

Key note speakers abstracts

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Risk Perceptions, Climate Change and UK Energy Policy

While much of the risk controversy in the UK over the past 10 years has revolved around new and emerging technologies (e.g. biotechnology, nanotechnologies) the far more familiar issue of nuclear power has, albeit somewhat stealthily, risen once again to the very top of the public policy agenda. Following the Stern Review of the economics of climate change in 2006, and the IPPC 4th Assessment report in early 2007, the risks of dangerous climate change are firmly on the public policy agenda. The paper briefly reviews what we know about climate risk perceptions before discussing the emerging political debate around new nuclear energy generation as a feature of future energy policy for the UK, specifically for its potential contribution to deliver climate change mitigation and energy security targets. Little is currently known about how ordinary citizens might respond to such a reframing of nuclear power, as a 'low-carbon' electricity source. This paper reports the results from focus groups held in 2002, as well as a major British survey (n=1491) undertaken in the autumn of 2005, addressing this question. The consistent message is that while higher proportions of the British public are prepared to accept nuclear power if they believe it will genuinely contribute to climate change mitigation, very few would actively prefer this over renewable sources given the choice. People see both climate change and nuclear power as highly problematic risks, and accordingly express only a reluctant acceptance of nuclear power as a 'solution' to climate change. The paper also concludes with remarks about the value of mixed methods empirical research in risk perception studies.



Key note speakers abstracts continued

Professor Joyce Tait (Innogen Centre, University of Edinburgh)

Risk Perception, ‘Upstream Engagement’ and Life Science Innovation

The European experience of building on public perceptions of the risks of GM crops to develop a totally new, path-breaking regulatory system for this technology is routinely presented as a triumph of democracy over the vested interests of the agro-biotechnology industry and farming communities. However it can also be perceived as inefficient use of resources and profoundly undemocratic - it is more complex and demanding than that for any other technology although there is so far no evidence of environmental or health risks; and it has privileged the views of a vocal minority over those of a less concerned majority.

This paper will explore the challenges of maintaining an evidence-based approach to decision making on risk governance in the face of this precedent and the interpretation being drawn from it that more ‘upstream engagement’ will minimise risks and mitigate potential future conflicts. The paradigm underlying demands for upstream engagement is that stakeholder perceptions matter and should be acted upon at an early enough stage in development to influence eventual outcomes, but this is particularly problematic for innovation in the life science sector with its product lead times of 10 – 15 years, for example in nanotechnology and synthetic genomics.

This way of thinking has become well entrenched in European policy and regulatory thinking and it is unlikely to be changed dramatically in the short term. However, the current anarchic situation could be improved by the introduction of a few ground rules such as: requiring disclosure of the basis for engagement (interests and values); setting standards for engagement in decision making processes; and clarifying the circumstances under which the values and interests of a minority group should be allowed to take precedence over those of others.



Abstracts for oral presentations (in order by session)

Session One

1.1) Burgess, A. (University of Kent, UK) A Potent Mix: Female ‘Binge Drinking’ and Heightened Risk Perception of Drink Spiking

‘Date rape is the new student fear’ declared an article in the THES (24/9/04); especially the ‘spiking’ of drinks with drugs enabling ‘drug facilitated sexual assault’ (DFSA). As occurred earlier in the US, a discourse once synonymous with sexual assault by acquaintances is now associated with ‘strangers’ seducing unknown victims through disabling drugs. Questioning students, belief in the threat of drug rape appears firmly held, but independent of reference to specific sexual assaults other than fictional attacks in soap operas. Nonetheless, DFSA has stimulated behavioural change among young women, supported by commercial products. Anti drink spiking devices and detectors are sold in supermarkets, and many young women police their drinks whilst socialising in public. Yet various police and scientific authorities have dismissed DFSA as an urban legend because of negative findings from blood tests on victims, and the limited availability of the principal drug associated with assaults, rohypnol. Critical feminist writing has attacked the discourse of ‘stranger danger’ anxieties as disempowering, and some campaigners object to the way in which the issue distracts attention from the serious problem of female ‘binge drinking’ and its role in assault.

This paper reports on the results of questionnaires and focus groups carried out on the issue at the University of Kent. Notwithstanding conviction in the threat of DFSA, women report uncertainty about the nature of the problem. A number of associated experiences, such as ‘normal’ drink spiking with extra alcohol, inform worries about DFSA and take place in the context of new vulnerabilities related to women now ‘drinking like the guys’. Widely reported ‘alcohol amnesia’ captures the sense of personalised uncertainty surrounding DFSA concerns.

1.2) Eiser, J.R. (University of Sheffield, UK). The experiential basis of attitudes to risk: How misperceptions resist change.

Previous research on risk perception offers several examples of where estimates made by ‘lay’ people differ from those of ‘experts’ and has frequently attributed such differences to a variety of factors such as cognitive heuristics and social amplification processes that are hypothesised to lead to distorted interpretation or processing of risk information. In much of this work, the perceiver is regarded as a somewhat passive receiver of information, rather than actively engaged in information search. In contrast, a dynamic model of attitude learning is proposed that emphasises contexts in which learners’ experience depends on their approach-avoidance decisions, and where different decision-outcome combinations vary in their potential to confirm or disconfirm prior hypotheses and evaluative beliefs, including particularly beliefs about the safety (desirability) or danger (undesirability) of novel objects, situations or activities. A paradigm is described in which participants have to explore their environment to discover the valence of novel objects, where feedback is only provided if objects are approached and where false-positive approaches involve cost. Experimental and simulation findings point to tendencies for bad or dangerous objects to be learnt better than good or safe objects. The reason for this is that incorrect (false-positive) beliefs that an object is safe will lead to approach, and hence discovery that the objects approached are actually dangerous, (although inappropriately risky behaviour may persist, as in health contexts, if corrective feedback is inconsistent or delayed). On the other hand, incorrect (false-negative) beliefs that an object is dangerous may persist uncorrected since individuals fail to discover that some avoided objects are actually safe or beneficial. Self-evaluations are also influenced more by negative than positive reinforcement. Implications for positivity biases in self-conceptions and risk-averse decision-making are discussed.

1.3) Ranyard, R. & McHugh, S. (University of Bolton, UK) Cognitive and emotion-based mechanisms underlying decisions involving risk and uncertainty: the case of payment protection insurance.

In an earlier study, information search and verbal reports prior to deciding whether to take out payment protection insurance (PPI) on a loan were generally consistent with a revised version of Huber's model of risk management: if financial risks exceeded both a loss probability and a loss value threshold, risk defusing operators, (RDOs), such as generating worst case plans or accepting insurance, were activated. However, evidence of strategies not consistent with this model was also found, such as detecting a risk and bearing it rather than defusing it. It is argued that cognitive appraisal (risk detection) may not be sufficient to activate RDO's. Rather, a complex interaction between affect, cognitive appraisal and anticipated emotion could provide a better explanation. In a questionnaire-based randomised group experiment, bank customers' preferences for credit and payment protection insurance (PPI) were investigated: 205 participants were presented with credit options with and without PPI. It was found that previous experience of taking PPI, worry concerning future repayment difficulties and anticipated worry reduction were better predictors of PPI preferences than were other variables, including the perceived risk of repayment difficulties. Implications for cognitive and emotion-based theories of how and when people protect themselves against risk are discussed.

1.4) Spence, A. (University of Cardiff) and **Townsend, E.** (University of Nottingham). Spontaneous Evaluations of Risk: Are Implicit Attitudes Driving the Affect Heuristic?

The affect heuristic and implicit attitudes are two separate concepts that have arisen within different literatures but that have a number of similarities. We review the literature and compare these constructs in order to clarify exactly what each refers to and how these may relate to one another. We conclude that the 'affect pool' of images tagged with feelings referred to within the affect heuristic literature may be equivalent to the construct of implicit attitudes. Further to this, the affect heuristic itself could be considered as a specific subtype of spontaneous process that is driven by implicit attitudes. We propose that each of the implicit attitude and affect heuristic constructs could be further developed through the examination and comparison of existing literatures surrounding the other. Implications for future research are outlined.

1.5) Windrum, N and Nelson, R. (Queen's University Belfast, UK) Nutritional risks and benefits – compensatory decision making in action.

Consumers' food choices are influenced by a wide range of factors including the perception of the risks and benefits associated with the food product. Healthy eating has been identified as an important attribute influencing food choice, however despite this obesity levels are currently a major public health concern. This study aims to investigate the relationship between how consumers perceive the nutritional risks and benefits associated with three types of food each having a different level of nutritional quality. Data were collected, using a conjoint design model, on the perceived risks and benefits associated with a range of product profiles within each food type. Information was also gathered on consumers' likelihood to choose each of the product profiles. 240 respondents completed the questionnaires. The results revealed that when looking at overall product ratings, risk and benefit perceptions were strongly but inversely related (ranging from -0.698 to -0.853). However, when looking at the individual product profiles, the inverse relationship remained but was found to be significantly weaker. This indicates that consumers are more adept at assigning risk and benefit scores related to the overall product class but less able to determine risks and benefits for the individual product profiles. The findings of regression analyses indicate that the perception of benefits contributed more (by a factor approximately 2.5 for all products) than the perception of risks when determining likelihood to choose scores for individual product profiles. This indicates that for low involvement items such as food the perception of risk is not a major determinant in consumer decision making but that it is perceived benefits that in reality determine choice. In addition as the perceived risk of the product increased so too did the importance of benefit perception indicating a compensatory decision making strategy employed by the consumer.

Session two

2.1) Lindström, M. (University of Kalmar, Sweden) Attitudes towards hazardous chemical substances in goods

This investigation deals with attitudes towards of hazardous chemical substances in goods and responsibility for reducing those chemicals. We also investigate peoples' worry, knowledge, perceptions of their own possibilities to reduce hazardous chemicals in goods and also their everyday behaviour. The project was performed in Stockholm in Sweden during 2006. Focus group interviews were made with environmental experts, companies, politicians and the public. A questionnaire based on the result of the focus group discussions was sent to 1000 people living in Stockholm, 100 politicians, 100 environmental experts and 200 companies.

The result showed that the most important criteria for choosing goods were the goods being free from hazardous chemical substances and that the contents of the goods should be easy to understand. The goods especially investigated in this study were clothes, electronics, food and hygiene products. Most important was to decrease hazardous chemical substances in food and in hygiene products and least important in electronic goods. Highest responsibility for decreasing hazardous chemical substances in goods was put on the companies producing goods and chemicals and on companies selling the goods. Lowest responsibility was allocated the consumers and the local politicians. The companies, experts and the politicians put high responsibility on each other and allocated the own group lower responsibility. Almost all were worried about the consequences hazardous chemicals could have on future generations and on the environment. Women were more worried than men. The knowledge on hazardous chemicals was low, except among the experts.

Increased cooperation between experts, politicians, companies and the media is suggested. Such cooperation could result in a popular scientific book of facts on chemicals in goods. Those groups are responsible for increasing the trust among people so they can go out and buy goods free from hazardous chemical substances. Education on how to communicate risks should be performed in the above mentioned groups.

2.2) Godfrey, R. (University of Wisconsin, USA) The role of values in assessing risk information, source credibility, message quality and behavioral intention with functionally relevant messages

This study explored the application of functional theory using an integrated value systems approach to a model examining function-relevant information and its effects on the perceptions of a source's credibility/trustworthiness, when risks from a new technology (and its resultant benefits) appear in the mass media. The now standardized, motivationally distinct value typologies of Shalom Schwartz's value survey served as proxy measures of value-expressive attitude functions related to the differences in what people want from (or find value in) the attitude objects of risk and its benefits - its functional relevance - as portrayed by competing sources of that information in a short news account of a new, but fictitious food preparation technology. Results suggested that risks and benefits, by either being closer to compatibility or in discordance with an individual's value structure, can often serve the underlying function of evaluating the veracity of a source's arguments. The analysis of this heuristical decision process involving functionally matched and mismatched messages in a news account, suggested personal values helped to define the limits of a source's reporting bias and the concurrent level of instilled trust that could account for those perceptions. This was further contrasted with dependent measures evaluating respondent's perception of message quality and behavioral intentions. Multivariate secondary analysis using SES control variables along with an evaluation of several research question variable indexes measuring beliefs in science and scientists together with technological and environmental concerns, suggested interesting future research.

2.3) Hawkes, G. Rowe, G., & Houghton, J. (Institute of Food Research, Norwich, UK). UK Public Reaction to Bird Flu: An analysis of comments posted on the BBC Have Your Say Message Board.

Bird Flu was confirmed in February 2007 in a Bernard Matthews turkey farm in Holton, Suffolk. Following evidence of illness, DEFRA ordered the slaughter of 160,000 turkeys, imposed controls on the movement of poultry, and released public reassurances regarding the safety of poultry for human consumption. The Bernard Matthews farm re-opened for business within a few weeks. Given past crises in the food domain (e.g. BSE, salmonella in eggs), the question arises: how do the UK public perceive this issue? Is mass panic imminent? Will sales of turkeys and chickens collapse, with commensurate economic pain for producers and farmers? Or will the public shrug its shoulders and respond calmly?

Because of the speed of the outbreak, and its inherent unpredictability, it has been difficult to assess public opinion on this matter in a timely manner using traditional methods. However, the existence of real time message boards on the internet, provides a potentially powerful tool for the rapid collection of public views on breaking news stories – albeit views that are likely to come from an unrepresentative sample of the population. One of the most popular message boards is the ‘Have Your Say’ board, hosted by the BBC. This receives in the region of 10-20,000 emails per day on high-profile and controversial topics. Fortunately, this message board hosted a debate on the bird flu outbreak soon after its initial announcement.

In this paper we: a) justify the relevance and importance of data from such message boards, irrespective of likely deficiencies in terms of its national ‘representativeness’; b) report a content analysis of the 3,000-plus posted responses on the bird flu outbreak, and; c) summarise initial ‘public’ opinion. Results suggest that ‘the public’s’ initial response is concern about current farming practises along with a jingoistic defensiveness of local and national produce (with condemnation of inferior foreign produce). However, it is important to recognise that: a) there are limits to the data, which need to be validated through more controlled research processes, and b) further incidences and revelations might rapidly lead to a change in public attitudes.

2.4) Oreszczyn, S. & Lane, A. (The Open University, UK) Farmers’ responses to risk: Making the decision to adopt a new technology such as GM crops.

Much of the debate surrounding the risks of genetically modified organisms (GMOs) has focussed on the policies and practices of national governments and international organisations or on the acceptability of GM products with consumers. Little work has been done at the local level, particularly with respect to farmers, who would be the primary users of GM technology in the form of Genetically Modified (GM) crops. This paper reports on the perceptions of larger-scale, commercial, farmers of the risks of GM crops, both farmers who were involved in the Farm Scale Evaluations for GM herbicide tolerant crops and those who were not. It highlights the way that unlike other actors, such as members of the public, scientists or environmental NGOs, farmers’ perceptions of the risk of commercialising GMHT crops are situated in their practices and experiences of farming and are formed in the context of their farming networks.

Session three

3.1) Rogers, M.B. & Krieger, K. (King's College London, UK). Public Perceptions of Climate Change: Addressing the Biggest Challenge Human Civilisation Has Been Asked to Meet.

As part of a larger, two-year study on the future of nuclear power in Europe, the authors investigated key energy challenges such as security of supply and climate change. In this presentation, the authors define climate change, identify the level of knowledge about climate change, identify key players in the climate change discourse, and discuss methods of bringing about behavioural change in order to include the public in climate change mitigation. A combination of academic and gray literature, as well as interviews with policy-makers, industry experts and NGO representatives in France, Germany, the U. K., and on the EU level illustrate that public knowledge about climate change is poor, resulting in confusion and misunderstanding, meaning that public information and misinformation are driving public behaviour in the form of energy choices and policy support. It also became clear that the public is willing to act in order to address the issue of climate change, but they desire guidance.

Recently, political leaders in the UK have been openly declaring nuclear power as part of the solution to climate change. The researchers found that, while it was evident that the public level of awareness of both climate change and nuclear power is on the rise, members of the public are clearly failing to make the connection between nuclear power and climate change mitigation. The authors believe that the question should not focus on how willing the public are to accept nuclear power generation as an option for reducing CO₂ emissions at this point in time. Combining these issues creates a potentially lethal combination of two subject areas in which the public are reporting low levels of knowledge and high levels of confusion.

3.2) Alriksson, S. (University of Kalmar, Sweden). Preferences for carbon dioxide emission mitigation from the Swedish steel industry.

The Swedish Steel Producers' Association, "Jernkontoret", has initiated a research programme called "Towards a closed steel eco cycle". The aim is to make the steel eco cycle sustainable through increased scrap recycling and efficiency.

In order to validate that the research programme leads to improvements in the environment, an interdisciplinary research project, using conjoint analysis, has been performed where preferences for some of the most important environmental issues within the steel industry were investigated. Risk perceptions within three groups of people – members of public, representatives from the steel industry and students - were evaluated through a conjoint analysis. The survey was distributed through a questionnaire and the respondents were asked to rank 9 alternatives in a fractional factorial design.

The results indicated that emissions of dioxins were prioritized over use of non-renewable energy, use of non-renewable resources and cost of production. Strikingly, emission of carbon dioxide received the lowest priority. A cluster analysis was made on the respondents and eight groups among the respondents were found, however, this segmentation was markedly different than expected in that the original three groups (students, public and representatives from the steel industry) were not recovered.

A method to communicate the results back to the participants directly after responding to the study was tried successfully. The method was found to work especially well if the individual results for each respondent were presented directly to the individual, or presented to small groups consisting of maximum 4 participants. When the results were presented to larger groups, the discussion was not as extensive. The reactions from the respondents were used as a basis for further discussions and documented in order to be used as a means of communication in the product development process as well as a decision tool within the steel industry.

3.3) Briggs, C.M. (University Bethlehem, PA, USA). Environmental health risks in post-conflict societies: the conceptual contributions of political psychology.

Environmental health risks are often described as resulting from physical contaminants in the environment, but more recently the public health literature has recognized the importance of social capital and risk perceptions in explaining the existence of certain risk pathways. Avoidance of highly salient risks can lead to behaviour that actually exposes one to a higher probabilistic risk, depending upon one's perceptions of the situation and his or her ability to respond. People often respond to environmental risks as second-order priorities, as the exposure pathways are often poorly understood and effects may not be manifest for many years. Decisions over where one should live, for example, often depend more upon perceptions of crime risk than possibly environmental exposures, an issue is increasingly being addressed by the environmental justice literature.

Such analyses of public health risk and environmental justice rarely, however, extend to post-conflict societies. Risk perceptions change radically during conflict, as violence becomes the greatest risk and ingroup/outgroup identities sharpen. At the same time, conflict increases environmental degradation and often targets a society's ability to adapt to and cope with changing conditions. Land mines target transportation routes and make prime agricultural land unusable, medical facilities/personnel and green infrastructure (eg water treatment plants) are often targeted, and supportive social networks are disrupted. This paper examines the contributions of political psychology in mapping post-conflict vulnerabilities, focusing upon conditions in the former Yugoslav republics. It is not enough for geographical and epidemiological methods to examine vulnerability patterns, but one must also be able to explain how and why behaviours change in response to conflict, and what effect these perceptions have in changing risk exposure pathways.

3.4) Venables, D; Simmons, P; Pidgeon, N; Henwood, K; & Parkhill, P. (University of Cardiff, UK). Living with Nuclear Risk: A Q-Method Study.

Nuclear power stations, which contribute roughly 19% of the UK's total electricity generation, are nearing the end of their lifetimes. Half of the 14 nuclear power stations currently operating in the UK will be decommissioned by 2010, and in 16 years, only one will remain. Recent UK government policy has therefore signalled the building of a number of new nuclear power stations in order to: replace decommissioned plants; decrease reliance on imported fossil fuels; and reach CO₂ reduction targets. In the context of these policy developments, investigation into the ways in which people construct, experience, and relate to nuclear risk has become increasingly important, particularly for understanding the potentials for social mobilisation around this issue. While attitudes to nuclear power and its risks have been extensively studied historically (e.g. the impacts of the TMI and Chernobyl accidents) there is far less contemporary data. We report an empirical study forming part of a major ESRC funded network 'Social Contexts and Responses to Risk'. This network seeks to enhance understanding of how people respond to risk and uncertainty during the course of their lives. Our study explored the subjective opinions and perspectives of people, with regard to nuclear power, through the application of Q-methodology. Following initial narrative interviews with 35 people living close to Bradwell nuclear power station on the Essex Coast, a corpus of statements was selected and sorted by (n=60) people living in close proximity to a second power station, Oldbury on Severn in Gloucestershire. Factor analysis of the completed Q-sorts identified a number of different subjective perspectives people adopted on living with a nuclear power station. These perspectives will be discussed in the context of the current nuclear policy debate as well as the usefulness of Q method for investigating the ways in which people 'live with risk'.

Session four

4.1) Nightingale, P.& McLeish, C. (University of Sussex, UK). Risk in the Risk Society: The Governance of Bioscience as a ‘New Security Challenge’?.

In 1992 the UNSC highlighted biological weapons as the major threat to international security. Biosecurity is now a central part of both security and science policy. In recent years the governance of bioscience has been radically changed by policies designed to prevent the hostile application of dual use biological knowledge and materials. At first glance this would seem to provide further support for a shift from government control to governance, driven by globalisation and the emergence of new risks, with biosecurity being a ‘new security challenge’. In this paper, we argue that such a view is over simplistic and that changes in biosecurity provide a useful lens for critically engaging with a set of social theories that can potentially have a misleading influence on policy formulation in relation to the treatment of “risk”.

Drawing on the work of Ian Hacking and Justin Rosenberg the paper positions the Risk Society as an Eschatology of Globalisation that makes a series of claims about the ‘past’ (Plumb, 1969) to justify the present. Beck’s claim about the end of expertise and the democratisation of science, for example, implicitly asserts the increasing value of sociological expertise, but is conditional on strong historical claims about an alleged scientific monopoly in relation to ‘natural’ risks in the past, and a shift from natural to artificial risks in the present. The paper highlights how despite its initial plausibility many of assertions of the Risk Society/Globalisation/New Security Challenges framework are empirically false in the context of biosecurity. For example, any decline in state power, a shift towards international law, a strengthening of international bodies, etc. The paper argues that the theoretical refusal to engage with technology leaves the risk society framework generating second order control of control (what Power calls ‘audit’) that leads to unrealistic policy.

4.2) Raude, J. & Setbon, M. (Ecole des Hautes Etudes en Sciences Sociales 22, France). Risk Perception and Health Behaviour in Epidemic Time.

Risk perceptions are generally viewed as central in many health behaviour theories. However, the relationship between risk perceptions and behavior has been more often studied in quiet time than in crisis time. Remarkably, the influence of risk perception on protective behaviour adopted within a population has never been studied in the context of a large outbreak. For this, a set of qualitative and quantitative surveys were conducted in two tropical French Islands, in which local populations were faced with similar arbovirose-related epidemics. The first island (La Reunion) was characterized in 2006 by a large outbreak of Chikungunya – an emerging infectious disease – which contaminated more than third of the population in a few months. The second island (La Martinique) is characterized by an endemic situation of Dengue fever which has been experienced, at least once, by about one fifth of the local population during the last decades.

The quantitative surveys posed a host of questions relating to mental representations of the nature, spread and risk of infection within representative samples of the adult populations. Numerous questions were posed and can be viewed as possible indicators of worry, trust, perceived likelihood, perceived controllability, and protective behaviour.

Statistical analysis suggests that most of these variables are related to reported preventive actions in both populations. Nevertheless, multivariate analysis tends to show that lay beliefs about the nature and transmission of the diseases was by far the most significant determinant of individual contamination by arboviroses. These findings have many implications for designing public campaigns to increase and improve the adoption of protective behaviour in the context of newly identified health threats.

4.3) Marselle, M & Canter, D. (University of Liverpool, UK). Perceptions of Risk During the Evacuation of the World Trade Center (WTC) on September 11th, 2001 (9/11).

This paper discusses the use of a specially developed questionnaire measuring WTC survivors' perception of risk on 9/11. Whilst the potential risk to the WTC on 9/11 was obvious to outsiders, did those inside the towers similarly perceive the risk they faced? Research suggests WTC occupants' interpretation of the event was largely inaccurate (Galea & Blake, 2004). As the same cues were being interpreted differently by WTC occupants, understanding how risk was perceived on 9/11 is fundamental for future large scale evacuations.

Using facet theory to generate statements of risk variables (Slovic, 1987) a questionnaire was designed for the retrospective measurement of risk from 196 respondents at the first impact and other times during their evacuation.

The questionnaire demonstrated good reliability and was found to contain three subscales of fear, control and information. Correlations showed a significant positive relationship between fear and control, and control and information. There was no significant correlation between fear and information. A 2x3 ANOVA (tower x floor region) found occupants in Tower 1 expressed significantly more fear and less control than those in Tower 2. Occupants in both towers expressed the same level of perceived fear and control across all floors. There was a significant main effect of floor and information, but only for Tower 1. Those in the middle region of Tower 1 felt they had the most information about the event.

The findings are contrary to contemporary engineering theory of high-rise evacuation, where floor height is a predictor of perceived risk (NIST, 2005), and accurate interpretations come from those closest to the impact zone (Galea & Blake, 2004). Findings suggest individuals may not have perceived the event as 'risky' when deciding to evacuate, meaning social and organisational factors maybe more important to initiate evacuation. These findings will help improve future emergency management procedures.

4.4) Patel, J. Ball, D. & Jones, H. Factors Influencing subjective rankings of driver distractions. (Middlesex University, UK).

Driver distraction is recognised as a significant cause of road traffic incidents. However, the more objective measurement and ranking of the relative importance of individual distractions in contributing to incidents tends to differ from subjectively-held rankings. To investigate this, the present study examines qualitative characteristics of fourteen driver distractions to determine if these characteristics might explain the discrepancy. The conclusion is that for laypersons, qualitative characteristics, such as equity and familiarity, do contribute to their ranking of driver distractions. This poses some interesting issues for risk managers. For example, should safety interventions aimed at driver distractions be based purely on factual data, or should they accommodate qualitative factors of importance to the public?

Abstracts for posters

P1) Jones, C.R., Eiser, J.R. (University of Sheffield, UK). Windy NIMBY: Attitudes towards wind farms in relation to ones proximity to proposed developments.

With the ever-increasing threat of climate change from global warming and the risks to humanity that this threat poses, the UK government is under increasing pressure to mitigate CO₂ emissions. A major source of CO₂ emissions comes from the burning fossil fuels in electricity production. As such, in order to achieve the required levels of mitigation, the UK government has set in place ambitious targets of increasing the amount of electricity yielded from renewable sources (e.g. wind, tidal, etc.) (i.e. 10% by 2010 – 60% by 2050).

Survey One

In light of the national targets, Sheffield City Council has begun to examine how the city can make its own contribution. It has recently identified four locations deemed suitable for the installation of wind turbines, a move that has provoked both positive and negative reactions from the city's residents. It is our intention to survey a representative sample of individuals in the locale of the earmarked sites (and an already identified control population), in order to assess their attitudes, beliefs and concerns about the proposed developments. The survey will seek to establish whether the proximity of a respondent's home to a proposed site, and their perception of the risks posed by climate change, influence their acceptance of the local proposals.

Survey Two

A similar survey will target a population around Goole (E.Yorks). This region is open and windswept making it ideal for the development of medium-large wind farms and, as such, there are currently five proposals in place for farms supporting between 12 and 35 turbines each. The survey will aim to establish public attitudes, beliefs and concerns about the large-scale proposals in this region, a region that already supports large-scale coal-fired plant (e.g. Drax). The responses of these participants will then be compared with a suitable comparison location (i.e. one supporting coal-fired plant but with no proposals for wind farms).

P2) Pahl, S., Zlatev, M. & White, M. P. (University of Plymouth, UK). Perceived Risk and Benefits of Self and Others as Predictors of Smoking Regulation Acceptance.

While many studies have investigated perceived risk to the self as a predictor of behavioural change, only very few have investigated perceived risk to others. However, many risks are distributed, affecting other people as much as the 'agents' of the behaviour in question.

Further, research on health behaviours has often focused on perceived risk but neglected perceived benefits even though generally people choose to engage in behaviours because of their perceived benefits not risks. The present study investigated the acceptance of smoking regulations in Germany, a country that still has very few restrictions on smoking. Smokers (N = 147) rated the benefits and risks of smoking for themselves and other smokers, and how much they agreed with smoking restrictions varying in severity. We replicated comparative optimism concerning smoking risks found in previous studies. In addition we found that participants overestimated their own benefits compared to other smokers. Own benefits but others risks predicted the acceptance of smoking regulations best. These findings are important for policy makers who want the public to accept new rules limiting certain risky behaviours. It may be more effective to remind people they are putting others at risk rather than addressing people's personal risk because this will be discounted.

P3) White, M. (University of Plymouth, UK) "I would have made the same mistake": The dominance of procedural correctness in retrospective beliefs about decisions under uncertainty

People are notoriously unwilling to acknowledge, in hindsight, the role of risk and uncertainty in foresight. When thinking about their own predictions they tend to think they "knew it along" despite evidence to the contrary (Hindsight Bias). When thinking about the predictions of others they tend to believe "they *should* have known it all along" and denigrate those whose forecasts were inaccurate (Outcome Bias). There is also evidence, however, most notably in legal contexts, to suggest that people are reluctant to apportion blame for incorrect predictions if these are seen as justifiable or appropriate under the circumstances. In short, people appear sensitive to both outcome and procedural correctness though the relative importance of these factors remains unclear. Two large-scale scenario experiments ($Ns = 1021, 1065$) were conducted to unpack these issues. Participants were presented with hypothetical life-death decisions made by others under uncertainty in the domains of cancer diagnosis (Study 1) and police shootings of terror suspects (Study 2). Decisions were manipulated in line with Signal Detection Theory's distinction between discrimination ability (outcome correctness) and response bias (procedural correctness) and participants were asked whether they believe they would have made the same decision under the circumstances. In both studies participants showed clear evidence of a hindsight bias in cases where danger was present (i.e. cancer or armed terrorist) and claimed they would have acted to counter this danger (made Hits but not Misses). In cases where danger was absent this was pattern was reversed. Participants continued to claim they would have acted to counter any danger, resulting in False Alarms, despite knowledge that this was ultimately the wrong course of action. These findings suggest that procedural correctness is more important than outcome correctness for these complex decisions under uncertainty. Implications for hindsight and outcome bias research are discussed.

P4) Wardman, J. (King's College London, UK). Colour Coding Community Risk: An Assessment of the UK Mobile Phone Industry 'Traffic Light Model' for Siting Telecommunications Network.

Community opposition to the siting of mobile phone masts in the UK is widespread and is often in part the result of local protesters' perceived health risks of electromagnetic radiation frequency emissions emitted by the technology. The UK mobile phone industry 'traffic light model' is a risk communication decision tool employed by industry personnel to help determine how to engage with people in communities selected for the siting and development of mobile phone masts. The traffic light model aims to be diagnostic and prescriptive; by helping users screen proposed sites for certain environmental and social attributes, the acute siting character of a chosen community can be classified into three levels of conflict potential (red, amber, green) from which a corresponding level of public notification or consultation may be selected as necessary to take place. This research presents the results of a systematic review of industry implementation of the traffic light model and public objections to proposed network developments drawing on one local authority's planning case files for 68 proposed sites over 3 years, triangulated with stakeholder interviews and focus group discussions. Results are presented for consistent use of the model, in terms of providing information, levels of public consultation and the role of the community in the siting process, as well as the possible influence it may have had on public acceptance of mobile phone masts. The relative strengths and weaknesses of the model are discussed in light of the challenges facing the industry, along with the broader social implications of employing formal decision protocols such as traffic light models in risk communication more generally.