; yet, such freedom brings deep and persistent (mis)education. Faith in new digital platforms often triumphs that in local teachers, serving as new authorities on art critique. Understandings on art are locally designed and not necessarily in line with global curricula on classic art, creating cosmopolitanisms in global education. Overall, it is found that digital learning is creative but not necessarily 'correct' by formal education standards nor compatible with global understandings.

*Producing the Globalizable, Consumable Subaltern: Micro-Transactional Online Platform as Co-Producers of Knowledge about the Other*

**Radhika Gajjala**

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This paper critically examines the co-production of the subaltern in global space through micro-transactional digital platforms such as kiva.org, microplace.com, micrograam.com and so on. We raise questions about the subalternity, materiality of labor both online and offline, affect and political economy in relation to social media platforms, drawing on continuing data collection online and offline for over 6 years.

In researching digital/global microfinance and how it works in concert with the transnational digital financialization of the globe, we have noted that the subaltern is "supplied" to online global market places as borrower while a westernized middle-class becomes mobilized to produce the "demand" for this subaltern. This process involves several kinds of tasks/labor performed by various groups of people both in western and urban locations and from the third-world locations from where the needy subaltern is offered up. On the one hand, for instance, of young college students are sent to various third-world locations to report out to the rest of the world in their role as "fellows" working for the producers of the online platform. On the other hand, MFI workers in third-world locations also contribute to the screening and production of the borrower. These are only two sets of people who work to co-produce this globalizable subaltern. The funding for this borrower (who has been "supplied" to potential borrowers) comes from lenders. These "demand" groups are also co-produced through advocacy in various other social networked groups in various other online spaces –ravelry.com, secondlife, facebook and so on.

*Open Access in Poland—How Polish Scientists Use Open access to Make Themselves Visible on International Science Arena?*

**Dominika Czerniawska**

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Every year open access receives more attention from policy makers, funders, governments and scientists themselves. It is used to achieve various aims like improvements in knowledge dissemination and knowledge utilisation, changes in scientific institutions' management, broadening the scope of knowledge freely available on the Internet. Scientists benefit from open access on different levels. Firstly, it enhances radically a range of papers which can be found and obtained. Secondly, scientists benefit from communication and cooperation with international scientific environment. The key question is how scientists use open access to 'bypass' traditional channels of communication (publications, conferences). To answer it two sets of in-depth interviews were conducted. The first set of interviews focused on new communication technologies in scientists' work. The second set was devoted to a perception of open access and detecting practices supporting career development with open access. Main results indicate intentional behaviours concentrated on gaining scientific 'audience' and maintaining it. Major identified benefits are acceleration of sharing results with drafts and preprints, valuable feedback, maintaining relations between conferences, being visible in scientific networks.



**Thursday 19th June**

**12:00-13:30**

**Track 1:**

**Novel forms of knowledge creation  
through group processes, archiving,  
digitization, etc**

**Room: Lakehouse A**

*Participatory Surveillance in the Rotterdam Nightscape*

**Tjerk Timan**

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In Dutch city centres, several stakeholders have been designated the task to create safe and pleasant nightlife districts. One way of securing these districts is via surveillance. While questioning forms of surveillance technology is done in surveillance studies, focus here is mainly on the top-down regimes of surveillance technology. However, in this paper an attempt is made to approach surveillance from a bottom up perspective by looking into mobile cameras used by visitors of the nightscape of Rotterdam. The mobile camera as an actor in the nightlife district may alter touchpoints of potential surveillance activities. We use the concept of participatory surveillance to refer to both conscious and unconscious participation in providing information to databases that are also accessible for others. In current nightscapes, the boundaries of what is or can be used as surveillance information is blurring. Roles of watched and watcher, of top-down and bottom-up surveillance as a consequence become increasingly fluid.

From a socio-technological perspective, this move can be described as a coming together of consumer electronics, new media and surveillance technology. From the point of view of citizens, the latter has a closed and regulated character, where the logics of new media can be described as the opposite: open and transparent. Both organisational surveillance as well as the (accidentally) participating citizen have to deal with a changing landscape of surveillance, where the digital and the physical, the online and offline world are getting more intertwined in public nightlife and its surveillance assemblages. The central question in this paper is if/whether or not evidence of participatory surveillance can be found in the practices of Rotterdam nightlife citizens. In an exploratory fashion, in-depth interviews with Rotterdam citizens were conducted to find out whether traces of participatory surveillance can be found in practice. Traces of participatory surveillance can be found in practice.

*Health and Illness in a Connected World: How might Sharing Experiences on the Internet affects people's health?*

**Sue Ziebland**

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The use of the internet for peer to peer connection has been one of its most dramatic and transformational features. Yet this is a new field with no agreed theoretical and methodological basis. The scientific base underpinning this activity needs strengthening, especially given the explosion of web resources that feature experiential content posted by patients themselves. This review informs an NIHR (UK) research programme on the impact of online patients' experience on health and health care, which includes development and validation of a new e-health impact questionnaire.

We identified seven domains through which online patients' experiences could affect health. Each has the potential for positive and negative impact. Five of the identified domains (finding information, feeling supported, maintaining relationships with others, affecting behaviour, and experiencing health services) are relatively well rehearsed while two (learning to tell the story and visualizing disease) are less acknowledged but important features of online resources.

The value of first person accounts, the appeal and memorability of stories and the need to make contact with peers, strongly suggest that reading and hearing others' accounts of personal experiences of health and illness will remain a key feature of e-health. The act of participating in the creation of the content of health information (for example through blogging and contributing to social networking on health topics) also influences patients' experiences and has implications for our understanding of the patient's role in health care management and information.

*Fostering Online Knowledge Sharing Behaviour Among Young People: The Investigation of Contextual Factors, Personal Perceptions and Outcomes*

**Darja Leskovec (& Vesna Zabkar)**

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One of the biggest challenges of fostering knowledge sharing online community is arousing participants to produce and exchange information. While there is an extensive body of research into determinants of knowledge sharing within online communities in organizational contexts, only a few studies were conducted among young people participating in communities of interest where factors motivating young people to participate might be different from those of employed people. Thus, we investigate motivations and outcomes of knowledge exchange among students from 24 countries who participate in a community built around idea competition and discussions about sustainability and innovation. We draw on theories of social capital, social exchange and social cognitive theory and build a model with 12 latent concepts grouped into contextual factors, personal perceptions and outcomes. We test the model with data collected among 68 members of the community. Using regression analyses with demographic controls we obtain next results: (1) attitudes toward knowledge sharing are shaped by one's personal perceptions, i.e. community outcome expectations and perceived reputation; and are the single strongest positive predictor of the intensity of knowledge sharing behaviour; (2) perceived positive outcomes are determined by relational and structural social capital factors, i.e. trust in management, identification with the community and interpersonal trust. Interviews revealed that young people participate in online knowledge sharing initiatives since they believe such collaboration is needed, and to improve their status, gain reputation and have their abilities formally recognized.

**Thursday 19th June**

**12:00-13:30**

**Track 2:**

**The co-production of knowledge via  
Web 2.0 platforms**

**Room: Lakehouse B**

*Gender and Knowledge Co-Production and Sharing*

**Leopoldina Fortunati**

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The co-production and sharing of lay knowledge among Web 2.0 users have grown. A large variety of communities of interest have developed a process of redefinition of knowledge as a social construction and have redefined the mechanisms, elements and modes of knowledge sharing. I will draw on two cases studies that were carried out in Italy inside the European project SIGIS (Strategies of Inclusion: Gender and the Information Society). The first deals with a website on the rare disease Lupus erythematosus and the second with the forums present in the website of the most read Italian women's weekly (Donna Moderna). The purpose of these case studies was to monitor the strategies of women's inclusion in the information society. However, their analysis highlights several elements that are important for the scope of this presentation. Results show that the focus of the knowledge produced in these websites has shifted from the vertical axis of specialists' knowledge to the horizontal axis of the peer, which is more effective in helping to cope with the variety of everyday life situations. In these websites women can obtain help together with an understanding of their problems, find solutions, correct their mistakes, obtain support and comfort. These feminine communities work as informal and extemporary self-help groups. The practical knowledge that is sought for derives from an intertwined process of information, experience and experimentation but lacks any elaborate structure of thought on the subjects investigated.

*Knowledge Co-Production Through Integration, Aggregation, Selection*

**Judith Simon**

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In recent years many new applications emerged on the Web under the labels *Web2.0* or *social media*. One core characteristic of such applications is the involvement of multiple agents in the production of content. And one type of content that can be co-produced and on which I will focus in my talk is *knowledge*. In particular, I want to propose a theoretical framework to analyze the co-production of knowledge on the Web and beyond. This framework is informed by STS as much as by feminist epistemology and social epistemology. Its core consists in a tripartite classification of socio-technical epistemic systems on the Web based on the mechanisms they employ to *terminate* socio-epistemic processes (temporarily) to obtain epistemic products. These three mechanisms are *integration*, *aggregation* and *selection*.

By comparing processes in tools such as Wikipedia or recommender systems I will show that systems which primarily employ integrative, aggregational or selective mechanisms differ profoundly in many respects: while all of them have their epistemic merits, they depend on different social, technical and epistemic *prerequisites*, they have differential *consequences* for the epistemic agents involved, they have different *strengths and weaknesses* and are optimal for different epistemic *tasks*. Further key issues concerns the differential attribution of *authority and power* to epistemic agents as well as different *loci of trust and responsibility*. The utility of my classification is hence twofold: it offers not only a nuanced framework for analyzing socio-epistemic systems and processes on the Web - it may also serve as a theoretical basis for *improving* them.

*Facebook calls for Action*

**Lonneke van der Velden**

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This paper proposes a method for studying action on Facebook, developed in a research project on Facebook Activism. Inspired by Bruno Latour's *Reassembling the Social* and his call to follow the actors and take into account their own ordering practices, we visualised 'action formats' on Facebook groups by using a digital methods approach. Critically assessing claims about Facebook activism that evaluated the platform against users' needs or expectancies, we questioned what type of activism *can be found* on Facebook. We studied calls for action on the thirty-five biggest Facebook groups from the 100 most relevant according to Google, all having 'stance language' in their titles ('against', 'pro', 'stop', 'support'). Our preliminary results indicate that these groups are pervaded by educational calls for action ('raise awareness'; 'learn'), which is followed by support strategies, offline attendance, and varieties of network dependent action. Similarly, the approach can be used to study action formats by querying for specific issues on Facebook, for instance 'privacy' or 'censorship', in order to compare different forms of issue formatting per issue. As such, the main contribution of the project for STS is that Facebook, often represented as being a big and opaque actor, can in this way be opened up and understood in its diverse forms of issue making, and possibly, if further developed, be related to larger processes of issue formation.

**Thursday 19th June**

**12:00-13:30**

**Track 3:**

**Valuing Knowledge**

**Room: Theatre**

*The Measure of Value. A Case Study of the Bristol Pound Complementary Currency*

**Andreas Novoszath**

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Bristol Pound is a region-wide complementary currency under implementation promising to create a new more sustainable, just and resilient economy. Among of its several novel features (e.g. mobile payment system, issuing by credit unions) the developers also plan to provide an online platform where local independent businesses participating in the scheme will be listed. Here they not only would be able to promote themselves and put up special discounts in the Bristol Pound but also will be part of a searchable directory where they will be able to communicate and initiate new businesses with each other.

By conducting on the scheme an ethnographic case study informed by science and technology studies we can raise several questions. How the use of the currency with the platform enacts a different type of economy and changes the practices of valuation? What new types of monetary and economic governmentalities emerge with the help of the use of ICTs and what means and possibilities does this provide or take away from the habitats of the Bristol and Bath region? How the economy does 'get known' and how does this process of knowledge making influence the everyday practices of traders, customers and regulatory bodies?

In this research by examining and describing the project along the following topics and by bringing forth the specificities of the materials, technologies, people and theories co-enacted in this process of economization we can think about the role of ICTs, knowledge making and the possibilities of participation in the contemporary political economy.

*Groundwork for a Political Economy of User Co-creation: notes on the Value Logic of Social Media*

**Thomas Rodgers**

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The intense proliferation of various forms of digital and social media has brought about considerable changes to the modes through which commercial value is both created and harnessed as a source of profit. Of particular interest to scholars working across the social sciences are the ways in which social media users are becoming increasingly integrated into processes of continuous and open-ended production. Concepts such as 'prosumerism' (Ritzer & Jurgenson, 2010), 'playbour' (Kücklich, 2005), and 'co-creation' (Banks and Deuze, 2009) have been mobilised in recent years in order to intimate toward the ways in which new and social media formats are characterised by user "do-it-yourself" architectures that simultaneously allow for a continuous emergence of "consumer creativity" on the one hand, and the corporate expropriation of this as a valuable source of freely-given labour on the other. However, one issue that needs addressing is the value logic of these 'co-creative', 'immaterial', or 'free' labour practices that characterise the economies of new and social media; the reasons for this are varied, but, as Arvidsson makes clear, the forms of production taking place through new and social media are – by virtue of the resources created being open, free, or common and therefore exchangeable outside the market – 'beyond value' (2009: 15). This paper will take up this issue through an examination of two cases – Massively Multiplayer Online Games (MMOGs) and Facebook – in order to provide a starting point for thinking through how value is both created and capitalised upon in social media formats.

*A Biography of Software Development: OSS for Microfinance*

**Wifak Gueddana**

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For many, microfinance is about building inclusive financial systems to help the poor gain direct access to financial services. However, studies of microfinance suggest that for a majority of microfinance providers their outreach is uneven and of poor quality for local low-income communities. Policy makers and consortia of microfinance experts have attempted to help build inclusive financial systems and improve capacity building through ICTs. They have fuelled a surge of ICT experimentations in microfinance institutions (MFIs) through an influx in investment capital, including software development, mobile money and peer-to-peer microcredit servicing. In particular, there is strong emphasis on open source software (OSS) initiatives, as it is commonly believed that MFIs are uniquely positioned to benefit from the advantages of openness and free access.

Whether in business markets or across international development spheres, OSS approaches have become extremely popular over the past two decades. This paper critically explores the distinctiveness of the open source approach in the context of the microfinance industry, to understand the implications that such software development initiatives have for MFIs and building their organisational capacity.

Going beyond the temporality and instrumentality of design, this study challenges our understanding of software production and the role of software-based information systems for microfinance. It also shows that the distinction between open source and other types of software solutions in the context of microfinance NGOs is irrelevant, inasmuch as it is a difference in construction rather than in ontology and so it can only be established retrospectively.

**Thursday 19th June**

**15:30-17:00**

**Track 1:**

**Novel forms of knowledge creation  
through group processes, archiving,  
digitization, etc**

**Room: Lakehouse A**

*Capturing Social Media: Sentiment Analysis and the Making-Meaningful of Social Media Content*

**Helen Kennedy**

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One of the consequences of the widespread use of social media is the availability of all sorts of once intimate and private stuff, textual, visual and affective. From this, the mining of social media data arises as a new form of digital work. Sentiment analysis, the application of a range of technologies to determine sentiments expressed within social media platforms about particular topics, is one form of social media data mining. Concerns expressed about sentiment analysis include that it constitutes the monetization of feeling and friendship (Hearn, 2010), or the control of affect (Andrejevic, 2011). In this paper, I propose that such macro-level theorizations of sentiment analysis need to be supplemented by attention to some simple empirical questions, such as: what is a sentiment? Can it be analysed? In social media, how widespread, available and reliable are those things that are understood to be sentiments? What are the differences in the ways in which sentiment analysis gets done? What do social media users think about the mining and analyzing of their social media activity in order to produce knowledge? I argue that like sentiment analysis itself, critical theorizations of it give particular meanings to social media content, and contribute to the political, social and cultural claims that are currently being made about digital content, claims that may surprise its producers. This discussion of sentiment analysis points, therefore, to a much bigger socio-technological question: what is digital/social media content, and what meanings *should* be attached to it?

*Online Advocacy Networks, Issue Mobilisations and the Coal Seam Gas Controversy*

**Asha Titus**

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The paper charts the dynamics and composition of online advocacy networks and the 'ad hoc' online publics that coordinate around the issue of Coal Seam Gas (CSG) by analyzing Australian social content on the popular micro-blogging platform, Twitter. Parsing Twitter streams for the hashtags #fracking #CSG #lockthegate #gasland, #wewantCSG and other emerging trending topics we trace this issue over a period of 6 months.

Beginning with land use concerns raised by affected farmers, to contestations of industry expertise and technologies such as hydraulic fracturing or fracking, this issue has grown into a full blown public controversy with aggressive refutations and media campaigns by the petroleum and gas industry association. What is interesting to note is the level of civic activism that propelled the momentum with online signature campaigns, calls to direct action, extensive online discussion and mobilization of the participative dynamics of Web 2.0 for diffusing links to counter expertise and 'citizen science'.

The aims of this paper are two-fold: given the complex, diverse networks and unusual emerging coalitions around this issue, we will use network metrics to analyse relative influence of dominant clusters of actors. Secondly, by analysing hashtags and retweeting against key critical events we will examine if the issue publics formed around CSG news discussion topics crystallise into more persistent direct action and 'communicative communities'; thereby addressing the question of how the structure of twitter functions (such as @replies and #trends) facilitates communicative practices, issue based temporal frame creation and content production to its multiple imagined audiences.

*Unary and Binary Trafficking via Closeting Interfaces*

**Zselyi Ferenc**

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The advent of STS has brought about a regress to mediaeval paradigms of the acquisition of knowledge: compilation, encyclopedia and "anatomy". This aged-yet-novel epistemology, however, resembles something that is more of an epistemic *logistics* with supply chains for trafficking ready panels of data and platforms for the exchange of formats, brands and designs. Ownership is disseminating/ed into owner-shiping and the auto-producing consumer (alone by himself) disseminates profiles, tableaux of identity-inducing emblemata that every other "autoprosumer" may share, survey, ignore, forward, reshape, overwrite, misunderstand, mime, copy, list, merge, displace, replace, symbolize, diabolize. Whatever s/he does, an interactive 2.0 "other" has been given birth to online whose virtual existence veils and surveils – closets – the profile owned/issued by the "original" ego-autos (self-in-itself) who could easily have been himself a >2.0 other< displacing another auctor. Every 2.0 platform is like a medieval codex compiled (and copied) by many "auctors" (scribes) merging, co-producing and pro(to)-consuming whatever is coming through via the logistics of episteme. This is an operation via random algorithms that bypass any datum, paradigm, identity-blazon, image with some/ any other ones. Every moment of/in use generates a random interface that closets prior participation by the one operating/ed "here" and now. Everyone and every image is a signifier that poses as a hyper-signified driven by a scopophilic drive to see and to oversee, to have and to hold. To be 2.0 online is to participate in a global mirror phase and to be entering the Symbolic Order that renews itself at random.



**Thursday 19th June**

**15:30-17:00**

**Track 2:**

**The co-production of knowledge via  
Web 2.0 platforms**

**Room: Lakehouse B**

*The Frameworks of New Media*

**Katalin Feher**

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New media consists of mergers, networking where content, platform and identity meet. It constitutes a metanetwork over society, culture and business with links. The three-dimension model gives us a chance to study meta/patterns of digital mediatisation and provides interpretative categories for the types of media, intermedia, crossmedia and transmedia – above conservative media.

*Selective Distribution in Twitter: How Algorithms Shape our Digital Reality*

**Mark Dang-Anh**

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Algorithms play a significant role in the evaluation of STS-platforms like Facebook and Google. However, less attention has been given to algorithmic filtering in Twitter so far. Algorithms are precise instructions (to machines): they transform input values into output values grounded on specific transformation rules. In Twitter, both the input values and the transformation rules remain unknown. Only the output values become apparent. Three categories that are based on algorithmic processes can be identified as such: Trending topics: subjects/key phrases that are immediately popular, recommendation for followers: automated suggestions for who to follow in Twitter, filtered search results: personalized search results.

Content, access to knowledge and attention to specific topics is spread disparately in Twitter, based on the principle of *selective distribution*. While timeline content is selected *personally* by the users, content of the above-mentioned categories is being generated by an algorithmic selection. The latter is being distributed either *personalized* (recommendation for followers, search results) or *uniformly* (trending topics).

The paper aims at pointing out algorithmic categories in Twitter on the basis of the model of *selective distribution*. It also gives an understanding of the meaning of algorithms for constituting digital realities based on the quantification of user behavior. Contrary to the notion of Twitter as a democratic, transparent, and deliberative tool, the microblogging system appears to be a black box regarding its underlying rules of algorithm-based content distribution.

*Co-Creating Book Recommendation Networks: An Amazon-Google Algorithm Story*

**Farida Vis ( & Elizabeth van Couvering)**

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In this paper we explore less obvious and well understood, yet powerful, knowledge practices of co-production engaged in online that form part of our everyday experiences. Specifically, we focus on contributions to such knowledge practices by considering purchasing behaviour and transactional data on Amazon, the online bookstore.

Any Amazon title includes information about books frequently bought together, what else customers bought, reviews, books related to the topic, what customers ultimately bought after viewing this item. There is the possibility to tag the book, which could lead to lively discussion forums, collectively constructed lists, details of contributors and their profiles.

Using software recently developed by Christopher Warnow, to visualise Amazon recommendation networks, we explore what can be gleaned from such visualisations in terms of how the Amazon algorithm can be better understood and, moreover, what such network clusters about a certain topic can tell us about algorithms possibly making purchasing decisions for us. Our case study is books on 'bird flu'.

Added to such visualisations and algorithmic clustering is the search that often precedes the Amazon website itself and that is the funnelling of online users through Google. *Alexa*, the Web Information Company, places Google and Amazon as 1<sup>st</sup> and 11<sup>th</sup> respectively in its listing of top 500 sites on the web in February 2012. It is this co-creation of knowledge between these two sites and their algorithms, as well as what happens on Amazon in terms of book recommendations that forms the core theoretical and empirical grounding for this paper.

**Thursday 19th June**

**15:30-17:00**

**Track 3:**

**Scientific Controversies Online**

**Room: Theatre**

*Anecdote and Evidence: Social Media and the Enactment of 'Proof' in a Controversial Theory about Multiple Sclerosis*

**Fadhila Mazanderani**

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It is widely believed that multiple sclerosis (MS) – an incurable neurological condition – is an autoimmune disease. In 2006 Italian vascular surgeon Paulo Zamboni suggested that MS might be (primarily) a venous one linked to abnormal blood drainage from the brain – what he termed chronic cerebrospinal venous insufficiency (CCSVI). While vascular theories of MS causation are not new, this one has generated considerable excitement amongst patients, especially since Zamboni has proposed that an endovascular intervention dubbed 'the liberation procedure' can improve symptoms and slow disease progression. Lack of support for CCSVI from Multiple Sclerosis Societies and the majority of neurologists, has sparked a wave of patient activism and medical tourism. A prominent feature of this activism is its strong internet presence, with prolific online information sharing and patient advocacy frequently framed as problematic and dangerous. In this paper we present our on-going research on internet use in the context of CCSVI. We focus on how people with MS use the internet to share their symptoms pre and post the 'liberation procedure' – in some cases reporting dramatically positive results. While these experiences are regarded by much of the medical profession as anecdotal or, in some cases, as fraudulent, patients continue to use social media to document, aggregate and share their experiences. Focusing on three different social media – YouTube, a patient forum and an online tracking website – we analyze the different practices and technologies being used to construct a CCSVI evidence base, and the different forms of 'proof' enacted through them in support this controversial theory and associated treatment.

*Climategate and the Creation of Hypes: How to Newspaper and Blogs influence each other?*

**Iina Hellsten ( & Eleftheria Vasileiadou)**

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In November 2009, emails by climate scientists were published online without their authors' consent, and a public debate began around "Climategate". Our paper analyses the coverage of climategate in newspapers and blogs in the first three months of the topic, and assesses the role of the two media in the hype creation and maintenance, drawing from three sets of theories: media hypes, intermedia agenda setting and sociology of technology.

We analyse newspaper and blog data, with the use of 1) ARIMA modeling which can capture lead-lag relationship between time series variables, and 2) co-word semantic networks which explore the word context of the metaphor. Our results indicate, among other things that: 1) the hype follows the same dynamic of other hypes around new technologies; 2) during the hype period itself, the attention in the blogs affected the newspaper attention, and not the other way around: in a way, the blogs were responsible not only for the event, but also, mainly, the hype around it; 3) at the level of discourse, newspapers again seem to be reacting to the discourse in the blog discussions and not the other way around. Anticipating the UNFCC Copenhagen meeting, the blogs and newspapers approach climategate from opposite positions at the level of the discourse: for the blogs the issue is about climate sciences withholding temperature data, and for the newspapers it is about a smear campaign of climate scientists and inquisition.

We discuss how these findings inform our understanding of scientific controversies online.

*Social Media and a World Risk Society: Contested Scientific Knowledge after the Tohoku Earthquake Disaster in Japan*

**Akiko Hemmi**

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Nuclear power has been promoted as an environmentally friendly energy source, but public acceptance has been reduced by the risk of major accidents. This exploratory paper looks at the recent nuclear power crisis in Japan following the Tohoku Earthquake and Tsunami. In the aftermath the knowledge of "safety" in relation to radiation has become a contested knowledge. Government announcements encountered public scepticism and citizens have been using social media to collect information, mobilise expert knowledge, educate the public and facilitate the formation of social movements to set new standards for "safety" on radiation intake from food and exposure to the contaminated air. The data was collected through in-depth interviews with key people from relevant organisations, supported by analysis of campaigners' blog sites. The paper examines how social media are used as empowering media as well as disruptive technologies to create an online public sphere by integrating lay/amateur knowledge with expert knowledge, challenge "authority knowledge" and/or facilitate confusion. It also addresses how local events can impact on international communities and vice versa: 1) local events influencing other countries' relevant policy direction as an example of "world risk society" and 2) international environmental NGOs playing an important role to provide scientific evidence as a neutral agency by conducting research to question the nationally provided official evidence and challenge existing institutionalised politics.

**Friday 20th June**

**11:15-12:45**

**Track 1:**

**The boundaries and future of social media as a medium of knowledge creation, dissemination, and regulation**

**Room: Theatre**

*Crowdsourced Maths*

**Ursula Martn (& Alison Pease)**

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Blogs, question answering systems and “crowdsourced” proofs provide effective new ways for groups of people, who may be unknown to each other, to use the internet to conduct mathematical research. They also provide a rich resource to shed light on mathematical practice and how mathematics advances, with the internet making visible and codified matters which have heretofore been ephemeral to study.

We discuss the first steps in such a research programme, looking at two examples to see what we can learn about mathematics as practiced on the internet. Does it differ from non-internet practice, and does it support or refute traditional theories of how mathematics is made, and who makes it, in particular those of Lakatos, or does it suggest new ones.

Polymath supports “crowdsourced proofs” and provides a structured way for a number of people to work on a proof simultaneously, capturing not only the final result, but also the discussion, missteps, informal arguments and social mechanisms in use along the way. Mathoverflow supports asking and answering research level mathematical questions and provides 25 thousand mathematical conversations for analysis, again providing a record of the informal mathematical activity that goes into answering them, and the social processes underlying production, acceptance or rejection of “answers”. We look at a sample of questions about algebra, and provide a typology of the kinds of questions asked, and consider the features of the discussions and answers they generate.

*Non-Adoption 2.0: Understanding Non-use of Social Technologies*

**Ali Eshraghi**

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The concept of Web 2.0 and the associated “social technologies” promise to provide more dynamic, use-centred, and interactive spaces for work organisations. However, the issues surrounding the adoption and use of such technologies are less well-understood and conceptualised in comparison to the first generation of the World Wide Web. Sally Wyatt (2003) and other scholars with backgrounds in Sociology of Technology (e.g. Selwyn 2003) and Human-Computer Interaction (e.g. Dourish 2009) have drawn our attention to the importance of conceptualising usage in terms of level and manner including non-use. This emphasis comes from the rationale that limited usage and non-use also matter in the processes of co-construction and development of technological innovation lifecycles. Drawing upon an empirical study in a successful sports club, this paper argues that the Wyatt’s categorisation of various types of technology non-users, which was generated for the first generation of the Web technologies, needs to be re-examined by considering the specific characteristics of the Web 2.0 as well as the legacy issues of migrating from first wave of the Web to Web 2.0. This paper reveals that the entangled work practices around existing IT infrastructure, particularly the dominating role of email, prevent the club from thinking about the take-up of some forms of Web 2.0 applications. In particular, as the collaborative nature of social technologies requires the involvement of all organisational members, the club has experienced a failure in adopting Google Docs as a platform for the purpose of document management.

*Using ANT and Practice Theory to Explore the Shaping of Participation and Non-Use of Social Media*

**Gibran Rivera Gonzalez**

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This paper explores the insights ANT provide to explain participation/non-use of social media. Participation in social media needs to be understood as problematic. Take up is patchy and subject to resistance, particularly in organisational settings. Previous work tends to focus on features of the media such as interface design or on individual motivational structures as explaining participation. The argument of the paper is that it should be seen as being shaped by historical, social and structural features characterizing the context in which it is introduced.

This study focuses on the problematic adoption of social media as part of a Human Resources project within a Multi-campus University in Mexico. ANT was used to explore the emergence and maintenance of an actor-network in which at attempt was made to enrol the social media. Late identification of the social media as a relevant actor, lack of strategies to strengthen relationships among the social media and other relevant actors, betrayal of actors initially supporting the social media, and incomplete transition of other actors ended in the non adoption of the social media. Practice theory was used to further explore how pre-existing practices shape the use of project related media and suggest the existence of habits of use of other social media, the power of routinization and inertia of practitioners’ communication patterns, the shared perception of practitioners of the social media lacking to support the ‘social side’ of their Human Resource management practice lead to the non adoption of the social media. The findings of ANT and practice theory, although offering distinct accounts, seem to be complementary in understanding participation in social media. Both theories highlight the relevance of the context surrounding social media to understand participation.

**Friday 20th June**

**11:15-12:45**

**Track 2:**

**Public and Visible Science**

**Room: Lakehouse**

*Information, Scientific Citizenship and Produasge: The Social Effects of the Collaboration and Horizontal Medias to Construction of Scientific Consensus in Digital Environments*

**Maria Moura**

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The electronic instruments to the social aggregation are tools of contemporary social mediation developed or improved as a result of the popularization of the Internet over the past two decades. Historically developed with different purposes, the instruments currently considered aggregators seek to expand and facilitate horizontal relationships enhanced by the internet in order to expand dialogic engagement based on the technologies of presence-absence. In this context, the concept of scientific citizenship refers to the possibility that, under the rights addressed in the development of citizenship and the right diffuse, the universal right to access the science education, the information and the controversies produced by the social actors in the creative processes of scientific development. In this study the collaboration was considered the intellectual and creative activity developed by partners who identify themselves through the sharing of cultural principles, ethical, political and institutional common. The purpose this paper is to explore the potential of the emergence methodologies to explain, deduce and interpret the collaborative construction of consensus in the digital environments about the new scientific concepts. At the same time, it's important to know the phenomenon and adopt its own potentialities as methodological approach. The period of the time, covered by the research, was 2009- 2011 on different fields of knowledge. The mediations of research were the abstracts and call papers to the scientific meetings and the social semantic spaces adopted to share information and novelties in the scholarly context.

*Sourcing the Crowd in Healthcare and the Hierarchy of Pharmaceutical Knowledge*

**Samantha Adams**

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Crowdsourcing, a practice whereby tasks such as problem-solving and quality control are "outsourced" to specific target groups ("the crowd") via the web is becoming more prominent in healthcare. Increasingly, patients are encouraged to reproduce their experiences with healthcare institutions, medical professionals and pharmaceutical products. Elsewhere, I examined how such websites forward certain political goals (e.g.: stimulating choice in public services) and become instruments for monitoring professional performance within existing surveillance structures.

In this paper, I focus on those websites gathering patient experiences with pharmaceutical products, notably *medications*. I examine how the *knowledge(s)* such sites produce are received by other actors in this high-risk, but highly regulated, field that has a clear knowledge hierarchy, wherein randomized controlled trials are considered the only "valid" form of knowledge production. I draw on a recent study of the Dutch crowdsourcing site, [www.mijnmedicijn.nl](http://www.mijnmedicijn.nl) ("my medicine"), developed in 2008 by a company that sees patient experiences as a different, but *complementary*, form of knowledge to that gained through other processes (i.e.: clinical trials, post-marketing surveillance) and therefore essential to effecting "patient-centered quality improvement" in the pharmaceutical sector. I address: a) What is the position of such sites and the knowledge(s) they produce within the current pharmaceutical information landscape/hierarchy? b) How do they simultaneously complement or challenge traditional forms of knowledge production? c) How do the website's secondary goals reinforce medical dominance under the guise of patient-centeredness?

*How New Developments in Communication Technologies are Influencing Public Engagement Activities in Science: Citizen Cyberspace Initiatives*

**Vickie Curtis**

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Web 2.0 technologies are playing an increasingly important role in public engagement activities in the sciences, and are enabling non-specialist members of the public to become directly involved in large-scale scientific projects. Through 'Citizen Cyberscience' initiatives, citizens can engage directly with scientists online and contribute directly to scientific research. There are several types of citizen cyberscience project: shared computing initiatives where citizens can process small packages of scientific data with their own computers (for example SETI@home and folding@home); shared thinking projects where citizens use their observational skills to analyse data (for example Galaxy Zoo and Stardust@home); and games with a purpose, where scientific tasks are re-packaged as an entertaining online game with participants contributing through their innovative puzzle-solving abilities (for example, 'Foldit').

I am interested in a number of aspects of citizen cyberscience: what motivates citizens to take part in these projects, and what motivates scientists to set them up? How do participants assemble into online communities of citizen scientists and how they are 'managed' by project organisers? I am also interested if these aspects of citizen cyberscience vary between each 'type' of project.

Very little research has been carried out in this area, and I will outline my own research plans as well give an overview to this exciting topic.



**Friday 20th June**

**13:45-15:15**

**Track 1:**

**The boundaries and future of social media as a medium of knowledge creation, dissemination, and regulation**

**Room: Theatre**

*Should we use Social Media for our Research?*

**Yimei Zhu**

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The globalising internet development has eliminated the constraints of time and space and this breakthrough have led to many changes in the way people communicate with each other (Hewitt, 1998). These changes have also made their way into science and scholarly communication. While scholars used to depend on browsing the most relevant published papers to stay current with research in their field, or meeting face-to-face in meetings and conferences to exchange newest information and latest research findings, the adoption of online social media, such as academic blogs, Twitter, wikis and discussion forums has enabled a real-time communication and dissemination of scientific content. However, the traditional practice of science is based on academic reward system that emphasis the priority of discovery (Merton, 1957). Would the use of blogs and micro-blogs compromise or even sabotage the academic reward system? Some scholars have criticized scientist bloggers who blog their research rather than waiting to publish their final result, as not fair on collaborators by leaking results and so circumventing the peer review process. Others praised web blog and social media to have provided great opportunities for a lively and stimulating scientific debate reaching beyond the research community which are valuable to the general public (Kendrew, 2011). This raises the question of how to discuss new scientific findings which have not yet been peer-reviewed in an online public place. Should academic researchers use social media for research? If yes, how to adopt it properly?

*Spectacular Secrets: Algorithms, Analytics, and 'The Need to Know' in Search Engine Optimization (SEO)*

**Malte Ziewitz**

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Algorithms have become somewhat of a modern myth. The subject of media reports, research projects and congressional hearings, they are increasingly portrayed as influential entities and conduits of control that 'govern', 'shape' or 'sort' our everyday lives (Slavin 2011). At the same time, they are usually treated as closely guarded trade secrets and are thus difficult to get at – conceptually, empirically and politically. While some have started to theorize the phenomenon through grand concepts like 'post-hegemonic power' (Lash 2007) or called for transparency and disclosure (Introna & Nissenbaum 1999), this paper takes a different approach. Turning the intractable prominence of algorithms into a topic, it will explore the material-discursive practices of those who deal with them on a day-to-day basis: Search Engine Optimization (SEO) experts in the UK. Drawing on ethnographic materials from an internship with an SEO agency, industry conferences and websites, the paper explores the mundane work of analyzing, influencing and resisting search engine results. Attending to the heterogeneous practices of secrecy, publicity and gossip that stand in sharp contrast to what prides itself on being a largely analytic culture, the paper proposes a way of looking at algorithms that does not take their status for granted. What is often portrayed as a straightforward tool for ordering information turns out to drive a mode of governance based on ambiguous analytics and a self-perpetuating 'need to know'.

*Beyond the 'Feminist Blog': Navigating Web 2.0 Spaces within the Contexts of Global Feminisms*

**Janan Dean**

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There is little doubt that Web 2.0 has contributed to the (co-) production and dissemination of alternative knowledge and forms of resistance within feminism. Yet, the development of the materials which allow Web 2.0 itself to exist result from the highly understudied, and disproportionate labour of women in the manufacture, rather than the design and implementation, of technological development. This paper examines several ways that contemporary feminism attempts to address, often discordantly within itself, the complexity of using Web 2.0 within it's own social justice work, and how the movement's own story intersects with that of other marginalized groups embedded in similar processes of co-production of knowledge and resistance centred around solidarity. Several Web 2.0 platforms are discussed and explored, including tumblr, delicious, and pinterest. It is argued that despite the oft-cited benefits of global and local collaboration, and community building Web 2.0 offers, it represents a new social space where individuals engaged in feminism-oriented use of Web 2.0 constantly re-navigate and re-negotiate intra-personal, inter-personal, and spatial relations in the context of ongoing global development issues.

**Friday 20th June**

**13:45-15:15**

**Track 2:**

**Public and Visible Science**

**Room: Lakehouse**

*ON the path to Cyberscience 2.0 — Will the Web Democratise science?*

**René König**

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The emergence of the more participatory Web 2.0 has also fuelled the idea of opening up academia to the public. Various online platforms potentially create “windows” in the “ivory tower” of academia, opening it in both directions: On the one hand, the public can access scientific knowledge and staff easier, on the other hand academia itself can reach out directly to the public (without depending on traditional mass media organizations).

A number of hopes and fears were triggered by this development: For example, optimists believe this could help to “democratise” science (e.g. by opening peer review processes), whereas critical observers expressed concerns about a possible popularisation of science. Evidently, the path towards “Cyberscience 2.0”, in which academia is increasingly entangled with Web 2.0 platforms, cannot be evaluated in such one-sided ways. To draw a more realistic picture, we conducted five case studies on social network sites, microblogging, Wikipedia (additionally Wikibooks and Wikiversity), Second Life and Google (including Web Search, Google Scholar and Google Books). Studying not only the functional logics of these platforms but also compiling available user studies together with our own observations and additional interviews, we identified various key issues. The impact is complex: we observed indeed a number of “democratising” effects, but at the same time, new hierarchies are evolving, which partly reproduce offline hierarchies. It seems likely that a professionalisation of scholarly Web 2.0 usage will take place, indicating an approximation of online and offline structures.

*Active Genomes: Examining a Participatory Turn in Genetic Research*

**Anna Harris (& Sally Wyatt, Susan Kelly)**

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Genetic testing for disease is no longer confined to hospital clinics, being now available for purchase on the internet. This online market, known as ‘direct-to-consumer genetic testing’, is diverse, ranging from companies selling tests for rare inherited diseases, to newer companies wanting to enrol a broader public, with testing for common health conditions. Many of these newer companies utilise a range of web 2.0 platforms in order to market their product. More recently, one genetic testing company has utilised web 2.0 tools in order to conduct genetic research. Their web-based methodology is advertised as enabling consumers to take an active part in genetic research. Consumer-participants supply information about their health conditions through simple online questionnaires. Self-reported data becomes linked to the individual’s genetic information, providing a valuable resource for genetic association research. This form of genetic knowledge production is different from ‘traditional’ forms of medical research which rely upon researchers collecting biological samples and data from medical records. Reliance upon self-reported data thus disrupts existing boundaries of expertise. Can we, however, describe consumers as engaging in participatory, collaborative research? What does it mean to use self-reported data in genetic research and are all health conditions equally self-reportable? What kinds of researcher and participant identities are being co-produced in this kind of research? How do these identities compare to those co-produced when patient advocacy organisations take part in research? This paper will explore such questions, based on in-depth analysis of genetic testing companies’ research activities online.

*Peer to Patent Community Patent Review: History, Future and Suitability for Extension to Patents on Stem Cell Science*

**Anna Hescott**

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The full potential of stem cell technology can only be realised if all supporting structures (e.g. the patent system) are working optimally. With the number of stem cell patent applications on early stage research ever increasing it is important that they are scrutinized and granted correctly. The quality of patent stock is dependent on pre-grant examination and post-grant litigation. The sole opportunity for an outsider to question a patent application pre-grant is provided by section 21 of the UK Patents Act: ‘Observations by third party on patentability’. However, this opportunity is rarely taken up. In fast-moving fields of science and technology, the scrutiny of the patent granting process is called into question by the fact that patent examiners have limited scientific education and awareness of the state of the field, particularly in emerging fields (e.g. stem cell science). Peer to Patent is a project which attempts to improve the quality of patent stock by harnessing public participation at the pre-grant stage by using social networking for collaborative democracy. The project recruits citizen experts (e.g. peer scientists) and encourages the uptake of third party observation. The project has been piloted in several jurisdictions including the US, the UK, Australia and Japan but has only considered patents on limited technologies, such as software. This paper provides an overview of the project’s history, success to date and its future and considers the potential for the application of Peer to Patent to fast-moving fields of science, such as stem cell science.

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# Science and Technology Studies Unit (SATSU)

Established in 1988, SATSU is an internationally recognised STS research centre within the Department of Sociology at the University of York exploring the dynamics, practices, and possibilities of contemporary science and technology. Its principal focus is on the biosciences, health, digital media and social networking including new forms of democratic governance, and the broader regulatory universe within which these are found. The primary areas of research between 2012-14 relate to members' interests in the sociology of the biosciences, biomedicine and health, and the methodological and substantive interface of STS and social media.

## ***The Biosciences, Biomedicine and Health***

The overarching question that we explore here is how do biomedical technologies and the play of expert/lay boundaries shape the meaning of health, 'life' itself and healthcare practices, within a wider context shaped by the growing regulation, marketisation and informaticisation of health. Informing these analyses will be an understanding of the socio-technical assemblage that characterises our substantive areas of inquiry, the meaning of evidence, and the implications developments have for citizens, social groups and policy.

We will be building on recent work to explore the rapid growth of cord blood banking, and other work examines the co-construction of expert knowledge and gender in the context of reproductive and other new life science technologies. A second strand explores one of the core areas of inquiry for SATSU since its foundation, that is, the socio-technical factors associated with the uptake and use of innovative health technologies. Substantively, this is focused on pharmacogenetics (PGx), and on stem cells and regenerative medicine, building on the results of the REMEDiE project. The priority for the next two years are threefold: to maintain and refresh the REMEDiE global database and make this available via a series of reports as an online public resource (in collaboration with EurostemCell network); to understand in more detail how conventional clinical trials processes are likely to be reconfigured as the field moves towards the development of cell therapies; and more generally, in what way health economics and health technology assessment methods will need to be changed to evaluate the utility and cost-effectiveness of advanced therapies in very different social and clinical settings. Some of this work ties in with the FP7 COST Action '*Bio-objects: Governing Matters at the Intersection of Society, Politics and Science*'.

## ***Social media and STS***

The Unit's work on social media cuts across members' work on culture, Web 2.0 and STS. We are especially interested in the methodological challenges and opportunities posed by a closer relation between STS and social media approaches to knowledge production and its mediation via a range of digital technologies and systems, not least user-generated framings of the world. Methodologically, this work involves working with real-time, by-product data, mapping the use and meaning of such data, and developing insight into socio-technical cultures that are emerging today. In addition, we are interested in the performativity of knowledge and knowledge claims via social media, research focused on the interactional practices of technology mediated cultural production.

Director: Professor Andrew Webster

**For further information see:**

**[www.york.ac.uk/satsu](http://www.york.ac.uk/satsu)**



# Institute for the Study of Science, Technology and Innovation (ISSTI)

The Institute for the Study of Science, Technology and Innovation (ISSTI) was established to bring together specialist centres and scholars across the University of Edinburgh that conduct research, teaching and knowledge transfer on social and policy aspects of science, technology and innovation. ISSTI is coordinated by the Science, Technology and Innovation Studies subject group in the School of Social and Political Science, which was formed by the merger of the Research Centre for Social Sciences and the Science Studies Unit with their linked intellectual roots in the 'social shaping of technology' and the 'strong programme' in the Sociology of Scientific Knowledge. ISSTI also involves colleagues from other specialist centres including the Entrepreneurship and Innovation group in the Business School, the Japanese European Technology Studies Institute in Economics, the Centre for Intellectual Property and Technology Law in Law, Edinburgh College of Art, the Social Informatics Cluster in the School of Informatics, various groups in the Schools of Engineering and Geosciences, and the Centre for Population Health Sciences. We have strong linkages with the College of Science and Engineering and the College of Medicine and Veterinary Medicine with their international research strengths.

## ***Priority areas***

Much of ISSTI's work focuses on four areas: Life Science Innovation (drawing on the strengths of the ESRC Centre for Social and Economic Research on Innovation in Genomic: Innogen and the ESRC Genomics Forum); Information and Communication Technologies (where we hosted nodes of the ESRC Programme on Information and Communication Technologies and the EPSRC Dependability Interdisciplinary Research Centre); Energy Technologies & Environmental Innovation; and, the Historical Sociology of Science, Technology and Medicine. Our work is united by cross-cutting interests on the role and character of technical expertise; on the promotion and governance of innovation; on risk and regulation; and public engagement.

## ***Engagement with policy and practice***

ISSTI's approach is characterised by interdisciplinarity within the social sciences and multidisciplinary cooperation with scientists, engineers, medical specialists and managers. ISSTI is committed to bringing its expertise and research findings to a wide range of audiences. Much of its work is explicitly geared to policy and practice and involves close cooperation with innovators, decision-makers and other stakeholders.

**For further information contact Professor Robin Williams Director, Institute for the Study of Science, Technology and Innovation**

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# The e-Humanities Group

## (Royal Netherlands Academy for Arts and Sciences)

Developments in digital infrastructures, tools and methods provide scholars in the humanities and the social sciences (HSS) with many opportunities to collect, store, analyse and enrich their data and to represent their research results in exciting new ways. Such developments may also lead to new research questions, not only in the humanities and social sciences but also in the computational disciplines. Furthermore, interdisciplinary dialogue and cooperation has the potential to enrich the research programmes of all involved.

The eHg was established by the Royal Netherlands Academy for Arts & Sciences (KNAW) at the beginning of 2011 in order to enable HSS scholars to both contribute to and take advantage of these developments, not only to address questions and challenges in their substantive research fields and disciplines but also to pioneer new forms of scholarship bringing together HSS and computational ways of thinking. The eHg recognizes that new tools and methods are not self-evidently valuable to all in HSS and that there are different research traditions within HSS which require different sorts of approaches. Thus, there are two strands to the work of the eHg – ‘computational humanities’ and ‘cultures of e-humanities’. The first focuses on the development of new tools, methods and approaches, with particular emphasis on those that can be used across a range of research questions and disciplines. The second addresses the contexts of use in which researchers may or may not exploit such innovations as well as what they mean for HSS more broadly, especially in terms of the development of new research questions. These two strands of work are brought together in a mutually productive way so that insights into how researchers actually use digital technologies inform the development of new tools and methods and so that new tools and methods reach more researchers.

The eHg is a KNAW-wide initiative that brings together researchers from across its institutes. It builds on previous work supported by the KNAW, such as Alfalab and the Virtual Knowledge Studio (VKS), and on its own in-house expertise provided by the *Informatisering en Automatisering* department. The eHg works together with Dutch universities and international research groups in order to advance both the development of computational approaches and the scholarly study of the implications of their use within HSS for research agendas and scholarly work practices. The eHg works with other research agencies (including NWO, NLeSC, COMMIT) to minimize duplication of effort and to maximize the benefits of synergy and cooperation and with DANS, CLARIN and others in order to provide a sustainable infrastructure for both data and tools. Professor Sally Wyatt is the group leader for the programme. For more information, see: <http://ehumanities.nl>



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