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### Flood risk perceptions and the UK media: Moving beyond "once in a lifetime" to "Be Prepared" reporting



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#### ABSTRACT

In the winter 2015/2016 a series of storms resulted in widespread flooding in northern England, damaging hundreds of properties, disrupting transport and causing public disdain. The flooding was widely covered in the media. This article develops a methodological framework to conceptualise factors influencing risk perception related to flood events, discusses the media's role as amplifier or attenuator of risks, and demonstrates how understanding risk perception can influence the deployment of effective policies to modify and reinforce more accurate risk perception to increase individual and community resilience and create a two-way dialogue between those risk and authorities. Given that climate change induced increased flood risk is a reality and the evidence that this is not yet understood by the public, nor addressed by the media, we suggest an urgent shift from the status quo media coverage based on blame to one of "Be Prepared". Furthermore, we suggest risk communication be based on better understanding of how at-risk communities perceive risk.

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#### 1. Introduction

In the winter 2015/2016 a series of storms caused widespread flooding in Cumbria, Lancashire and Yorkshire in the northwest and northeast England, damaging hundreds of residential and business properties, disrupting transport and causing public disdain. Floods are the most disruptive natural hazard posing widespread risk in the UK, and their intensity and frequency are expected to increase in the changing future climate which will leave a growing number of people at risk from flooding (CCC, 2016; Evans et al., 2004; HM Government, 2016; Thorne, 2014).

The government's flood risk management approach allocates resources on the basis of a cost benefit analysis, which leaves many areas outside of the densely populated Thames River basin under-served. This approach creates "various institutional risks such as delivery failure, scandal, and associated reputational damage, which have repeatedly plagued recent flood-risk management efforts in England" (Porter and Demeritt, 2012: page 2362). National government is often blamed for failing to manage flood risk (Rothstein et al., 2006) because although concepts of localism are emergent in studies of spatial inequity (Begg et al., 2015) and engrained in planning (Porter and Demeritt, 2012) the scale of recent floods places renewed emphasis on action by the National government (Smith et al., 2016). This highlights that to better prepare the public flood risk research is needed on new themes such as the socio-cultural dimensions of risk perceptions, trust in political entities, community resilience and societal behaviour, using cognitive-psychological approaches to understand them (Botzen

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et al., 2009; Butler et al., 2016; Grothmann and Reusswig, 2006; Harries, 2008; Healy, 2001; Joffe and O'Connor, 2013; Kellens et al., 2011; Renn, 2004; Wachinger et al., 2013).

German sociologist Ulrich Beck (1992) suggested that the risks we face have become incalculable and unpredictable to such an extent that we live in a risk society. To mitigate, adapt and manage these risks, it is crucial to adopt a holistic transdisciplinary approach not only to understand risk probabilities but also to conceptualise cognitive-psychological underpinnings of how people perceive risks (Metzner-Szigeth, 2009; Rose, 1998). As Beck put it: "scientific rationality without social rationality remains empty, but social rationality without scientific rationality remains blind" (Beck, 1992: page 30).

Most experts refer to risk as the probability of an adverse event times its consequences (Wilson and Crouch, 1982). Contemporary usage of the term 'risk' implies precision of calculation, objectivity and control (Joffe, 1999). However, such positivist definitions fail to acknowledge the complexity and subjectivity of risks. As the concept of 'risk' is a human construct, we cannot speak of 'real' or 'objective' risk as the concept of risk itself is of a subjective nature (Rausand, 2011). Risk also evokes different emotional responses in different people and has different meanings to different people (Šotić and Rajić, 2015).

Beck (1992) argued that risk is a dynamic concept based on causal interpretations, and thus initially exists only in terms of the (scientific or non-scientific) knowledge about it. The understanding of risks is thus subjective and the definition of risk is not consciously formulated in people's mind-sets a priori: it is influenced by, and results from, a culturally formed interplay between institutional and individual subjectivities (Gabe, 2004). Similarly, the term perception relates to internal cognitive processes that occur when people are confronted with risks. However, the validity of conceptualising risk perception solely in terms of individual cognition has been questioned (Joffe and O'Connor, 2013). It is argued that merely focusing on responses to risk as mechanical information-processing within the individual mind omits "inter-subjective aspects of knowledge", as responses to risks develop in, and through, interaction with others (Joffe, 2003; Kahan et al., 2010). This makes the mass media and the political and institutional entities in charge of assessing, communicating and managing risks, key social and political actors in influencing the way the public perceives risks, or what has been termed "cultural relativism" (Beck, 1992).

In light of Beck's theory of risk and media, the media have heuristic potential to influence and alter our perceptions of risk and the way we respond to risk, as the media is embedded in, and shapes, our sociocultural constellation. Mental models that individuals use to judge risks are internalised through social and cultural learning and constantly moderated, i.e. reinforced, modified, amplified, or attenuated by media reports, peer influences, and other communication processes (Morgan et al., 2001). This potential of the media to shape risk perception and to drive agendas and policy development has been documented in the literature (Escobar and Demeritt, 2014; Kasperson et al., 1988; McCombs, 2005; Happer and Philo, 2013). There is also evidence that the preoccupation of UK media coverage on *major* floods (and not on all floods) attenuates the salience of flood risk (Gavin et al., 2011).

Understanding flood risk perception and factors influencing it has important social and political implications as the level of awareness of flood risk directly influences people's actions before and during a flood (Grothmann and Reusswig, 2006). Key factors influencing risk perception include: 1) previous (or direct) experience of events; 2) information provided by the mass media or communication channels (or indirect experience), and; 3) trust in authorities and flood defence measures (Wachinger et al., 2013). Understanding risk perceptions allows us to predict, at least to some extent, people's response to natural disasters such as floods. Second, it enables policy-makers and institutional entities to deliver and deploy effective strategies that are in line with public expectations and that are accepted by the broader community. Third, it enables the creation of inclusive two-way dialogue between the public and government on the main issues and risks at stake, leading to an increase in preparedness and effective responses in such events.

By analysing reporting of the winter floods 2015/2016, this article helps to better understand the dynamics of the interplay between public and institutional responses to flood events, how these responses influence risk perception and the role of the media as a social moderator of flood risk. This article contributes to the literature by providing insights into how different factors, including media coverage, influence people's post-event perceptions. We provide recommendations on how "the risk perception paradox" (Wachinger et al., 2013) can be addressed to increase preparedness to flooding events and to manage public and political responses. In what follows we first outline the methodology and the framework used to analyse to what extent different factors influenced risk perception. We then report our findings on the influence of different factors on risk perception and how media reporting moderated risk perception. We end by critically analysing the findings and their policy implications and conclude with the recommendations and future research needs.

#### 2. Methods and data analysis

We adapted Wachinger et al.'s (2013) framework to conceptualise the factors that influenced risk perceptions in the winter 2015/2016 flood events (Fig. 1). The framework visualises the media as a filter and highlights the media's ability to amplify, reinforce, modify and attenuate risk perception by selectively conveying and shaping information. *Political and institutional responses* were added to the framework because they are also recognised to influence risk perception (Butler et al., 2016). Using this framework, we analysed to what extent the media reported on these factors and whether and how the media might influence risk perception. In the discussion section we explore the interaction between risk perception and effective policies and communication and individual and community preparedness. Download English Version:

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