Fifth International Workshop on Studies of Expertise and Experience – SEESHOP5
Cardiff University, UK. 10-12th June 2011

Programme

Friday 10th Room -1.31, Glamorgan Building, King Edward VII Avenue (No 2 on Map)			
12.00-13.00			**Lunch, welcome, introductions**
13.00-14.00	**Harry Collins,** Cardiff University	The Map of the Third Wave and IMGAME research	I introduce the map of the 3rd Wave showing how the programme has grown intellectually (with apologies to those who have already seen it). I then describe what we have been doing so far in our IMGAME project.
14.00-15.00	**William Thomas,** Imperial College London	Trust, Dialogue, and Organization in the History of Expertise	SEE fashions itself as the "third wave" of science studies, but it is left unclear to what extent SEE simply constitutes a novel way for sociologists to think about expertise, and to what extent SEE is a new way of thinking about expertise in general. A key theme of "second wave" science studies is that queries into the foundations were necessary because, historically, expert conclusions were thought to be based on clear reason, when, in fact, much was left to trust and cultural consensus, and in particular a potentially fragile consensual trust in the power of science. Historians made use of second wave science studies in order to illuminate aspects of the historical record—particularly controversy, negotiation, and conventions of cultural trust—that were concealed as post-hoc narratives were established. Similarly, SEE may also offer a means of expressing how expertise has historically worked. This paper argues that a means historically used by policymakers and experts alike is to enter into dialogue with each other, in order to determine how their thought integrates into a wider body of policy-relevant knowledge. Once the nature of various individuals' expertise had been ascertained, experts could be organized into effective policymaking and administrative mechanisms.
15.00-15.15			**Coffee**
15.15-16.15	**Theresa Schilhab,** Aarhus University		Drawing upon studies in contemporary neuroscience and cognitive psychology, I propose that 'derived' embodiment is deeply involved in competent language use and, therefore, in interactional expertise. First, I argue for a strong relationship among language acquisition, language use and the real world (i.e. the world accessible to the senses). Biological constraints in very early childhood anchor language to the body because of our physical and psychological immaturity at birth. Thus, infancy is predominantly concerned with the bodily needs and experiences of the concrete while language acquisition takes place. Particular interest in the concrete furnishes our linguistic world and installs 'concrete' language as the principal constituent of competent language use. Second, I argue that well established concrete language implicitly and explicitly elicits mental representations – partial reactivations of sensory-motor states that occur during experience. These are stepping stones for making sense of expressions in new linguistic areas. Like any competent language user, the interactional expert prompts multimodal imagination and re-enacts concrete experiences when acquiring linguistic knowledge pertaining to a specialist field. Finally, I outline the characteristics of those imaginative powers to identify mechanisms that improve interactional expertise.
16. 15-17. 15	**Robert Crease,** Stony Brook University	Debating Doomsday Scenarios in	I'm going to talk about a specific kind of technological doomsday scenario – in which heavy ion accelerators are thought able to destroy the world -- and use it as a way of raising issues about how to think about expertise. This issue poses the question of expertise sharply -- and the role of interactional expertise -- by showing that a group of

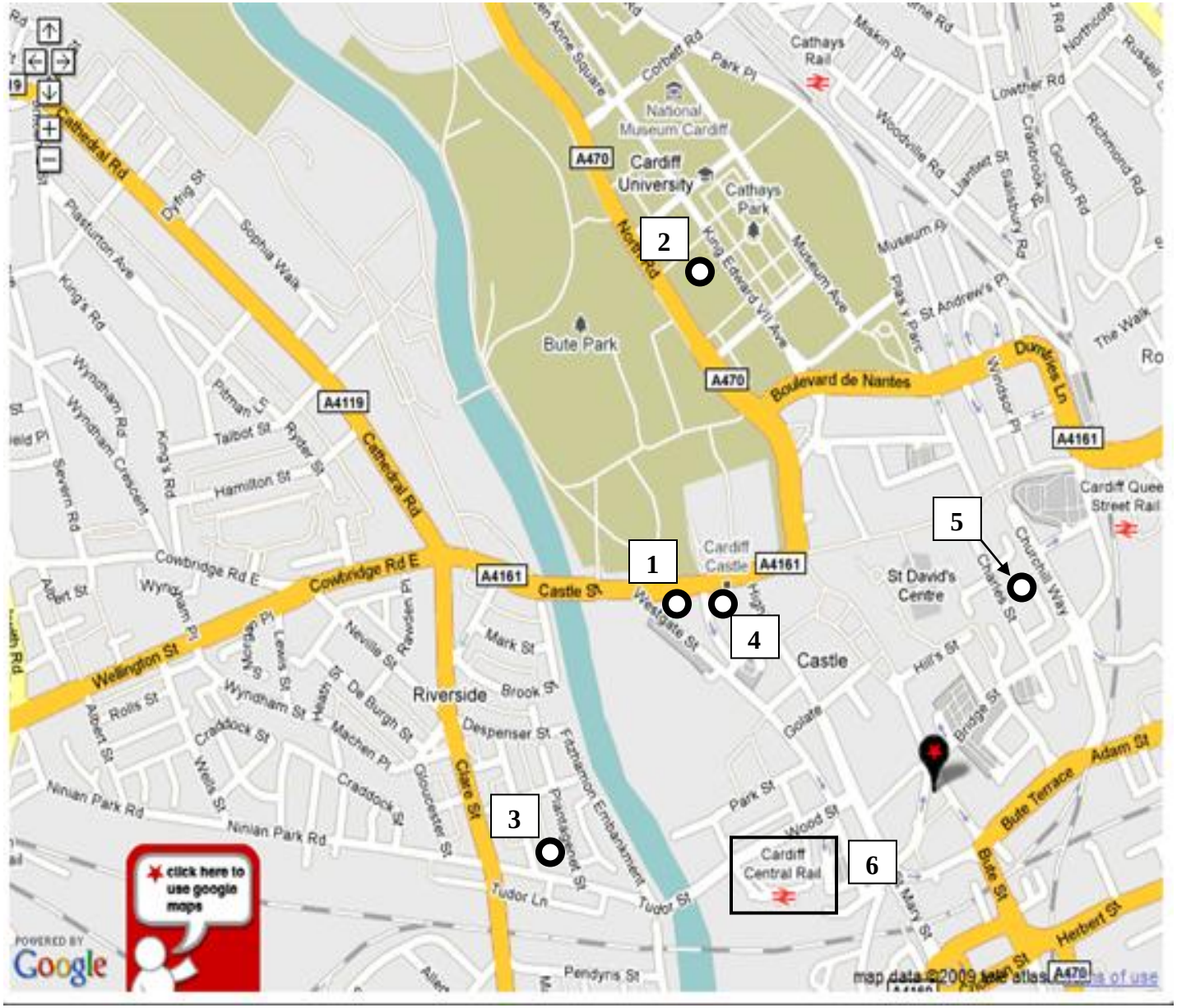
		Public: The Role of Expertise	people who are substantively, attributionally, and interactionally experts can still have difficulty obtaining a voice. The lesson, I think, is that we need to focus, not on the substance nor on the attribution of expertise, but on its institutional network -- on its "delivery system" so to speak – that is, on the way in which knowledge is generated and passed on.
17. 15-18. 15	**Kyle Whyte,** Michigan State University	Setting Goals of Research on Interactional Expertise	Collins, Evans and collaborators are pursuing research on whether something like interactional expertise exists. Many of us wait with baited breath for the results of these studies because of our interest in how interactional expertise may improve managerial and educational practices. Yet even if the major aspects of the theory of interactional expertise gain the needed evidence, what interests most of us is not full blown interactional expertise. The standards for attaining it, indeed, are too high to be used as the basis for improving management and education. Rather, it is the lesser degrees of expertise and experience on the periodic table of expertises that are relevant to these projects, and should be the focus of future research. Additionally, there are also lesser versions of concepts like interactional expertise, such as interactive ability, and others that will be discussed in this paper. These degrees of expertise and experience do not require imitation game testing because possessors cannot speak as fluently as experts do in the relevant disciplinary languages. Yet if we ultimately believe that areas like adaptive management, sustainability science, and environmental education will be all the better when some practitioners have interactional expertise, it is then these lesser degrees of expertise and experience that will prepare the ground for future attainment of interactional expertise.
19.30		**Dinner: Riverside Cantonese (No 3 on Map)**	

Saturday 11th Committee Room 1, Glamorgan Building, King Edward VII Avenue			
8.30-9.30	**Nicolas Schunk**, Aarhus University	The health discourse's articulations of a common understanding of sickness	I will present a socio-philosophical perspective on the notion of tacit knowledge: How to conceive expertise without substance, subject, collectivity or a metaphysical use of language - through the problematic of articulation and the category 'commonness.'
9.30-10.30	**Martin Weinel,** Cardiff University	Introducing two new types of meta-expertise	Drawing on research on Thabo Mbeki's involvement in technical aspects of science policy-making around the use of antiretroviral drugs in South Africa, two hitherto unrecognised types of meta-expertise are introduced: domain-specific discrimination and sociological discrimination.
11.00-11.15			**Coffee**
11.15-12. 15	**Gabor Kutrovatz,** Eötvös Loránd University Budapest, **Gabor Zemplen,** Budapest University of Technology and Economics	Assessing Expert Arguments	Proponents of the Studies of Expertise and Experience claim that non-experts have practically no epistemic access to the merits of the arguments that experts put forward to support their testimonies and advices. According to them, it is only specialists in a given field (downward discrimination) or in a closely related field (referred expertise), or at least quasi-specialists (technical connoisseurship), that are in the position to make internal evaluations of what the experts say. For others, it is their social expertise that gets transmuted into technical judgments, that is, meta-expert evaluations are based on their knowledge of either the specific social context of a given expert's claim (local discrimination), or the general characteristics of our society permeated by experts (ubiquitous discrimination). As Collins and Evans claim (*Rethinking Expertise*, p. 45), the "judgment turns on whether the author of a scientific claim appears to have the appropriate scientific demeanor and/or the appropriate location within the social networks of scientists and/or not too much in the way of a political and financial interest in the claim". Understanding these turns on what they call meta-criteria, by looking at either the credentials, or the track-record, or the experience of the expert. Philosophers discussing expert testimonies, on the other hand, are more optimistic concerning the range of tools non-experts can use when assessing expert claims. Lists of what SEE terms meta-criteria are offered by authors like Alvin Goldman ('Experts: Which Ones Should You Trust?') and Scott Brewer ('Scientific Expert Testimony and Intellectual Due Process'), and these include, among others, criteria to evaluate certain characteristics of the arguments supporting expert opinions. In the field of argumentation studies, several books by Douglas Walton deal excessively with expert testimonies, and offer an evaluative checklist of critical questions addressing issues regarding both the social context and argumentative aspects. The paper investigates some of these normative models, and connects the analysis with empirical work on two case studies. The analysis of these studies (on the Moon Landing Hoax and on H1N1 vaccination) shows that the models under consideration can complement one another, and fare better together than standing by themselves. These results are interpreted in the Periodic Table of Expertises, with special emphasis on technical connoisseurship and meta-criteria. In addition to the problem of 'purely' non-expert evaluations of expert claims, the possibilities for argumentation studies as a sort of professional meta-expert field are also considered. Humble proposals are made.
12.15-13.15	**Jean Goodwin**, Iowa State University	Assessing expertise in the worst case scenario: Ordinary civic deliberations	Both Argumentation Studies (AS) and Studies in Expertise & Experience (SEE) find themselves converging on the problem of explaining how, in the course of complex and confused civic deliberations, nonexpert citizens can figure out which statements from purported experts deserve their trust. SEE's "macro" overview of varieties of expertise points the way to a solution: since nonexperts cannot exercise "downward discrimination" and assess expertise directly, they instead rely on "*social* judgments about *who* ought to be agreed with." AS in turn can complement this insight by providing a "micro" account of how experts can communicate in order to give citizens good reasons to trust them. Together, SEE and AS provide important elements of a normative theory of

			expertise in civic deliberations.
13. 15-14.00			**Lunch**
14.00-15. 00	**Mark Addis**, Birmingham City University	Expertise in Construction	Expertise will be broadly understood as covering various kinds of know-how, attention-based knowledge, skills, decision making, and similar phenomena. Construction involves extensive use of expertise at a variety of levels from technical craft to managerial and in intense situations driven by time and resource constraints. It provides useful data for developing and critiquing philosophical theories of expertise as abstract claims about what constitutes expert behaviour can be set against what is known to be effective practice in the industry. Treating knowledge management in propositional terms has not really brought about improvements in practice in construction as better practice depends upon the application of individual expertise in particular contexts. Professional education and development involves those who work in the industry recognising their expertise including diagnosing limitations to their knowledge and work context. Particular reference will be made to a study of expertise in several large construction companies. Selected methodological and practical implications arising from this work will be considered.
15.00-16.00	**Mike Gorman**, University of Virginia	Integrating social scientists into the laboratory: interactional expertise and somatic tacit knowledge	Erik Fisher at Arizona State University set up an international program to integrate graduate students and postdocs with social science or humanities backgrounds into a variety of laboratories. This talk will describe the only two of these experiences where the student appeared to gain both interactional expertise plus a component of somatic tacit knowledge. The students were able not only to talk the language of the researchers, they learned to do procedures: in one case a PCR, in another making STM tips. The goal is to provoke a discussion about (a) whether these cases really involve somatic tacit knowledge; (b) advantages and disadvantages combining interactional expertise with the ability to do procedures; (c) how to map this sort of acquisition trajectory; (d) how to do more empirical comparisons of student experiences from Fisher's socio-technical integration project; (e) how to scaffold students to keep track of relevant data to make these kinds of comparisons in the future.
16.00-16.15			**Coffee**
16.15-17.15	**Evan Selinger,** Rochester Institute of Technology**/ Andrew Berardy,** Arizona State University	Towards a Pedagogy of Interactional Expertise for Sustainability Education	Training graduate students to perform integrative research is difficult due to differences in how students from different disciplines conceptualize, analyze and discuss their research subjects. Current practices in integrative education do not sufficiently enrich cross-disciplinary understanding; students complete their coursework unable to meaningfully interact with experts in other fields. Pedagogical strategies designed around interactional expertise (IE) may improve integrative education through enhancing cross-disciplinary communication. Given the primacy of language in acquiring IE through linguistic socialization, we hypothesize that adapting pedagogical strategies from foreign language education, such as teaching for transfer of learning and learning the "alphabet," words, grammar, culture and history of a discipline will enhance students' communication ability and give them a basis on which they may later more rapidly acquire IE through linguistic socialization. Due to the transdisciplinary nature of the field, teaching thermodynamics to sustainability students provides an ideal context to create and test this pedagogy. In this context, resources from experiments on IE, notably, the imitation game, are well-suited to compliment conceptual tests, such as a "concept inventory," as mechanisms of course assessment. While we do not yet have course data to report, preliminary results are positive. They show the pedagogy may be as effective for teaching concepts as traditional instruction, and demonstrate a capacity to enhance how students communicate about thermodynamics issues.
19.15	**Dinner: Bosphorus Restaurant, Mermaid Quai, Cardiff Bay (Bus for Cardiff Bay leaves at No 4 on Map)**		

Sunday 12th Committee Room 1, Glamorgan Building, King Edward VII Avenue			
8.30-9.30	**Tim Thornton,** University of Central Lancashire	Why tacit? Why knowledge? The dilemma facing an account of tacit knowledge	A number of philosophers have argued for the importance of something in the area, at least, of tacit knowledge (TK).These include Heidegger, Polanyi, Ryle, Wittgenstein and Dreyfus. But their arguments are of different kinds (empirical versus philosophical and narrowly focussed on an argument versus a more general metaphysical picture). What they suggest is the importance of something practical which resists linguistic articulation. But does it amount to tacit knowledge? The central problem is this, accounting for tacit status must rule out an explicit articulation of the content of the knowledge. But without some explicit articulation of content grasped by a subject, why think that TK is knowledge? One model might be Dreyfus' sub-conceptual skilled coping. But, as Dreyfus himself suggests, that lacks the right kind of content to count as knowledge. In this paper, I will outline McDowell's response to Dreyfus and argue that the best hope for TK is a conceptually structured content (and so not fully tacit) but whose articulation is practical and context specific.
9.30-10.30	**Luis Reyes Galindo,** Cardiff University	Tacit knowledge and expertise in theoretical physics	This work is a summary of the main conclusions regarding the constitution and transmission of tacit knowledge in and amongst theoretical physicists. Theoretical collaborations are also examined. I use Collins' tripartite classification of tacit knowledge to further scrutinize the types of tacit knowledge that are involved in specific tacit knowledge domains of physics. Tacit knowledge and interactional expertise are argued to be physics' main source of cohesion between otherwise epistemically autonomous fields of knowledge.
11.00-11.15			**Coffee**
11.15-12. 15	**Tiago Duarte,** Cardiff University	Expertise in Paleoceanography	This paper is part of a PhD research that examines the production of knowledge on climate change. The main focus is on the different fields of expertise brought together to examine climate change, how different types experts interact, and how much tacit knowledge is shared among the different communities of experts. It begins by showing the wide range of research areas take part in climate change study, then narrows down to focus on paleoceanography, i.e. the reconstruction of past oceans and past climate based on data extracted from a range of marine archives such as foraminifera, diatoms, corals, etc. Paleoceanography is a multidisciplinary field that combines knowledge from several disciplines including oceanography, climatology, micropaleontology, geochemistry, etc. I describe the different stages of research within this field and the combination of skills possessed by paleoceanographers. Based on this description I examine the different judgements that experts have to make in different stages of research and address the following question: What is to have expertise in Paleoceanography?
12.15-13.15	**Harry Collins,** Cardiff University	Scientific expertise and the public: An opportunistic case study	In late 2010 I was sent a published paper by a physicist which explained why the Laser Interferometer Gravitational-Wave Observatory (LIGO) could not possibly work. It explained that interferometers, the basic element of LIGO, do not function as generations of physicists have believed. Because the light beams in LIGO's arms are in vacuum, no effect will be seen. To see the kind of effect that LIGO is looking for, the beams would have to travel in some medium such as water. I sent this paper to a dozen LIGO scientists together with a short questionnaire asking how they reacted to it. I analyse the 10 replies and show how they bear upon the difference between the way experts assess a maverick publication and the way ordinary people are able to do it. I show how this reflects upon the Thabo Mbeki case.
13. 15-14.00			**Lunch**

14.00-15. 00	**Robert Evans,** Cardiff University	Democracy, Expertise and the 'Third Wave' of Science Studies	The relationship between STS and democracy has been the topic of much recent debate. Whilst almost all in the field would claim to be in favour of democracy and of making science and technology more democratically accountable, there is much less consensus about what this means in practice. This is particularly clear in the responses to the 'Third Wave of Science Studies' paper published in 2002. Despite the author's claim that the paper is consistent with democratic ideas – claims which have been supported in some recent readings of the work – it was quickly criticized for its elitist and undemocratic approach, and these criticisms have been repeated more recently. In this paper, we consider the published responses to the Third Wave paper and examine their implications for our original position. In particular, we examine how the distinction between the technical and political phase of a technological decision relates to democratic ideas such as checks and balances, representation, deliberation and authority. We thus combine a general defense of the claim that the Third Wave of Science Studies is consistent with democratic norms with examples that indicate how the tension between expert and democratic modes of authority can be understood in particular instances. In doing so, we set out one vision of the relationship between expertise and democracy.
15.00-16.00	**Darrin Durant,** York University (Canada)	Democracy, 3Wave, and Rawls: avoiding the problem of extension	As a field, STS seems attracted to a political rhetoric whereby public participation in technical decision-making is taken as an unalloyed good. So when 3Wave dissents from lavish deference to public will(s), it can and has been made out as illiberal and undemocratic. This critique gets its legs from a particular alignment between boundary-phobic strands of STS theorizing, and contemporary political philosophy that takes seriously the project know as identity politics and/or the politics of recognition. Those interested in the political wing of 3Wave, and thus interested in ways to coherently answer the charge that 3Wave is illiberal and anti-democratic, have available to them two means to proceed. One is to poke holes in the critique itself, asking tough questions about identity politics styled STS. Then other is to defend the Rawlsian styled Democratic thought underlying 3Wave. This talk outlines both ways of proceeding.
16.00-16.15			**Coffee**
16.15-17.15	**Philippe Ross**, University of Ottawa	Experience, Expertise and Media: the Social Situation of Production	For media and communication theory, the opportunity for audience members to act as mass communicators represents a blurring of production and reception, social settings traditionally conceived as interdependent but separate. With the emergence of hybrid roles like that of 'prosumer' (Toffler 1980), 'produser' (Bruns, 2008) and 'citizen journalist' (Thurman, 2008), there is a sense that supply and demand now connect in more efficient ways than they did pre-Web 2.0. But is the mediation of production and reception through the performance of hybrid roles new? And were the two ever separate to begin with? Elsewhere I have shown how the new media producer's role of mediator between products and audiences rests on a kind of experience-based expertise that is mobilized in an *ad hoc* way in production, thus prohibiting clear distinctions between professionals and amateurs (Ross, 2010). In this paper I further explore the interdependency of production and reception by conceiving of production as a particular kind of social situation (Goffman, 1959), and producers as performers of a 'synthetic role' (Meyrowitz, 1985) – that of producer-audience – in which their own experience of reception acts as a form of 'prior feedback' (Gans, 1957) on audience dispositions. The paper will outline the relevance of such an approach for both SEE and communication theory, as well as discuss plans for empirical research on the multidisciplinary adjudication committee of the Canada Media Fund – the Canadian government's main funding mechanism for independent television and new media producers.
17.15-18.30	**All**		Wrap Up and general discussion
19.15			**Dinner: La Boheme (No 5 on Map)**



KEY: 1) Angel Hotel; 2) Glamorgan Bldg; 3) Riverside Cantonese; 4) Bus Stop for Cardiff Bay Bus; 5) La Boheme; 6) Train Station