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# **IAMCR 2015**

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<sup>2</sup> The email addresses have been intentionally altered to prevent harvesting by spammers.



We have endeavoured to ensure that these are the abstracts presented in Montréal. Nevertheless, due to cancellations, additions and other factors, abstracts may be included here that were not presented and abstracts that were presented may not be included. Please advise us of any errors at support2015@iamcr-ocs.org.

**Title:** Patterns and risk communication issues during the contingency against Chikungunya in print media of Paraguay, from June to October 2014

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**Abstract:** Chikungunya is a mosquito-borne viral disease that causes fever and severe joint pain. The first documented outbreak of chikungunya with autochthonous transmission in the Americas started in December 2013. By June 2014, many countries in the Americas, including Paraguay, developed Risk Communication plans. The aim of this study was to describe issues in the media, evaluate the results of training journalists and analyze how the information provided by the public sector was replicated in the private media. Content analysis of publications in print media of Paraguay from June to October 2014 was conducted. The frequency of variables were calculated, including significance test, using Epi Info 7. Of 142 articles reviewed, 76 (53.5 %) corresponded to the private sector and 66 (46.5%) to the public. The 60% had as its content: the announcement of cases (18.3%; 95% CI = 12.3 to 25.7), vector control measures (17.6%, 95% CI = 11.7 to 24.9) and warnings (12% CI 95% =7.1 to 18.5 %). Significant difference was found in the selection of the main topics depending on whether the media belonged to the public or private sector. 80.8 % of the news that had as its central focus "announcement of new cases" were for private media (p=0.004) and 87.5 % of which had as its central focus the existence of a plan contingency corresponded to the public sector (p =0.001). Also, the news that highlighted the training provided under the contingency to Chikungunya were published in 83.3 % in



the public media sector (p = 0.017). 18.4% (95% CI 10.4 to 29.0) of news reproduced textually the public information and 27.6 % (95% CI 18.0 to 39.1) did so partially. The topics most frequently replicated by the media were the "Number of cases" (replicability ratio = 2.6) and the "Alerts" (replicability ratio = 2.3). Minor replicability had information about "Plan" and "Environmental Measures" As conclusion, it was stated that providing information to the press is an effective action within a risk communication plan. There is a difference between risk and risk perception. In epidemiology and integrated risk management, risk is defined as the probability of an event or the relationship between severity of a threat and vulnerability of the exposed population. It is therefore an objective measure Meanwhile, the perception of risk is a social construct that is determined by the subjective judgment that people make about the characteristics and severity of a threat. The factor of social outrage, fueled by the perceived lack of response from the authorities in charge, increases levels of perceived risk. Public publications that insisted with prevention messages and planning issues have not always been reported verbatim in the media, but have maintained an acceptable degree of replicability, which reflected reliance on official sources. It is observed that there was a change in the orientation of messages. At first warning messages marked presence (and increase risk perception) while in subsequent times greater emphasis on planning and promotion of preventive measures was observed.



**Title:** Detection and Danger in Climate Change Communication

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**Abstract:** Why has evidence of anthropogenic climate change not created the political conditions for avoiding dangerous climate change' How should our approaches to climate change communication reflect our answers to this question' Important work has been done on these questions in communication studies and related fields and diverse hypotheses abound. Scholars have argued that the problem lies in the scientific illiteracy of the public, the wiring of human brains to privilege near term threats, the bad faith of climate change sceptics, the intransigence of countries dependent on fossil fuel exports, the inability of scientists to speak clearly, the hubris and politics of liberal democracies, the evils of capitalism, the politicization of science, the failings of consumer culture, and even that that climate change is simply too complex for humans to understand. [References to this literature are available on request] I address this debate by situating the scientific detection of anthropogenic climate change in historical perspective in order to illustrate how the dominant means of demonstrating an observable human influence on climate displaced an ecological conception of climate change and its dangers in political discourse. I begin by illustrating how climate change as a policy concern was generated by geophysicists and defense industry consultants in the 1970s, and discuss how the conception of climate change as a CO2 emissions problem reflected the context and priorities of U. S. energy security concerns (in this respect, I extend the historical work of Spencer Weart, Naomi Oreskes, and Mike Hulme). I then examine two prominent efforts to dislodge this conception of climate change as it gained institutional authority and was used to organize an international policy framework for addressing climate change danger: Thomas Schelling's advice to the US National Academy of Sciences and William C. Clark's proposal for an alternative policy framework grounded in ecological politics. The ecological approach to understanding, modeling, and communicating climate change danger (exemplified by Clark), I suggest, was sidelined throughout the 1990s, until the policy failures that continued into the first decade of the 21st century permitted an alternative conception of climate change to challenge the prevailing hegemony. I conclude by bringing this historical investigation to bear on the question of how best to communicate climate change danger. I contrast how the ecological approach to climate change differs from the dominant approach institutionalized in UN negotiations and IPCC reporting and recommend scholars and activists rethink the priority that is usually accorded to global mean temperature measurements at the expense of abrupt change, extreme events, and tipping points.



**Title:** Six dimensions to confront a disaster: Proposal of a journalistic action model for the coverage of a catastrophe

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**Abstract:** This paper's objective is to model the journalistic action and decision making during catastrophic events. The model is capable of preemptively recognize actions and workflows of the journalistic process, in order to support the news departments of TV networks with tools that help the coverage of critic, unexpected, unpredictable, routine breaking events. It encompasses six dimensions, which come together in a proposal of more than 200 potential actions that newspeople must confront and execute in the coverage of general disasters, which bring forth a series of challenges that affect the usual professional workflow. These dimensions come from the traditional questions that shape the information process: What' (Challenge: Logistic / Emotional / Ethical / Informative), Who' (Participants or person in charge: Producers / Journalists / Editors / Executive directors), How' (Requirements: Personal needs / Third party needs/ Media requirements / External demands), When' (Timing relative to the disaster: Before / During / After / Constant), Where' (Disaster stage: Preparedness / Mitigation / Response / Recovery), Why' (Kind of disaster: Armed conflict / Natural / Sanitary / Terrorism). This can be interpreted graphically as a cube filled by actions, where each face of the cube is one of these six dimensions. This organization of the actions under these multiple inputs allows the actors in charge of the disaster's coverage to recognize fundamental actions considering their own responsibilities and purposes. For instance, a journalist might be able to recognize key personal actions that affect logistic issues during the coverage that will have effects over his decisions. In turn, a media executive could recognize the key actions he should undertake before the coverage of a disaster, that are associated to information challenges of all his team. The model was devised in the frame of a four year research project, financed by state funds, that studied television journalistic coverage of the February 27, 2010 earthquake in Chile. This event was selected for its magnitude (8.8 degrees in the Richter scale, followed by a tsunami warning on over 50 countries across the Pacific Ocean), and because it set the agenda of the Chilean media for several months, and because it put newsroom



routines to test. The model considers the data obtained during three research stages: a theoretical reflection (bibliographical revision and in depth interviews with newspeople) (Puente, S., Pellegrini, S. & Grassau, D., 2013a and b), a quantitative content analysis (Puente, S., Pellegrini, S. & Grassau, D., 2013, June; Puente, S., Grassau, D. y Pellegrini, S., 2014, July) and discourse analysis (Puente, S., Grassau, D., Rojas, R. & Vatter, N., 2014, July) of the case study. In short, the model was developed as a product that could go beyond the different existing manuals that provide practical tips focusing their proposal on specific actors, types of emergency, or actions. Thus, the multiplicity of points of view that this model offers turns it into an efficient reference tool for the different actors involved in the complex scenario confronted by the news media in a major catastrophe.

**Title:** HEURISTIC-SYSTEMATIC PROCESSING: THE EFFECTS OF ADVERTISING ENVIRONMENTAL INITIATIVES ON SKI RESORT VISITATION

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**Abstract:** This study examined the effects of promoting environmental or 'green' initiatives in ski resort advertisements on the inclination to ski at those resorts. Applying Chaiken's (1987) Heuristic Systematic Model of persuasion, the study investigated whether level of environmental concern predicted greater attention to environmental messages or heuristic cues in ski resort advertisements, and the relative effects of such messages and cues on decisions to visit particular resorts in the future. A convenience sample of 578 visitors to three Colorado ski resorts were randomly exposed to one of three experimentally manipulated advertisements, emphasizing the resort's environmental efforts, affordability, or a mixture of the two. Analysis revealed that participants with high levels of environmental concern were more likely to recall the environmental message in a mixed advertisement before heuristic cues (such as skiers, snow and resort logos). However, they were no more likely than less-concerned individuals to recall the environmental message before heuristic cues in an advertisement focusing solely on green initiatives. While environmental messages had no significant effect on the decisions of less-concerned individuals, those who were highly concerned were more inclined to return to a resort after exposure to an advertisement promoting the resort's green initiatives. Results illustrate the importance of understanding individuals' motivations to systematically process information in advertisements when using environmental initiatives to encourage ski resort visitation. They also provide practical insights regarding the effectiveness of advertising at resorts versus offsite when promoting environmental initiatives to concerned individuals.



**Title:** The Political Economy of Polar Diplomacy: A Textual Analysis of Arctic Council Declarations,

2004-2014

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**Abstract:** The Political Economy of Polar Diplomacy: A Textual Analysis of Arctic Council Declarations, 2004-2014The confluence of geopolitical, economic and environmental factors within the Arctic over the past decade has intensified the global focus on the region, an area comprised of vast ocean and the most northerly land masses of the Arctic nations, namely the United States, Russia, Canada, Iceland, Norway, Denmark, Finland, and Sweden. Climate change has been a felt presence ' not only altering ecosystems and wildlife habitat, but also opening up possibilities for new marine shipping lanes and sites for mineral and resource extraction. The emergence of these energy/mineral and transportation opportunities has coincided with growing demand for major global commodities (including oil and precious metals) during the past decade. National and economic interests have been quick to pursue such opportunities through exploration, environmental assessments, land purchases, and diplomatic endeavors. Young (2009) describes the Arctic post-Cold War as 'a locus of energetic and often innovative initiatives relating to the governance of human-environment relations.' It is at this intersection of environmental protection and economic development where the Arctic Council has channeled its energies, but also where member nations have forged their own approaches borne of national interests. As the major intergovernmental initiative involving all eight Arctic states, the Arctic Council carries out two stated objectives: the promotion of environmental protection, and sustainable economic development (Bloom, 1999). The organization's origins lie with both the Arctic Environment Protection Strategy (which the Council absorbed in 1996), and Russia's desire for an "Arctic zone of peace" in the late 1980s (Dodds, 2012, p.4). A intensifying focus on both climate change generally and specific environmental impacts of industry and exploration/ settlement are bound to put more challenging issues in front of the Arctic Council 'even though nation-state leaders have sometimes lacked the sense of urgency and crisis to strengthen substantially regional legal arrangements (Koivurova & VanderZwaag, 2007). This paper examines the emergence of the Arctic Council as the preeminent international governance body in the Arctic through the theoretic lenses of political economy and post-colonialism. Canadian historian and communication scholar Harold Innis is particularly important for a political economic examination of the Arctic region, given Innis' research travels throughout the Canadian north and his leadership of the Arctic Survey. Post-colonial theory complements a political economic framework to understanding the dynamics of power at the Arctic' explaining roles of ideology and race in relatively unchartered territory. It also serves as a potential category of critical analysis securing a political economic understanding of ideological domination under colonialism (Slemon, 1994, p.22). A textual analysis of governance documents analyses the relationships between national, corporate, environmental and Indigenous/community stakeholders in the Arctic, assessing the emerging discourse frameworks promoted by the Council as well as the



representation of subaltern voices. As a vehicle for political economic analysis, it helps to identify the embedded or proclaimed interests of power and capital 'and the relationship between the economy and political, social and cultural forms.



**Title:** From Science to Journalism'How Meteorological Information is Translated into TV Weather

Forecasting

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**Abstract:** This research focuses on the weather forecasting during the typhoon period in Taiwan in order to explore how scientific messages with uncertainty are translated into news with certainty. It aims to understand the relation between science (meteorology) and mass media (TV weather forecasting). Weather forecasting is the most common experience of science communication for Taiwanese people, particularly during the summer and autumn (June to October), the so-called typhoon seasons. Therefore, the period between June and October makes the best opportunity to observe and collect the data for this study. Theoretically, this research adopts an interdisciplinary approach combining the fields in science and technology studies (STS) and communication studies. It suggests that how the TV weather forecasters recognize their roles as scientists or journalists, and how they think of their information receivers (TV audience in this research) have impacts on how and what information is transmitted to the audience. Additionally, this article argues that the way and to what extent TV weather forecasters recognizes the uncertainty of meteorology and professional norms are reflected in their translation of weather information to the audience. Methodologically, this research adopts textual analysis to compare the differences between the content of typhoon warnings from Central Weather Bureau (official weather forecasting institute in Taiwan) and the information from TV broadcasting. Based on the findings from the textual analysis, in-depth interviews of TV weather forecasters are conducted to explore how they translate science into daily information for their audience. This article concludes that TV weather forecasters with professional meteorological backgrounds adopt a more complicated way to translate the scientific information to the audience than those without meteorological backgrounds. On the contrary, the study finds that TV weather forecasters without meteorological backgrounds provide a more understandable translation to their audience. Also, they would prepare a variety of equipment and perform dramatically to help their audience understand the forecasting information. With the triangulation of data collection and analysis, this research hopes to synthesize a comprehensive science-news translation model which can contribute to the existing literature in science communication.



**Title:** The Human Face of Climate Change. Environmental Justice and Visual-Verbal Framing in Mainstream and Alternative Media

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**Abstract:** Climate change is - in essence - a human problem. Indeed, the climate change issue is populated with responsible emitters, actors discussing solutions, victims. The concept 'environmental justice' (EJ), in particular, sheds light on this human face: The 'South' will suffer earlier and most severely due to the values of the 'Western' development model (e.g., 'apek, 1993). The human face of climate change is increasingly becoming visible in (mainstream) media accounts (Doyle, 2012; O'Neill, 2013), giving rise to particular visual frames (and/or framing devices). Indeed, we argue that the allocation of roles and the characterization of actors often are key to the framing or reasoning devices which underpin frames. The latter do, however, often reflect hegemonic, stereotypical thinking. Given the particular impact of visual frames on the audience's views, values, actions, and hence, on reality, this might have major implications (Leiserowitz, 2006, 2007; Messaris & Abraham, 2001; Spence, Poortinga & Pidgeon, 2012). Apart from their particularly subtle and pervasive character, visual frames - being a subtype of the general framing concept - comprise the same elements as their verbal counterparts: framing devices, a central organizing theme and reasoning devices (Brantner, Geise & Lobinger, 2012; Coleman, 2010; Dan & Ihlen, 2011; Rodriguez & Dimitrova, 2011; Van Gorp, 2006). Furthermore, frames always interact with contextual influences (Shoemaker & Reese, 1991). While the (top-down) mainstream media tend, as such, to reproduce hegemonic frames (ideologies, stereotypes), alternative (bottom-up) media are much more likely to deconstruct these frames and construct alternatives (e.g., Kenix, 2008). To the best of our knowledge, no research has yet been conducted on the mainstream/alternative visual framing of the EJ case, exposing the relations between characterizations and allocations of roles and certain frames. Nevertheless, other visual/verbal framing and CDA studies do offer some insights. Generally speaking, mainstream media depict 'Western' actors, in particular the elites, as major agents, with a face, a voice, an opinion. 'Southern' actors, however, are more often reduced to passive - voiceless, faceless - victims or bystanders, if not made invisible altogether. Alternative media, on the contrary, often reinstate the latter as active, individualized agents. With regard to the verbal mode, such diversified allocations seem to give rise to the hegemonic EJ frame and its alternative counterpart (Chouliaraki, 2006; Farbotko, 2005; Moernaut, forthcoming). Bearing in mind that the verbal and visual mode always work in tandem (Coleman, 2010), we conduct a multimodal qualitative framing analysis based on a corpus comprising the articles featuring climate



change, published - from February 28, 2012 to February, 28, 2014 - in three Flemish (Northern Belgian) mainstream newspapers (n = 532) and an alternative outlet (n = 194). The purpose of our research is to expose the visual frames (and framing devices) regarding EJ, employed in the alternative media, as opposed to the mainstream media. These will be discussed with regard to their interaction with - reinforcing or contradicting - the verbal frames. More specifically, we will attempt to exhibit the visual-verbal reproducing or deconstructing of certain (hegemonic/stereotypical) roles and responsibilities.



**Title:** The World's Dumping Site: Ecological Ethics, Environmental Justice and China's E-waste

Challenge

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**Abstract:** As Richard Maxwell and Toby Miller comments: 'ecological ethics barely figures into the way media and communication researchers think about media technology'. Indeed, despite the emerging media scholarship on the material impacts of ICTs over the past decade, ecological considerations still remain a peripheral concern for the study of media and society and a comprehensive understanding of the socio-environmental impacts of ICT infrastructure is yet to be achieved. Take China as an example, China has been widely acclaimed as 'the world's factory' over the past decade and now it is the primary site for global ICT manufacturing and assemblage, with the world's largest group of digital labour. Tracking the global 'mode of production' of digital labour, recent studies have critically scrutinized the miserable working condition of ICT workers in China (e.g. Foxconn), using it as key empirical evidence for analyzing the exploitation of the working class in the global information era. Less research attention, however, has been paid to the 'afterlife' of the digital devices. As the world's second largest consumer of electronic goods and largest importer of e-waste, China also plays a key role in the terminal side of the material and environmental life cycle of the global electronic equipment. Currently, approximately 70% of the global consumer generated e-waste is dissembled and recycled in China, often in illegal and extremely pollutant methods. China's underground e-waste industry has generated enormous environmental damage to local communities, with issues such as toxic emissions, water contamination, and rising cancer rates widely covered by both domestic and international media. As such, from the perspective of political economy of communication, the dire situation of China's e-waste challenge invites further theorization of ICTs' social-environmental impacts, especially in terms of their broader connections with issues such as ecological ethics and environmental justice. Drawing upon theories of environmental justice, this essay delineates the e-waste challenge in China and its mounting socio-environmental negative impacts upon local communities by critically evaluating domestic and international public discourses on this issue. Based on the notions of distributive justice and procedural justice in environmental risk management, the essay argues that there is a lack of justice perspectives in the mainstream discourse on the e-waste challenge in China. Although the dire situation of China's e-waste challenge is often framed in worrying and sympathetic tones, the causes of the issue are often interpreted in terms of the lack of legislation or technological innovation. The neglected point of such narrative is the responsibility of those behind the acceleration of ICT upgrades and digital dumping practices. In this regard, China's e-waste challenge presents a vivid example of the 'zone of sacrifice' phenomenon in the global era, in which the vulnerable communities of the Global South are forced to bear the environmental injustice based on class and racial interests. In this spirit, the essay ends by addressing the significance of environmental justice perspectives for future critical scholarship on ICTs' global material impacts.



**Title:** Preparing Society for Abrupt Climate Change: Assessing the Influence of Worldviews, Ideologies and Media Use on Risk Perceptions

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**Abstract:** In this paper, analyzing the results of a Spring 2015 nationally representative survey of U.S. adults (N=1,000), we conduct the first systematic assessment of public awareness and risk perceptions relative to abrupt and rapid climate change. We ask respondents about their awareness and beliefs specific to the following potential events or impacts: The disappearance of Artic sea ice due to warmer polar temperatures; the mass extinction and dying out of animal, fish and plant species; the melting of the Antarctic ice sheets leading to major seal level rise and coastal flooding; the melting of the Greenland ice sheet leading to major sea level rise and coastal flooding; changes in the North Atlantic ocean currents causing major disruptions to weather and climate; the melting of Artic permafrost leading to the rapid release of trapped greenhouse gases; and warming in the Arctic leading to extreme cold and 'Polar Vortex' weather patterns. Controlling for key demographics, science literacy, and other factors, we assess differences in public awareness and risk perceptions by previously established measures of worldviews, values, and ideologies. We also analyze how respondents across these different audience segments receive news and information relevant to abrupt climate change and the influence of such information sources on risk perceptions. To conclude the paper, we discuss the implications for continued research on this topic and for efforts at preparing society for rapid, potentially catastrophic climate change-related risks.



Title: 'El medio ambiente' no es noticia: escasa publicación en dos diarios de Jalisco, México

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**Abstract:** Es apenas en las últimas décadas que se ha comenzado a discutir sobre la ciencia y la tecnología de la sustentabilidad (Giannuzzo, 2010) con el propósito de solucionar problemas de orden tanto teóricos como prácticos, así como la integración de diferentes disciplinas en los estudios sobre el medio ambiente. Hay reconocimiento de la ciencia ambiental en diversas publicaciones científicas y su inclusión en ciertas carreras; no obstante, a través de los medios de comunicación, este reconocimiento no es palpable, ya que poco se difunde o conoce de esta disciplina. Y lo que es peor, no siempre los estudios sobre el ambiente (medio ambiente, en específico) derivan en mejoras ya que existe una falta de articulación entre las problemáticas ambientales, la investigación y las acciones necesarias a la solución de estos problemas, o al abordaje en mayores estudios interdedisciplinarios. Asimismo, la producción científica y tecnológica, en la mayoría de las veces, no corresponde al tipo de conocimiento que puedan ser utilizados por los encargados de formular políticas públicas en ciencia y tecnología (Modvar & Gallopín, 2010), ni a la información que tienen las personas sobre CyT (ciencia y tecnología), o al cómo se comunique en los diferentes medios de comunicación. Con el propósito de analizar cómo se presentan las diferentes disciplinas científicas en la prensa local impresa, se procedió a analizar qué, qué tanto, cómo, entre otras cuestiones, se pone de manifiesto de la ciencia y la tecnología en los dos diarios de mayor circulación en el Estado de Jalisco, México: El Informador y Mural. El estudio consistió en hacer una comparación acerca de la publicación de notas relacionadas con ciencia (en sus diferentes campos académicos) y tecnología. Se llevó a cabo un análisis minucioso de ambos periódicos por el período de un año (julio 2012-junio de 2013) a través de la técnica de análisis de contenido, teniendo como base la semana construida (6 semanas en total). Se establecieron diferentes categorías para realizar el análisis de las notas, entre ellas, la de disciplinas científicas (a cuáles se hace mayor alusión, por ejemplo), tipo de fuentes, alcance, tratamiento y contenido de las notas, etc. En particular, las notas sobre las ciencias ambientales fueron casi imperceptibles: de las 283 notas recabadas en el período aproximado de un año, solo 15 fueron publicadas entre los dos diarios. En cambio, las notas relacionadas con salud fueron las que tuvieron mayor espacio y visibilidad en ambos periódicos (82 en total). Se vislumbra una tendencia hegemónica de lo que se trata en los diarios, particularmente en Latinoamérica, con respecto a las ciencias de la salud, según muestra parte de la bibliografía existente sobre el tema (Polino, 2008; Massarani & Buys, 2008; Ramalho et al., 2012; Arboleda, Hermelin y Pérez, 2012, entre otros), en detrimento de las otras disciplinas científicas, lo que contribuye a construir representaciones sociales de la ciencia, precisamente hegemónicas, que poco contribuye a una reflexión crítica de la ciencia y la tecnología, sea cual fuere la disciplina (Domínguez, 2012).



Title: OCUPE ESTELITA, SUBJECTIVATION AND RESISTENCE

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**Abstract:** We reflect on the discursive configuration of events surrounding the Novo Recife Consortium and the Ocupe Estelita movement, in Recife, Brazil. Our focus is the occupation of José Estelita pier, which started in May 21, 2014, and lasted 60 days, and the actions in online social networks and other media The occupation represents a discursive battle over urban occupation between the movement and a group of local contractors of Novo Recife Consortium that already exists for some years in the city of Recife. The land occupied by the movement, that has over 100,000 m<sup>2</sup> and has been abandoned for more than a decade, was auctioned in October 2008 and delivered to Moura Dubeux and GL Developments 'Novo Recife Consortium constructions. In 2009, the Consortium submitted to the City Hall of Recife the Novo Recife urbanization project, which provides the construction at the site of a housing and commercial complex. The project is the issue of questions of social movements and prosecutors. From this context, we reflect on the subjective processes and construction of meaning on urbanization involved in ideological disputes around the Novo Recife Consortium. From a Foucauldian perspective, we treat the discourse of the Ocupe Estelita movement as a builder of subjectivity networks that circulates and also suffers interdictions in certain areas. The importance of studying the logics of circulation of the discourse of Ocupe Estelita dues to the fact that discourses constitute social reality. As the discursive materiality is the most sensitive indicator of changes in social reality (Bakhtin, 2010 [1929]), the emergence of this particular social movement could indicate other formas of articulation between subject, discourse and city. The discursive event of May 21 shows us that the discourse of Ocupe Estelita movement circulates in three distinct areas: 1) a space formed by interpersonal interactions, which include the occupation itself, militancy, political, cultural and educational actions; 2) a online space, that includes social networks as Facebook and Twitter and blogs and 3) a space formed by the traditional media, consisting of newspapers, magazines, televisions and radios. The movement is constituted from an emerging discursive formation capable of questioning the hegemonic discourse of contemporary urbanization. The way it builds other subjectivities and senses of how to inhabit the city - contrary to the fortified enclaves (CALDEIRA, 2000) that represent the new order of Brazilian urban space - refers to the primary function of social movements to reflect on the social order and indicates the importance of their study in Communication studies. The prohibition of Estelita discourse in local newspapers of Pernambuco state showed that the production of meanings occurred in the international media and in digital media, reinforced by interpersonal interactions. The



built subjectivities are related to the empowerment of Recife citizens in the processes of choice concerning the urbanization of the city.

**Title:** When 'Victims' Take the Lead. Bottom-up Positionality and the Environmental Justice Frame: Deconstruction and Construction from Below

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**Abstract:** 'Western' thinking is strongly permeated by an economic development model of liberalism and Euro-American centered globalization. However, it has been argued that while the rich and powerful 'West' benefits from this thinking, the negative consequences 'environmental hazards, such as climate change, economic and social inequality and vulnerability 'largely fall on the 'South' (Rees & Westra, 2003). This concept, environmental justice (EJ), has been strongly debated in recent years (e.g., Agyeman and Evans, 2004). Mainstream media, however, usually address it on a rather 'superficial' level (Farbotko, 2005), failing to look beyond hegemonic values. This is largely due to their topdown/hegemonic 'positionality', or 'location within the larger social formation' (Taylor, 2000, p. 509). Indeed, according to Pulido and Pena (1998) positionality is key to the way people interpret, define and thus act upon environmental issues. Positionality 'in terms of context (e.g., sponsors), content (e.g., sources) and production process (e.g., journalists) is also a core point of difference between mainstream and alternative media (Atton, 2002; Downing, 2001; Harcup, 2014): Alternative media, amplifying the grassroots voices of organizations or citizens, tend to hold a bottom-up positionality. As such, they are more likely to deconstruct hegemonic thinking and construct alternatives (Hopke, 2012). Drawing on the assumptions above, we conducted a qualitative (deductive-)inductive framing analysis (Entman, 1991; 1993; 2004; Richardson, 2007; Tankard, 2001; van Dijk, 1998; Van Gorp, 2006). Our corpus comprised all articles featuring climate change, published between February 28, 2012 and February 28, 2014 in three Flemish (Northern Belgian) mainstream newspapers (n = 533) and an alternative website, 'DeWereldMorgen' (n = 194). Our assumption that one frame may be employed by various ideological stances is illustrated remarkably vividly in the oppositional realizations of the EJ frame. Hence, based on our findings, we compiled matrices of the mainstream and alternative EJ subframes, next to the overarching master frame matrix. In order to illuminate these abstract matrices, we complemented them with a micro-scale analysis of case study articles. By and large, the alternative subframe reverses the 'Western' hierarchical thinking, based on demarcations like 'us' ('West') versus 'them' ('South'), agents versus patients, heroes versus victims. Both subframes denounce the 'West's' excessive GHG emissions. Nevertheless, the mainstream represents the disproportionate vulnerability of the 'South' to climatic changes as an internal defect, which can only be resolved by external (economic) help (the 'West'). The alternative subframe, however, reverses this thinking: An external cause ('the West') bears full



responsibility for the 'South' suffering the major part of the climate change consequences, but also for its disproportionate (social, economic') vulnerability, it being reduced to a silent victim. Yet, the 'South' holds a superior/equal (agent) position with regard to adaptation, thanks to grassroots ('internal') experiences. Clearly, the alternative subframe provides the broader contextualization which the mainstream overlooks. This unique reversal is also vividly illustrated by the ('reversed') ideological square (based on van Dijk (1998, p. 33)), we introduce as a unique contribution to the (applied) linguistics and media studies field.



**Title:** Scientific (Un)Certainty of Life Sciences in the Media: Adapting a Reasoned Action Approach to Explaining Journalistic Depiction Behavior

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**Abstract:** Science journalists are responsible for the media's depiction of research findings in the field of life sciences as more scientifically certain or uncertain. Scientific uncertainty as a basic characteristic of science"is defined by tentative, contradictory, or not reproducible results (GRADE Working Group, 2004; Zehr, 2000). Although researchers have determined that the representational styles of scientific uncertainty (downplaying uncertainty, hyping uncertainty, and accurate depiction) vary among science journalists (Ebeling, 2008; Schneider, 2010), the reasons for these differences have not yet been fully investigated (initial findings: Stocking & Holstein, 1993, 2009): while some journalists seem to depict scientific uncertainty, others seem to avoid it in their reports. To identify the reasons for this, a model of science journalistic depiction behavior with respect to scientific uncertainty (AUTHORs, 2015), based on the reasoned action approach (RAA; Fishbein & Ajzen, 2010), will be tested in this study. To test the model, a database containing the contact details of German science journalists was generated to achieve a representative sample. Three different methods were used: extraction of names (1) from (online/offline) mass media outlets, (2) from databases provided by Zimpel and the Kroll booklets (Kroll & Kroll, 2003, 2006, 2008), (3) provided by two German journalism federations. The database contained 1249 contact details. The telephone numbers of those journalists who agreed to participate were submitted to a CATI-laboratory. Finally, n = 207 interviews were completed. To test the model, all the variables related to the RAA (Fishbein & Ajzen, 2010) were collected individually. The defined behavior in this investigation is the representation of uncertain aspects of research (in the field of life sciences) in a future report. Based on the fact that this is a survey with science journalists, which is exploring the reasons for their behavior (but in fact not measuring their behavior), the intention to perform this behavior becomes the dependent variable. Relevant independent variables are behavioral, normative, and control beliefs, as well as background factors"they were extracted from the research literature (e.g., AUTHORs, 2015; Stocking & Holstein,



1993, 2009). Testing regression models (R²adjusted = 42.7) showed that the journalistic intention to represent scientific uncertain aspects of research in a future report seemed to be influenced by the coverage of other media as a control belief (' = .340\*\*\*), expectations of the audience as a normative belief (' = .258\*\*), as well as by the background factors of individual perceptions regarding the scientific uncertainty of the main field of coverage (' = .305\*\*\*), past behavior (' = .234\*\*), and by the gender of the study participants (' = -.222\*\*), with male participants showing a greater likelihood of intention to represent uncertainty than females. The main purpose of the present paper was to test a model derived from the RAA (Fishbein & Ajzen, 2010), as research currently lacks a theory-based approach to better understanding and explaining science journalists' depiction behavior of scientific uncertainty. This paper is able to extend the research literature in several ways; findings will be discussed at the conference.

Title: Public communication and ecology: how digital politics is fostering environmental sustainability

in Brazil

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**Abstract:** Digital politics created new ways of facilitating interactions between public authorities and the broader society. In contemporaneous Brazil, creative forms of online communication between actors impacting environmental governance have been developed by governments throughout the country, in an attempt to cope with the scale of the uneven distribution of natural resources and the challenges posed by the growing complexity of their management. As a major source of information on public policies democratically formulated to meet those challenges, government web portals and their role in contributing to transparency and accountability have become a research object in need of indepth and comprehensive understanding. Research advances by uncovering their characteristics, pitfalls and shortcomings. In the context, the fast evolution of concepts and practices of e-government and digital democracy requires the formulation of investigations to verify the occurrence of new developments still little known. In the field of communication, questions have been introduced in respect of the fulfillment of the right to information by government web portals, related to the commitment of public management with sustainable development. This paper presents results of research seeking to identify the potential contribution of online public communications about environment and sustainability to the strengthening of citizenship in Brazil, considered in its dimension of exercising the right to information. Specifically, we aimed to obtain: a) a comprehensive assessment of the quality of the achievements of digital public communications as a source of information about the performance of state and federal public policies for the environmental sustainability, facing the demands of social and economic development and public investment in areas such as nature conservation, water supply management, water resources, solid waste, biodiversity, conservation units, land use and environmental licensing policies; b) a systematic characterization, in comparative perspective, of the context, scope and depth of the information on policies for environmental sustainability available in government web portals of the 27 Brazilian federal units and the Ministry of the Environment regarding six axes of analysis, comprising 20 categories: background and diagnoses; purposes; norms and standards; publics and sectors benefited; social impacts; economic impacts; c) the formulation, in face of the findings about the quality of the digital public communications about environmental sustainability, of communication management strategies to government web portals, capable of improving the availability of information on the performance of public policies. The analysis of 271 web pages accessed in the year of 2014 revealed the existence of amounts ranging from 12% to 47% of the requisite information for a full characterization of an environmental policy, as established by the theoretical and methodological assumptions of our research. This result suggests that the information available on the government websites would be insufficient to provide a satisfactory characterization of public policies, and points to the need of improvements in online public



communications on sustainability in Brazil. We suggest that our evaluation framework, proposing a checklist of 20 criteria for comprehensive policy communication, should form the baseline for government environmental departments throughout Brazil and beyond to effectively provide information needed for democratic engagement.

**Title:** Fracking in German Newspapers. Quantitative and qualitative analyses of the impact of corporate communication on media coverage.

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**Abstract:** This paper presents findings of an empirical analysis of German newspapers about hydraulic fracturing ('fracking'). In Western nations, hydraulic fracturing and related impacts are currently one of the main issues in environmental discourses in the media (Evenson et al., 2014). Here, corporate communications activities play a significant, yet not easily visible role in shaping these discourses (Lester, 2010; Smith & Ferguson, 2013). In order to understand the influence of corporate communications on media coverage, it is critical to scrutinize the emergence and effects of fracking related communicative processes (Boudet et al. 2014; Jones, Hillier, & Comfort, 2013; Matz & Renfew, 2014; Schirrmeister, 2014; Wolling & Arlt, 2014). The media discourse is typically dominated by economic considerations, the protection of the environment and considerations for public health (Melo-Martín et al., 2014). As Boudet et al. (2014b) point out, there is a substantial need to enhance our knowledge of these topics. However, the coverage often seems biased (Jaspal & Nerlich, 2014). Taking into account the vital role of media as a source of information (Nelkin, 1995), these findings are even more relevant. Although commercial drilling for shale gas has not yet started in Germany, the discourse in the German mass media seems more controversial than in other European countries. Based on the theoretical concept of 'framing' (Entman, 2009; Scheufele, 1999) and considerations pertaining to the influence of public relations on media coverage (Baerns, 1987; Baerns, 2009) we conducted a quantitative empirical study (N=260) of three German political newspapers in 2014 (Jan.-Dec.) with the highest public and political impact (Der Spiegel, Die Zeit, Die Welt) and their coverage of fracking related topics. In order to measure the influence of the most quoted proponents on the content and storyline of the respective newspapers, a qualitative analysis was conducted covering corporate communications activities (website, press releases, campaigning etc.). Our main questions wereRQ1: How do German opinion leading newspapers cover the emerging discussion on the topic 'fracking"RQ2: To what extend is the media coverage influenced if not determined by corporate public relations activities'First findings show that the dominant tone of the coverage in Germany was rather negative (48%), while positive and neutral tones characterized 20% and 31%. The vast majority (50%) of the actors are political institutions or scientific experts (19%). Claims from fracking related companies (9%) and from environmental groups (6%) are playing a minor role. In contrast, economic aspects (14%) are the dominant frame in the discourse while only 4% is addressed to environmental



impacts.In deeper analyses, the paper will critically discuss the communicative frames in the press (e.g. arguments) and their potential influence on public opinion building and political decision-making in comparison with corporate communications activities. Furthermore, we will contrast our findings with similar studies from Europe (e.g. Cotton et al., 2014; Jaspal & Nerlich, 2014; Jaspal et al., 2013; Mercado et al., 2014) in order to evaluate similarities and differences in different national discourses.



**Title:** comunicación ambiental: sus supuestos epistemológicos y su oportunidad para construir alternativas al capitalismo

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**Abstract:** La ponencia analiza los supuestos epistemológicos que han configurado la comunicación ambiental en España y América Latina. Para ello, se realizó una revisión de los documentos que presentan una conceptualización de la comunicación ambiental y las nociones de ésta presentes en los trabajos de investigación de los últimos diez años. Se puedo determinar que los autores iberoamericanos que han trabajado la comunicación ambiental abordan esta disciplina desde principios epistemológicos que, de manera implícita, mantienen una relación con la naturaleza heredada de la episteme moderna. Esto es, que consideran a la naturaleza un objeto exterior que está allí para ser aprendido y, por tanto, que puede ser usufructuado. Ese principio de relación es la base del capitalismo, pues éste se basa en la explotación de recursos naturales que son manufacturados como productos a ser consumidos bajo la lógica del mercado. Esa dinámica de producción tiene como consecuencia la actual crisis ambiental, que en últimas es una crisis en los principios de la civilización occidental (Leff, 2009; Estermann, 2012). Por ello, la comunicación ambiental no se puede limitar, como hasta ahora lo han hecho gran parte de sus autores, en la promoción de comportamientos y conductas conservacionistas, pues termina siendo favorable a la dinámica capitalista, dado que sólo se procura mermar el agotamiento del planeta, pero no un cambio trascendental, como lo exige la actual coyuntura ambiental (Escobar, 2011). La ponencia propone la configuración de una comunicación ambiental que amplié esta relación epistemológica, para lograr la construcción de propuestas alternativas al capitalismo. En esa línea, recupera la biología del conocimiento (Maturana y Varela, 2007) y las nociones andinas del Buen Vivir. La primera, la biología del conocimiento, permite ver que la naturaleza no es un objeto exterior a ser conocido y protegido, sino que hay una co-determinación entre el sujeto y su ambiente. Lo segundo, el Buen Vivir, recupera las cosmovisiones de los pueblos andinos de América del Sur, que persiguen principios de vida diferentes al capitalismo, es decir, no limitados a acumular y consumir, sino que tienen como horizontes de sentido la armonía entre los sujetos y la naturaleza, orientando la felicidad a otros horizontes diferentes al consumo (Gudynas y Acosta, 2011). Finalmente, la ponencia propone que los comunicadores ambientales realicen un autoanálisis antropológico (Bourdieu, 2003), para que antes de hacer propuestas comunicativas, tengan presente los sistemas de creencias que de manera inconsciente configuran su noción de ambiente y su relación con la naturaleza.



Title: Counter-Hegemonic Discourse or "Business as Usual": A Case Study of Grist's Bakken Shale

Coverage

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**Abstract:** This study investigates what knowledge(s) media construct with regard to fracking. Recent literature, including special issues of Communication Studies (Sellnow and Seeger, 2014) and Environmental Communication (Olausson and Berglez, 2014), address media's engagement with climate change, but little if any literature exists on related matters such as fracking. Undertaking research of this type is significant given media's role in constituting knowledge, and fracking's dubious environmental reputation. Contextually, this research occurs in North Dakota's rapidly developed Bakken shale region'at one of the largest unconventional oil deposits in the United States. This study utilizes post-structural discourse analysis in studying relevant texts appearing on the environmental blog Grist. In contrast to the grammatical and linguistic focus of structural discourse analysis, poststructural discourse analysis considers how power constitutes knowledge, objects, behavioral norms, and actions toward our living world (Castree, 2001, 2014; Fairclough, 1992; Foucault, 2010/1972; Hall, 1997; Rose, 2001). Scholars are divided as to the blogosphere's potential to disrupt taken-for-granted knowledge'e.g., some argue that self-authorship, and linking to alternative knowledge sources open up new discursive and informational spaces (Anderson and Marhadour, 2007; Kaye, 2010); others argue that blogs perpetuate dominant power and knowledge by linking to 'mainstream' corporate media (Kenix, 2009). Regardless, scholars argue that counter-discursive media must be seen in order to influence or challenge dominant discourse (Castree, 2014). Given Grist's status as a Top 100 (overall) blog, and second-most-popular 'green' blog, the outlet represents a 'focal point' environmental blog theoretically capable of influencing broader discourses (Sunstein, 2007, p. 143; Technorati, 2014). Grist therefore presents an opportunity to study blogs as part of a broader mediated environmental discourse. while doing so within the specific, environmentally relevant context of fracking in North Dakota's Bakken region. Initial findings of this case study indicate ambiguity in Grist's discourse. Grist challenges neoliberal texts which celebrate deregulation, monetary wealth, job creation, and individualistic pursuits common in more mainstream media. Grist also critiques environmental, industrial, and regulatory misdeeds associated with fracking. However, Grist fails to articulate alternatives to dominant ways of thinking and doing'e.g. energy use, capitalist consumption. Arguably, Grist speaks the discourse of 'sustainable development' which, scholars argue, fails to address root causes of environmental issues, and is often 'rhetorical cover for business as usual' (Castree, 2001, p. 3; see also Dryzek, 1997). This case study is not intended to be a meta-analysis of Grist's environmental discourse, nor does this research examine Grist vis-à-vis other environmentally-themed media. Both areas represent fruitful opportunities for further research.



Title: Risk communication in Chile. A Study of the 2014 Valparaíso wildfire

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**Abstract:** Global warming and the consequent increase in natural disasters as well as population growth have influenced global risk prevention worldwide. Although progress in science has allowed the prediction of risks and the development of risk scenarios, there are numerous examples indicating that there is a gap between scientific knowledge and the ways communities perceive risks. This scenario has prompted scholars to recognize and examine the role of risk communication, particularly how it could increase the level of public awareness and promote empowered communities. The analysis of risk communication and how a specific piece of knowledge is received and understood prompts us to talk about the tension between who produces knowledge 'authorities or scientists 'and the public. Building on these questions and based on Sherry R. Arnstein's and Iris Marion Young's definition of citizen participation, and the notion of power and repression given by Michelle Foucault, this paper analyzes how risk communication practices could perpetuate an unequal system of knowledge distribution. Based on a case study methodology, this paper addresses this symbolic practice by exploring the most recent emergency situation in Chile: 2014 Valparaíso wildfire. Through an examination of how public information and scientific knowledge is disseminated in society, this study suggests that the absence of community participation in Valparaiso risk preventive plans as well as the hierarchy of power in risk communication practices in Chile, has (a) preserved a low level of public awareness, and (b) maintained a top down and lineal flow of communication. This analysis considers factors such as social and economical characteristics, relationship between stakeholders and impact of media. Keywords: risk communication, knowledge distribution, public awareness, and citizen participation.



**Title:** Environmental Communication and Critical Discourse: Methods for Understanding the Mediated Alienation of Humans from Nature

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**Abstract:** News, marketing, and other communication alienate people from nature and make things look grim, so that people feel discouraged about the planet. How might one study that problem in environmental communication' Most US people live in urban settings where media filter understandings of nature (Hansen, 2011), and critical discourse analysis (CDA) provides both theory and method for critiquing texts (Bell and Garrett, 1998) and exposing power relationships in media. Most CDA ignores the ecological, and so needs enhancing to capture complex human-nature representations. Blending historical, ontological, and eco-linguistic approaches can offers a subtle view on an expanded range of nature-discourse issues (see, e.g., Stibbe, 2014). Researchers have propose new, liberating approaches (Martin, 2004), such as Milstein's (2009) work on dialectics at the zoo, that might help find sources in discourse for the problem of discouraging environmental communication. This essay proposes combining method perspectives for discourse within environmental content. Fairclough (2004) lays the foundation in context, text and discourse with a focus on injustice. Next, Reisgl & Wodak (2009) add the historical element to expose origins and to track changes over time. Third, Dryzek (2013) contributes ontological assessment to discern the industrial roots of environmental discourse in key elements of stories. Finally, Hodge (2012) suggests identifying contradictions in the 'texts' to discover communication in modern settings reveals complexity and how contradictions persuade. The essay examines each perspective for a particular strength to see how media depict nature in relation to humans. Enhancing CDA with these perspectives expands the critique of environmental discourse to provide a holistic view and expand the range of potential solutions. Combining CDA strategies expands the understanding of power in environmental discourse, revealing new insights such as how discourse at the human-nature nexus tends to escalate in patterned ways that reinforce power relations. Finally, the combining strategy can help build an environmental action framework to help find new ways of thinking about the problem of the public being alienated from the environment. References Bell, A., and Garrett, P. (1998). Approaches to Media Discourse. Oxford: Blackwell.Dryzek, J. (2013). The Politics of the Earth. Oxford: OUP.Fairclough, N. (2004). Semiotic aspects of social transformation and learning. In R. Rogers, (Ed.), An Introduction to Critical Discourse Analysis in Education (pp. 225'236). Malwah, NJ: Erlbaum. Hansen, A. 2011. Communication, media and environment: Towards reconnecting research on the production, content and social implications of environmental communication. International Communication Gazette, 73(1'2), 7'25. Hodge, B. (2012). Ideology, identity, interaction. Critical Approaches to Discourse Analysis across Disciplines, 5(2), 1'18. Martin, J. (2004). Positive discourse analysis. Revista Canaria de Estudios Ingleses, 49, 179'200. Milstein, T. (2009). Discourse, power, and conservationism. Environmental Communication, 3(1), 25'48. Reisigl, M., and Wodak, R. (2009). The discourse-



historical approach. In Reisigl and Wodak (Eds.), Methods of Critical Discourse Analysis (2nd ed., pp. 95'129). London: Sage.Stibbe, A. (2014). An ecolinguistic approach to critical discourse studies. Critical Discourse Studies, 11(1), 117'128.

**Title:** Framing and networks in Japanese nuclear power reporting

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**Abstract:** The Fukushima nuclear accident in Japan in 2011 has triggered a number of studies on the impact of accidents on the framing of nuclear power in the media. However, even though the impact of the nuclear accident in Japan can be supposed to be the strongest worldwide, the changes in Japaneselanguage media framing have not been scrutinized yet. The paper compares the changes of framing in the three most important Japanese newspapers, Yomiuri Shinbun, Asahi Shinbun and Mainichi Shinbun. Before the accident, two of the newspapers (Asahi and Mainichi) showed a dominant framing of nuclear power in terms of public accountability, combined with a mix of framing in terms of energy security, cost-efficiency and risk. One newspaper (Yomiuri) showed a dominant framing in terms of energy security and social progress. The Fukushima nuclear accident brought a change of frames in two newspapers (the Asahi and the Mainichi) with the cost-efficiency and energy security frames largely diminishing and the accountability frame further becoming dominant in these papers. In the Yomiuri Shinbun, no significant change in framing could be observed. How can this difference be explained'I draw on data on the integration of science journalists into government and lobby networks and argue that this integration can account for the changes in framing by journalists. Yomiuri science journalists in important posts (chief or deputy chief science editor) are entirely integrated into businessgovernment lobby networks. In contrast Asahi science journalists are integrated only to a limited extent while Mainichi journalists show the least degree of business-government network integration and instead some linkages with protest movements. While in political communication political parallelism, a concept focusing on political parties, has been proposed as a concept to compare communication systems, I argue that a focus on networks can make a contribution to the analysis of environmental communication and could serve as a starting point for comparative studies beyond European and North American systems of environmental communication. The combination of framing analyses with the tracing of networks could be a useful approach.



**Title:** Reframing renewables after Fukushima' An international comparison of changes in the media's framing of renewable energies.

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**Abstract:** Although the Fukushima disaster caused public debates on the future usage of nuclear energy worldwide, the political reactions varied a lot across countries. To understand these national differences it is not appropriate to focus only on the nuclear sector, but rather to consider the whole energy supply system of a country. Due to the finite nature of fossil fuels and their negative impact on the climate, especially renewable energies are becoming a more important component of the energy supply system in many countries. Against this background it is the aim of this paper to examine the impact of Fukushima on the media's framing of renewable energies from an international comparative perspective. According to Entman (1993) the media's framing of renewable energies can be described as the selection of a number of thematically related aspects e.g. the problems and benefits of renewable energies and making them more salient in the media than other aspects. To understand which factors may influence this framing process we considered the existing literature on media coverage on renewable energies (e.g. Haigh 2010; Heras-Saizarbitoria et al. 2011; Stephens et al. 2009; Zeh/Odén 2014). In summary the findings show that the media's framing of renewable energies is in particular influenced by the general structural and economic conditions of a region or a country. Furthermore two studies show that single external shocks like the financial crisis or the Fukushima accident can even cause changes in the media's framing. Against this background we questioned: Do we find changes in the media's framing of renewables energies after Fukushima across countries' And if yes, can we explain differences in the reframing across countries by their country-specific conditions' To answer these questions we conducted an international comparative content analysis on media coverage on renewable energies in eleven countries: Germany, Austria, Ireland, UK, USA, Canada, South Africa, India, Indonesia, New Zealand and Australia. To examine changes in the media's framing the study period covered two years: one year before Fukushima (01.01.2010 to 10.03.2011) and one year after Fukushima (12.03.2011 to 30.06.2012). Using the database Lexis Nexis a random sample of 160



thematically relevant articles from two daily newspapers in each country was collected. In total for 1760 articles the problems and benefits of renewable energies, the causes of using them and their evaluation were coded. To test the influence of country-specific conditions various macro variables (economic situation of the country, energy production and consumption, geography and climate) were collected for each country and linked to the content analysis data. The results of that study show some changes in the media's framing of renewables energies on the dimensions problems, benefits and causes. Interestingly these changes go in different directions across countries. Furthermore we found that country-specific conditions help to explain the different changes in the media's framing of renewable energies.



**Title:** 'Child at risk': Communicating healthcare messages to (grand)parents in China

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**Abstract:** This paper analyses the communication of young children's (under three years old) healthcare messages in China which has contributed to the increasingly medicalised and scienticised perceptions and practices. It argues that healthcare for young children is becoming increasingly riskridden for their (grant)parents due to a coherent social construction of 'child at risk' by health professionals, news media and children's healthcare industry. This paper focuses on findings about the construction of 'risk and protection' in commercial advertising, although other sites (e.g. expert and health professionals, peers, news media and social media) of construction are also discussed. This paper draws upon theoretical perspectives of individualisation and reflexive modernisation from Beck's (1992) risk society and Jackson's (2013) social anxiety. It analyses the construction of the discourse of 'child at risk' in TV healthcare product advertising (analysed with semiotics), to understand how(grand)parents perceive this discourse and its related medicalised and scienticised practices (researched with 21 focus groups). The findings suggest that children's healthcare industry has skilfully constructed a coherent narrative of 'child at risk' comprising messages of nature, science, risk and protection. While the meaning of natural environment has changed significantly 'mostly suggested as 'risky' before the 2008 infant formula scare but later used as a signifier to mediate the message of food safety 'the meaning of science is relatively stable. Science is generally represented as the ultimate measure to manage risks and provide protection. Adverts of children's healthcare products also constructed a range of inter-related and mutually-reinforcing risks including risks of everyday environment and natural environment (pollution), risk of malnutrition (vitamin D and calcium deficiency), and health risks (food poisoning), all of which have contributed to (grand)parents' heightened sense of anxiety and their support for medicalised and scienticised methods of children's healthcare, also championed by health professionals. The wide acceptance of the discourse of risk, science and protection is a result of the neoliberalisation of healthcare sector in China. Within this trend the cost for medical treatment and basic living needs for children is rising rapidly, as the state withdraws its support for pregnancy, birth and childcare, leaving parents to make their own choices in an individualised and commercialised system of children's healthcare. The findings also show that in China, childcare has become a joint 'enterprise' of parents and grandparents with sometimes conflicting views about risks based on scientific knowledge and lay understanding. In some areas (e.g. using medicinal food to treat minor ailment) the latter can still produce resistance to the hegemonic medicalised and scienticised practices. Grandmothers sometimes form strong but unrecognised childrearing communities and exchange 'top-tips', many of which based on their lay, albeit lived experiences, reflecting a certain level of reflexivity in the 'risky' business of children's healthcare.



Title: The media treatment of the Gilligan's Restaurant in the Parlee Beach Provincial Park, New

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**Abstract:** Is the media able to effectively convey the intricacies of complex and technical environmental controversies in a politically laden complex' In order to answer this question, we undertook a media analysis of the case of Gilligan's restaurant on Parlee Beach, New Brunswick, an environmental and legal saga that unfolded over the course of 7 years from 1998 to 2006. The analysis, using keyword and thematic analysis and coverage indicators, of 235 articles from the 3 daily and 2 weekly newspapers that covered the case revealed that most newspapers failed to adequately portray the technical aspects of the case, and that coverage was more focused on the political controversy surrounding the case than on the actual environmental issues at its root. This confirms the assessment of Jacques Giguère of the 'forgotten message', in that issues related to environmental sciences are often vacated from reporting because they are not easily understandable by the journalists and editorialists. The analysis also showed that the opposition used the environment as a pretext to stop the project without being able to identify a real environmental issue associated to the project. Thus, the understanding of what constitutes or doesn't constitute a natural ecosystem, the possible impacts of the construction or the existing building restrictions in environmental conservation zones were not accurately portrayed. Instead, the articles were at times somewhat sensationalist 'reporting on political strife, legal proceedings and (supposed) wrongdoing of the regional planning commission in charge of the emission of the permit tends to erode the readers' confidence in those regulatory authorities and confuse the environmental issue. The particular media landscape of New Brunswick, where virtually all daily newspapers (including 3 of the 5 newspapers analyzed here) belong to the Irving family, oil and forestry entrepreneurs from New Brunswick and Canada's third richest family, did not seem to influence the editorial lines of the news coverage in our study.



**Title:** The friends of science episode as a symptom of the renaissance of climate denial

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**Abstract:** Recent billboards in six Canadian cities (Edmonton, Montreal, Ottawa, St. Catharines, Toronto, Vancouver) with messages such as 'The sun is the main driver of climate change, not you, not CO2' (and in French 'Le soleil est le principal facteur du changement climatique. Pas vous. Pas le CO2') drew attention to the Friends of Science (FoS). This organization is not new since it has been in existence since 2002 and was very active in the run-up to the federal election in 2006. After years of relative inactivity, FoS suddenly sprang to life again in 2014 with those billboards and a very active campaign of sponsored Facebook posts. This episode is symptomatic of a renaissance of the climate denial movement since 2009 and the preparation of the Copenhagen conference (Blowfield and Murray, 2011; Butler, 2010; Levy and Spicer, 2013; Monbiot, 2009, Wurzel and Connelly, 2010). As for many US-based entities involved in climate, funding for the FoS can be traced back to corporate donors, including Talisman Energy, in the period up to 2006, but is untraceable for the current campaign. Quebec's media, including Le Devoir, La Presse, Le Journal de Montréal, TVA, Huffington Post Quebec, Radio-Canada or the Agence Science Presse, responded in a unanimously condemning way to this campaign. This stands in contrast with its Anglophone Canadian counterpart, which was more divided, as shown by FoS supportive articles or comments in the National Post or the Toronto Sun, and several media focusing on the controversy surrounding the Pattison Outdoor (the carriers of the billboards) vs Greenpeace controversy, or on the strife between FoS and the Alberta Wilderness Association, rather than on the content of the FoS campaign. In addition, environmental and scientific organizations in Quebec, such as the Association des Communicateurs Scientifiques du Québec, the Association des Biologistes du Québec, a collective of authors from Institut des Sciences de l'Environnement de l'UQAM or Greenpeace Quebec responded with communiqués and even a billboard campaign on their own to the FoS messages. As the resurgence of climate denial and its impact on public opinion and politics is strongly focused on Anglophone countries, as evidence by the USA, Australia, UK ending last amongst G-20 countries when ranking the belief in the human origin of climate change (Ipsos Mori, 2014), the comparison of the reception of the FoS campaign in Canada's francophone and Anglophone media is of undeniable interest to the sociology of current climate denial. In this context, it is also noteworthy that there is no French version of the FoS website and no French post on their facebook page. Can we therefore conclude that Quebec is immune to climate change denial and distinct from the rest of Canada and North America on this issue'



**Title:** IT TAKES A VILLAGE TO BUILD A SEA LEVEL RISE APP: CIVIC HACKING AS AN APPROACH TO INFORM CITIZENS ABOUT CLIMATE CHANGE IN MIAMI

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**Abstract:** Miami is the US city most vulnerable to sea level rise. Scientists project an increase in sea level ranging from .3 meters to 1 meter by 2100, in an area where more than 200,000 people live at an elevation below 1 meter. We are building an application to help residents better understand and document the potential impact of sea level rise on their homes and businesses, including under-reported but increasingly common flooding. Our app includes a crowdsourced data collection tool where citizens may document flooding; a visualization of increasing heights of sea-level rise at the level of individual addresses; a database of flooding reports from citizens and local government agencies; and a schedule of high tides, when flooding is more likely to occur. We view our efforts as a civic hacking project, where a group of stakeholders come together to find technological solutions to a communications challenge, using mostly open-source resources (Lewis & Usher, 2013). In this paper we outline the scope of our app, and discuss some of the challenges that come with building it. Our data combines crowd-sourced geographic information with public data available from government sources, and faces the challenges of inconsistencies in reporting that are common to crowdsourced



geographic information projects (Sui, Elwood & Goodchild, 2012) and access limitations related to open data (Goldstein & Dyson, 2013). The public communication challenges of creating a sea level rise app are not dissimilar to those faced by journalists covering climate change (Anderson, 2009; Antilla, 2005; Boykoff & Boykoff, 2007). Sea level rise is a politically sensitive topic in Miami; government and business interests are motivated to minimize the potential impact of rising seas on South Florida. These attitudes have impacted the design strategies that we have incorporated into our application. Our user testing suggests that the ability to enter personal information into the application to see how sea level rise might impact individuals may increase the recognition that sea level rise is a serious issue for South Florida. Our experiences developing this project may be applied to other environmental communication efforts.BIBLIOGRAPHYAnderson, A. (2009) Media, Politics and Climate Change: Towards a New Research Agenda. Sociology Compass, 3(2): 166-182. Antilla, L. (2005) Climate of Scepticism: US Newspaper Coverage of the Science of Climate Change. Global Environmental Change, 15: 338-352.Boykoff, M. & Boykoff, J. (2007) Climate Change and Journalistic Norms: A Case-Study of US Mass-Media Coverage. Geoforum 38: 1190-1204. Goldstein, B. & Dyson, L. Beyond Transparency: Open Data and the Future of Civic Innovation. Code for America Press: San Francisco.Lewis, S. & Usher, N. (2013) Open Source and Journalism: Toward New Frameworks for Imagining News Innovation. Media, Culture & Society, 35(5): 602-619. Sui, D., Elwood, S. & Goodchild, M. (2012) Crowdsourcing Geographic Knowledge: Volunteered Geographic Information (VGI) in Theory and Practice. Springer.



**Title:** Who is leading in the energy discourse' A content analysis on the influence of different actors within the energy debate in the German press coverage

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**Abstract:** The aim of the German energy policy is to achieve a sustainable energy supply system, which essentially is based on renewable energies. However this energy transition is connected with a variety of challenges, especially the conflicting interests between different actors and the lack of public acceptance. In this context the public energy debate is becoming more important and in particular opinion leading media like the daily quality press and political magazines take in a key role. They report extensively on the problems and benefits of different energy sources and set the 'energy debate agenda'. Journalists collect, select and comment energy-related information by their own rules and routines which are influenced by personal, social and organizational prerequisites, so that the opinion of the journalist or his/her editorial line reflects within the news coverage (e.g. Kepplinger et. al, 1989; Schulz, 1990). Moreover, other actors try to influence the media coverage on energy by adapting the journalistic selection process (e.g. Peters et al., 2008; Peters & Heinrichs, 2005). To what extent such an influence exists depends on the situation, social relevance and topic (e.g. Berkowitz & Beach, 1993). Hence, news cannot be published independently and thematic expertise is not necessarily the crucial criteria for selection. Given the right expertise and resources, actors can be successful in adapting to journalistic selection processes, which then results in higher levels of attention in energy and environmental news coverage (e.g. Thrall, 2006). Against this background we are interested in the question which actors are successful in positioning their opinion in the media and, thus to shape the German energy debate and eventually to influence the decision-making process in energy and



environmental politics. To answer this question this paper is based on a long-term quantitative content analysis of the German press conducted by the Energy Campus Nürnberg (EnCN), an interdisciplinary research project on renewable and sustainable energy. Basis for the content analysis is the continuous monitoring of nine opinion leading newspapers and magazines with a focus on issues relating to sources of energy and key aspects of energy supply since 2010 up to date. A total of 4120 articles on the German energy debate was analysed. For these articles categories on the main actors, the reason of media coverage, the main energy source and corresponding issue, pros and cons of the main energy source as well as its' evaluation were coded. To examine the actors' influence on the energy debate in the media they were categorized into eight actor groups. The first results show that especially national political actors (48%) and actors from the energy producing sector (22%) are most dominant in the mediated energy debate. In contrast scientific actors (8%), NGOs (5%) or the general public (6%) do not seem to have such a strong position. In the paper we further analyse the actors' positions in relation to other variables such as the editorial line, the issues and energy sources in more detail.

**Title:** Building social movement leadership through translocal storytelling: protecting the Arctic National Wildlife Refuge through 'caribou stories'

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**Abstract:** In 1987, Secretary of the Interior Donald Hodel recommended to Congress that it vote to open the Arctic National Wildlife Refuge (ANWR) to oil and gas leasing. Gwich'in villages from northern Canada and Alaska quickly united in order to prevent drilling in the calving grounds of the Porcupine caribou herd in ANWR's coastal plain. In the decades since, Gwich'in have worked in alliance with the Alaska Coalition of environment, faith, labour, and community groups to bring the intertwined story of Gwich'in and caribou to community halls, church basements, university lecture theatres, and other venues in all 50 American states. My doctoral research quantified and qualified how, during the 2005-6 period, the film Being Caribou was systematically used by members of the Alaska Coalition to reach hundreds of thousands of Americans. At community screenings for Arctic Action Days, audience members were asked by their peers to immediately write letters, phone their elected officials, and otherwise make their opposition to drilling in ANWR known. Quantitative "impact assessment" metrics capture the immediate influence of these screenings in scaling up citizen action before crucial Congressional votes. But what about in the longer term: how did these community screenings contribute to movement leadership building and long-term citizen participation' Drawing on recent research into civic engagement (Han, 2014; Corrigall-Brown, 2012, Ganz and Lin, 2012) and social movement storytelling (Ganz, 2010), this paper will contextualize the Being Caribou screenings as sites of civic engagement, training, and leadership building. Screenings were organized by volunteers, often with little prior training, supported by experienced field staff, following a distributed leadership model (Han, 2014:80-84) which Ganz's research with the Sierra Club has shown to be particularly effective for building engagement, commitment, and activist skills (Ganz and Lin, 2012: 358). The community screenings accomplished a kind of translocal storytelling in which the caribou stories at the heart of the Being Caribou film provided powerful moments of audience identification and affect. Following Ganz's framework for social movement storytelling, organizers tied the caribou's fate to a 'story of us' (as oil and gas consumers), and a 'story of now', in which the upcoming Congressional votes provided a moment of challenge/choice. In keeping with recent science communications research on climate change, my field research consistently showed that, particularly in contexts of pre-existing strong and weak ties among audience members, such storytelling was much more effective than fact-based argumentation in overcoming viewer apathy and in communicating the risks of industrial development in ANWR. Works citedCorrigall-Brown, Catherine. Patterns of Protest: Trajectories of Participation in Social Movements. Stanford, California: Stanford University Press, 2012. Ganz, Marshall. 'Leading Change: Leadership, Organization and Social Movements'. In Nohria, Nitin and Khurana, Raksesh (Eds), the Handbook of Leadership Theory and Practice. Cambridge: Harvard Business School Press, 2010. 509-550. Ganz, Marshall and Emily S. Lin. 'Learning to Lead: a



pedagogy of practice' in nook, Scott A, Nitin Nohria, and Rakesh Khurana. The Handbook for Teaching Leadership. Thousand Oaks: SAGE Publications, 2012. 353-366.Hahn, Hahrie. How Organizations Develop Activists. Oxford University Press: New York, 2014.



Title: Visual representation of renewables in Taiwanese media in a time of global climate change

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**Abstract:** Renewable energy has been considered effective means to help reduce greenhouse gas emissions around the world, including Taiwan. The Taiwanese Legislative Yuan passed a renewable energy act in 2009 aimed at promoting the use of renewable energy and boosting energy diversification, but an earlier 'Framework of Sustainable Energy Policy' enacted in 2008 prioritized nuclear power as the main provider of clean energy. The 2011 Fukushima nuclear disasters raised worldwide awareness of nuclear safety issues. The Taiwanese government's pro-nuclear energy policy was soon harshly questioned. Advocates for more public engagement in energy policy decision-making have emerged. The above concerns have also been widely covered in the news media. Due to the complexity of the energy-related science and policy, media representation of the renewables is thus considered better off in forms of in-depth reporting, documentary, or via vivid visual images. Therefore, from the perspectives of environmental communication and public understanding and engagement in science. this study aims to analyze visual representation of renewables in the Taiwanese electronic media. Specifically, a quantitative content analysis was conducted on a sample of 176 news clips (n=83), documentary (n=72) and talk show segments (n=18) from 14 TV channels from 2008 to 2014. A random sample of 20 TV units was pretested, resulting in satisfactory inter-coder reliability coefficients ranging from .80-1.00. Findings: Renewables were mostly represented in a positive tone (68.8%), followed by neutral or mixed ones (23.1%). Few relied on strong emotional visuals (10.4%), catastrophic scenes (11.0%), conflicts (13.9%), or sensational sound effects/music (13.9%). The use of strong languages only appeared in one documentary. Moreover, about 1/3 of the sample (32.9%) used infographics. However, as high as 58.4% of the contents were framed by economic growth in contrast to only 15.0% was framed in terms of climate change mitigation. The study went further to examine the extent to which the visual representation of renewables has addressed the issue of public engagement. Although more than half of the contents mentioned 'the public' (59.5%), the highest proportion (30.1%) went to opinions and complaints of the public, followed by an emphasis on the benefits of adopting renewables to the public (24.3%), government subsidy (16.9%) and participation in public activities or relevant groups (12.7%). Introduction of the concept of 'public engagement' only comprised 4.6%. Only one documentary and one talk show segment demonstrated contents related to official public actions such as election, referendum and recall. Contents addressing everyday lifestyle change or civic responsibility appeared only in one documentary. Based on the findings, the study hopes to identify problems that have hindered public understanding and engagement in issues related to renewable energy. Future research can be extended in addressing whether various forms of framing or representing renewable energy in the media can affect the sense of public participation. Various ways of message designing can also be experimented on the target population to test the above the effects.



Title: Engaging with Extremes: Reporting on Weather Risks in a Climate-Change World

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**Abstract:** In the 1990s, sociologists theorised that as contemporary risks transcend the senses and extend to distant and the extraordinarily long term, people were increasingly dependent on global 'expert systems' of knowledge. Unrelenting reporting of global disasters had heightened people's sense of insecurity and powerlessness. The abstraction of global environmental risks such as climate change, which is fundamentally tied to economic crisis, through science and the media thus affected personal identity and ontological security. As Frederick Buell (2003) noted in his book, From Apocalypse to Way of Life, crisis reporting may have only deadened the imagination to the very real crisis around us. This paper draws upon oral histories recorded in the past decade -- during a remarkable period of contestation over climate knowledge in Australia -- to explore how crisis has deepened yet become domesticated as part of ordinary life. It focuses in particular on human perceptions of news media agency. The researcher has, since 2004, undertaken two oral-history collections on extreme weather events: the first is on drought in south-east Australia; the latter is on cyclone in the northern Wet Tropics. These collections captured significant moments of reflection and self-reflexivity on the meaning of extreme weather, climate and the news media's role its 'construction', revealing contestation over expertise and experience as inherently partial forms of knowledge, and exposing the core interpretive problems of climate change. Despite shifts in climate change perception, however, the oral histories embed risk discourses that arguably represent historical, battler narratives of endurance and denial -' revealing livelihoods and identities at stake. Further, where the ongoing reinterpretation of extreme weather in light of global warming highlights the mediation of global environmental risks through abstract systems, these oral histories draw attention to the significance of people's sense of trust in, or distrust of, the media. In that context, this paper canvasses the ambiguous power of the news media's role in communicating global climatic risks to the public.--Buell, F., From Apocalypse to Way of Life: Environmental Crisis in the American Century (Routledge: New York, 2003).



**Title:** Genealogy and transformations of the hegemonic discourse about society/nature relationships in the stage of World's Fairs

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**Abstract:** The main purpose of this research has been to comprehend the constitution and configuration of the present dominant discourse about the relationships between society and nature, particularly about the contemporary environmental problem and the 'sustainability' discourse, through an archeological and genealogical inquiry in the transformations of the discursive proposals about these relationships held by the World's Fair's main actors. The World's Fairs are placed as stage for the analysis and study of the different ways in which participating nations, corporations and international organisms propose their own perception and standpoint about the relationships between human societies and nature, and the mediator role of science and technology in these relationships for over a century and a half (1851-2010). It's argued that World's Fairs have been a special kind of gathering place where important processes of communication between international actors have taken place. The aim was to approximate an understanding of the 'thoughts of modernity' about nature, science, and technology, from a space where modernity celebrates itself. The theoretical and methodological aspects supporting the object of study and its analytic approach are referred to three scopes, widely discussed and assembled into a strategy: the theory of the discourse, as a methodological and theoretical frame, the environmental sciences as the support of the analytical axis, and the World's Fairs as the stage of analysis. The analysis shows how the World's Fairs, constructed in this research as dispositives of visibility and models of world ('dispositives', based in Foucault proposals), are vehicles of insertion and consolidation of a cultural hegemony, that adjust their main objectives and strategies in order to display the transformations in the society/nature relationships: from the visualization of an unquestionable and promissory future (the communication of progress, in first periods) to the hiding of the absence of future (the communication of harmony, in recent years).



**Title:** Communicating Climate Change at the Grassroots: Media representation of the Australian climate change movement.

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**Abstract:** Australia is especially implicated in global climate change given its vast fossil fuel reserves that drive foreign trade; its highest per capita consumption of carbon; and the effect of global warming on the Australian climate with 2013 being the hottest year on record. The current Australian government's response to climate change has been to repeal the previous administration's controversial Clean Energy Futures Legislative Package (aka the 'carbon tax'), and to replace it with a 'Direct Action' climate policy. Previous research has shown that Australian public climate change discourse is dominated by powerful business interests, yet there is a large and active grassroots climate change movement that has mushroomed since 2007 comprising diverse individuals and organizations that draw on a range of green philosophies and approaches that is challenging the neo-liberal order and capitalism to varying degrees. Political scientist Timothy Doyle suggests governments and corporations 'would not be remotely green' without the pressure from non-institutionalized, as well as institutionalized members of the green movement. In this paper I present a study of media representation of the Australian grassroots climate movement, which is part of a larger project examining climate change discourses in Australia. I will present results of content analyses of mainstream and alternative media, to compare which climate change activists are sourced in which medium, what they are saying about climate change, and how they are saying it. I am particularly interested in geographical differences, given that there are notable differences in the extent of climate change activism in Australian capital cities, which may contribute to varying policy responses among Australian state governments.



**Title:** What science and technology do you sing in the environmental issue' - A study of songs in the anti-nuclear movement of Taiwan

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**Abstract:** Over the past two decades, the research on science communication has moved forward at a rapid pace, and several of its key concepts have changed. Guiding the public to understand a set of certain and correct scientific knowledge (e.g. science popularization) has no longer become the sole purpose. Science communication, which has emphasized two-way interactions and exchanges between science and the public, has been widely identified as a more important purpose today. Especially for the environmental issues, to create more understandable dialog for the public, which will, in turn, benefit by attracting more people to participate in the discussion. It will also improve the maturity of a democratic society. Taiwan is a small island with many energy-consuming and highly-polluting industries, and the environmental issues are usually presented as a symbolic controversy in social movements. Particularly after 2011, with Japan's Fukushima Daiichi nuclear disaster that has stimulated a huge debate on the nuclear power plant issue in Taiwan. With concern regarding the technology risk, many anti-nuclear movements have progressed during this period. In this new wave of social movement, we have observed that anti-nuclear songs play a more salient role to inspire the younger generation to join the movement than before. From our previous study, music can be a good example for material to act as a "boundary object", a bridge for people to not only talk about, but also to participate in social-scientific issues. In this study, our research questions focused on what are the main factors that motivate singers to engage in the anti-nuclear movement, and what songs represent the nature of the nuclear issue, science risk, and value decision. For the methodology, we chose the qualitative method with field observations and in-depth interviews. The interview questions focused on two parts, one for the singers' basic background concepts directly related to the anti-nuclear issue, and the other for the singer's personal value (e.g. meanings and metaphors of the lyrics, the value and theory behind the song, audience acceptance, etc.). The data of 11 field observations, and 12 interviews of singers and music bands, were collected for the following investigation. The result showed that the most prominent factors to encourage singers to involve in the movement are: long-term environmental group fellowship, friendship among social movement participants, and enthusiasm motivated by the Fukushima Daiichi nuclear disaster. Furthermore, singers will construct their lyrics and music based on four different phases of concerns: 1. Distrust of government; they doubt and criticize anything that their government does; 2. Unknown risk of technology; technology that cannot



guarantee 100% public safety; 3. Personal life philosophy; value decision-making from an individual's worldview; 4. Reflection toward technological development; they worry about the endless development of technology that will not resolve the real problems.

**Title:** Twitter Usage in Public Communication Campaigns: Agenda Setting and Issue Framing of the California Drought Crisis

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Abstract: In recent years, social media, such as Facebook, Twitter, and Instagram, have played an important role in providing easy access to information about natural disasters in different parts of the world. In early 2011, Twitter was used as a primary communication tool by the Japanese government and aid workers to disseminate news and information to the general public and citizens who needed help during the March earthquake while other traditional media avenues were cut off in the areas affected by the tsunami. In 2012, Twitter also served as a lifeline for communication during Hurricane Sandy. According to the Pew Research Center, more than 20 million tweets were sent out between October 27 and November 1, at the five-day peak of Hurricane Sandy. Among these 20 million tweets, 34% were from news and governmental sources providing information and support, and sharing eye witness accounts about the disaster. Twitter has currently gained widespread academic attention for its role in newsgathering, dissemination, and consumption. Previous studies have focused on the role Twitter plays in providing updates and protocol reminders to the general public and followers. However, the fact that Twitter has played an increasingly significant role as an alternative news source similar to traditional news media but within its own distinctive social media platform, Twitter users' role as public agenda setters and issue framers cannot be ignored. This study chooses to examine how Twitter has been used to set public agenda and frame issues related to global climate change through Twitter accounts of key environmental players about drought situations in California. Between March and August 2014 during the height of the drought crisis, the study followed tweets, retweets, and links sent out by three different news sources 'the Office of California Governor, Jerry Brown; the environmental organization, Pacific Institute; and a Los Angeles environmental news reporter, Paul Rogers. Upon close analysis of the patterns of information and themes that were sent out by these three main news sources, the study finds a mix of thematic messages on how the drought issues were framed and addressed to citizens. These themes include 1) situation updates, 2) the sense of urgency, 3) the demand for water conservation, 4) the blame game, 5) the connection between global and local environmental problems, and 6) the focus on short-term and long-term solutions of the problem.



Title: Environmental news on French Television 1994 - 2014

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**Abstract:** In this communication, we shall present the first results of an analysis of the way environmental news was presented on French television in 2014. It will provide a third point in a time series initiated in 1994 and continued in 2004 and will allow us to measure the evolution of the social construction of the environment as a public problem. It will also allow us to measure the change in television news formats. Although Internet has obviously plays an increasing role as a news source, television still remains the first declared source of information for the European public (Eurobarometer). It therefore remains important to continue monitoring it and carefully constructed time series are particularly useful to that aim. In our paper, we shall present a quantitative and qualitative study of the two main evening news bulletins, one public and one commercial, over a period of one month. The quantitative analysis allows us to observe evolutions in the place of environmental news, the types of subjects treated, the social actors mobilized, etc. For instance, the notion of sustainable development was absent in 1994 and climate change hadn't yet appeared in 2004. The qualitative study goes much deeper into world visions and modes of address, based on the Reading Contract theory of Eliseo Veron. In the earlier periods, commercial and private sector television differed strongly on these points, reflecting different relations proposed by the channels to their viewers and illustrating different views of what can be done about environmental problems. For instance, the explanations of environmental catastrophes can include different types of human responsibility. This type of knowledge also provides us a better understanding of the way our future is collectively represented.



**Title:** Online news, trust and the energy transition. A qualitative content analysis of trust-relevant attributes of actors associated with the energy transition

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**Abstract:** Three years ago, following the Fukushima nuclear disaster, the German Government ratified a legislative package concerning the modification of energy supply. Among others, the package aims at gradually abolishing non-renewable energy sources and a phased shut-down of nuclear power plants in Germany. Even though the German public strongly supports these goals of the so called 'energy transition', there are also a number of concerns'especially regarding anticipated costs. In this context, mass media serve as an important go-between between actors associated with the energy transition (e.g., politicians, energy companies, environmental activists) on the one hand and the public on the other hand. Since mass media are a crucial source of information regarding the energy transition, the question arises, whether the way in which news media depict these actors has the potential to promote or rather hinder the public trust in a successful implementation of the energy transition. Based on the concept of trust by Mayer et al. (1995), three factors of actors' trustworthiness'ability, benevolence, and integrity'were taken into account in a qualitative content analysis. 350 articles were randomly chosen from a total sample of 3,625 articles on renewable energy and energy policy recruited from six online newsportals with the highest reach in Germany. Articles taken into consideration were published between April 2013 and March 2014. Our results show that the majority of trust relevant statements refers to the actor's ability to successfully deal with the energy transition. In contrast, statements addressing the actor's benevolence and integrity are significantly less common. Our findings also indicate that mentioned trust relevant attributes are mostly rated negatively. Implications of these findings are discussed with regard to their potential impact on the public's acceptance of political decisions and civil disengagement from political activities (see e.g., Gabriel & Zmerli, 2006; Schiffman, et al. 2002).



Title: Japanese view of nature and the construction of meaning about the environmental issues

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Abstract: The purpose of this paper is (1) to shed light on the Japanese view of nature and its environment, and (2) to propose the new frame to analyze the media coverage about environmental issues in Japan. Every society has its own fundamental values and understandings of nature and the natural environment. Although the mass media has been the main source of the information about the environmental issues in daily life, those deep-rooted values may affect the view of nature and their opinion about environmental problems. Hayashi et al (1994) conducted a nationwide survey about Japanese view of nature in 1993, and analyzed the data by method of multidimensional analysis. They found out the structure that the nature-oriented way of thinking and the opinion that they should not manipulate nature for maintenance of good condition were closely related. They argued that the result was different from the data taken in West Germany, so the opinion about environmental exploitation and preservation may have different conceptual structures among different cultures. In this paper, the author reviewed survey and research results about Japanese view of nature and environment, and proposed the new frames for the content analysis of the media coverage about environmental issues in Japan. In addition to that, the preliminary content analysis was done and tested the validity of the proposed frame.

Title: Communicating Climate Change in South Asia

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**Abstract:** South Asia comprises the countries of Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, the Maldives, and Sri Lanka. This study on climate change has been carried out by (1) analyzing the newspaper texts available online, and (2) interviewing journalists of South Asia through emails. Global climate change is now a major challenge facing the world. The UN's Inter-governmental Panel on Climate Change (IPCC) and other leading organizations have expressed their concerns over climate change being cause in terms of erratic monsoons, flash floods, crop failure, etc. The South Asian region is more vulnerable to climate change risks as it is too dependent on its natural resources and agriculture, besides its dense population and poverty. This paper focused on studying the discourses of the climate change-related news in newspapers of the South Asian countries. It was found that there is a phenomenal difference in attitudes and experiences of journalists in bringing out the information to the public domain. Some of the other findings are: The journalists mostly portray climate change as cause of anthropogenic activities and climate change as a potential crisis in near future. There needs to be more media focus at the regional or local levels. Climate change will not affect every place on the earth in the same way. Thus, specific solution strategies may need to be developed for regional areas. Although climate change effects will be felt at national and global levels, there are regional adaptations that need to be considered. For this, journalists will have to work hand in hand with grassroots civil society activists to create climate awareness at the local level. There is a possibility that journalistic behaviour could affect the way that the media presents climate change. Matters such as deadlines and lack of knowledge of the reporters could result in heavy use of material from international and national news agency services. It might be expected that a regional newspaper would provide a greater amount of regional and local coverage, but it is not the case. Regarding methodology, it was difficult to access major newspapers over the internet for analyzing the content, though archives were available in most of the news portals. Accessing journalists and getting interviews over email was more difficult.



**Title:** Influence of media coverage and observable environmental change on risk perception and environmental awareness

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**Abstract:** Along with social developments a relatively new risk concept, aimed at influenceable outcomes of human action and natural phenomena, has evolved. To meet the requirements of current and further generations, the identification and public understanding of socio-environmental problems need to be increased. Mass media are a major source for information about such environmental change and associated risks. Therefore we need to identify important variables to support high quality-communication and the interaction of public in environmental topics. This will lead to more responsibility and higher demands for politics, economy and science as well as to a bigger relevance and stronger politicization of risk research. Hence more research about the effects of newspaper usage in addition to environmental communication is required. The assessment of environmental risks is not only based on media information, but also on the individual environmental perception. Thus we analyzed how information from mass media is processed by the public and which possible correlations with the individual perception of the environment showed up. In the proposed presentation we discuss the influence of (1) media effects and environmental perception on the assessment of risks and (2) on a



change of the environmental behavior. For the theoretical framework we used main concepts from communication science, such as the 'Elaboration-Likelihood Model' (Petty/Cacioppo, 1986), the 'Cultivation Hypothesis' (Gerbner, 2002) and the concept of 'impersonal risks' (Kahlor et al., 2006), which are defined as a direct threat for the environment but only indirect threat for the individual. We conducted a quantitative survey in two waves (N1=479; N2=295) in 12 German regions in 2014. This regions show either high or low infestation caused by the non-domestic horse chestnut leaf miner (Cameraria ohridella), which was used as model organism exemplary for environmental changes. The horse chestnut leaf miner causes a distinctive pattern of damage to chestnut trees, resulting in premature defoliation in summer, which is directly observable for citizens and therefore an ideal example to investigate environmental perception. Additionally, we created newspaper articles about the horse chestnut leaf miner (tabloid, quality-journalistic, popular-scientific), which were different in their journalistic representation, complexity and fragility of content. The articles were incorporated as an experimental stimulus within an online questionnaire, which was questioning variables (based on valid scales from former researches) such as personal relevance, environmental change perception, subjective risk perception, information processing and individual change of behavior. We proceeded by examining theory based hypotheses. Our results indicate that (1) the perception of an environmental change and personal relevance are highly important factors contributing to risk perception, information processing and adaption of environmental behavior. (2) Second, we could show that media influence on risk perception and environmental behavior is limited, but that the quality-journalistic article showed highest effects on change of risk perception and behavioral adaption. The direct observation of environmental changes and a concurrent creation of medial environmental subjects open the space for discussion of environmental subjects in public. Our results shall enhance effective environmental communication (e.g. in politics) and the discussion on environmental change management. This project is founded by the German research Foundation (DFG)



**Title:** Manufacturing and challenging climate consent. From communicating climate change to a climate for change

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**Abstract:** Over the course of the past four decades, climate change has transformed from a purely scientific issue into what international leaders like Barack Obama and Ban Ki-Moon have claimed to be the biggest challenge of the 21th century. However, on its route through culture, politics and media, climate change has taken on various ideological meanings which are used to advance (conflicting) political projects. As a consequence, it confronts democracies with various new and old challenges. This paper starts by engaging with the academic literature about the (democratic) role of (news) media in the climate change debate. It criticizes the underlying desire for consensus and depoliticization of the 'mirror' and 'public forum' approaches for acting as an exclusionary mechanism discriminating between who/what is recognized as legitimate and who/what is recognized as illegitimate. Alternatively, this paper argues for an agonistic approach, evaluating media on the extent to which they operate as democratic arenas which allow for ideologically-pluralist debate. This calls for a politicization of climate change, framing it as an issue which grounds contestation over competing political choices leading to alternative, sustainable futures. These disagreements about climate change reflect different values, interests, social identities and intellectual traditions. This paper investigates to what extent Flanders' two leading elite newspapers De Standaard and De Morgen closed or opened the space for a democratic debate between alternative sustainable futures. It analyzes climate change coverage surrounding four UN climate summits and the release of two UN climate reports between 2000-2012. Furthermore, it also includes the alternative news outlet DeWereldMorgen in the analysis of COP 18. This comparative-synchronic and historical-diachronic analysis allows us to reveal three distinct ideological cultures, which are different in terms of their: (i) reliance on de/politicizing strategies, (ii) ideological preferences, and (iii) underlying assumptions about the nature of international relations. We find that De Morgen and De Standaard differ in terms of ideological preferences and assumptions about international relations, but they both rely on depoliticizing exclusionary mechanisms, distinguishing rational and moral actors and demands from irrational and immoral ones. As a consequence, the ideological preferences underlying the news coverage are naturalized, while the space for ideologically-pluralist debate remains limited. Only the ideological culture of DeWereldMorgen uses politicizing discursive strategies which relate the issue to the logic and interests central to the existing politico-economic model, and resultantly, make these subject of public debate. This takes place by awarding framing power to voices who advocate more public control over the economy and a logic of regulation and redistribution. By doing so, DeWereldMorgen comes closest to the ideal of a democratic arena, in which democratic debate between alternative sustainable futures is encouraged. The paper ends by providing recommendations on how environmental communicators, journalists and academics can contribute to the (re-)politicization of climate change, which we believe to be a precondition for



more democratic, instructive and engaging debates, through the representation of climate change as a mirror, looking-glass and catalyst.

Title: Highlighting and masking: A Study on China's News Coverage of Environmental Pollution

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**Abstract:** Resource shortage, environmental pollution and ecological damage, together have become three largest crises on a global level, and china is not an exception. In recent years, smog has continually appeared; water pollution has frequently happened; soil contamination has seriously exceeded the standard' environmental problems are livelihood issues that need to be addressed urgently. In the year 2014, the Environmental Protection Law of the P.R. China which executed for 25 years was revised for the first time, and the revised version was put into enforcement on the first day of 2015. In the mediated society, the public's conception and definition of risk stem from personal life experience, direct contact with others and indirect social connections'especially mass media (Singer etc. 1993). As a hot issue in media reports, the share of news coverage on environmental problem is increasing gradually. Media are constructed by reality of society, and their choice and news framing can easily influence people's cognition and action. In China, environmental news coverage is divided into three phases by some researchers (JI, 2007), and after 2000 this kind of news report entered the phase of progressive elaboration. Therefore, this paper chooses the year of 2000 as a starting point of study on environmental news coverage. As for studying objects, the paper chooses mass media who value environmental issues include People's Daily, Southern Weekly, China Youth Daily and CCTV. Using 'pollution (")' as the key word for searching gaining a collection of 673 samples. The purpose is to analyze whether their news coverage of such issues is objective with informing the risk of environmental pollution in the aim of improving people's consciousness. Research hypotheses are as The overall number of news coverage of environmental pollution indicates an uptrend; the content of reporting gradually evolves from after investigation and punishment to whole-process reporting and monitoring towards environmental pollution incident. 2. There are various categories in environmental pollution reports including water pollution, air pollution, soil pollution, ocean pollution and urban pollution etc. . Media's coverage of water pollution and air pollution is relatively more than other categories. 3. Recently media's concern for new sources of pollution has increased, such as the growing number of reports referring to indoor air pollution and pollution of automobile exhausts. 4. There are more news coverage on abrupt environmental incidents like Harbin water pollution and mass disturbances relating to environmental issues such as PX incident. However, soil pollution and ocean pollution are less discussed in media coverage. 5. growing emphasis on food safety reports while with a less emphasis on food pollution due to



environmental contamination. Few reports of food pollution does not highlight environmental pollution's effect on food safety. 6. Media lay much more attention on urban environmental pollution than that of rural area. Research conclusion:At present, China's news coverage of environmental pollution highlight abrupt environmental accidents; nevertheless, their news coverage mask or overlook soil contamination and the resultant risk of food safety. Other hypotheses need to be verified or falsified.



Title: Communicating New and Urgent Responses to Climate Change: Are all media and cultural

domains equal'

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**Abstract:** The cultural and media services sector comprises a number of specific domains which are characterised by various levels of autonomy of expression and so, this paper argues, these domains are differentially positioned to communicate urgent and necessary new ecological paradigms. Understanding the varying potential of those domains to articulate new ecological paradigms becomes increasingly important, if not urgent, since the recent release of IPCC AR5. These reports have been unequivocal in stressing mankind's influence on the climate system, whilst warning of severe, pervasive and irreversible effects should the current global socioeconomic trajectory not be altered (IPCC 2013, 2014a, b, c). This paper draws on the materials and findings of case studies that assess the role of a selection of the cultural industries in facilitating new and alternative ideas around ecological sustainability. These case studies are centred around three domains of cultural and media production, those of advertising, journalism, and art. The empirical approach assesses news and current affairs broadcasting during the release of the IPCC AR5 reports. It takes the audiovisual news broadcast as a container for both journalistic and advertising content, thus exploring journalism in a juxtaposed dialogue with advertising. It analyses a selection of artistic work, or 'eco art' that has been created between 2007-2014, those dates falling between IPCC AR4 and AR5. The cases are designed to shed light on key questions about the media with respect to sustainability, namely: (1) do the media domains recognise the problem of ecological crisis and therefore the need to move to sustainability, and if so, how does it define it' (2) how do the media domain report or portray sustainability (3) if sustainability is portrayed, is it in line with conventional growth-based norms, such as sustainable consumption' (4) if sustainability is portrayed conventionally, is there any critique of growth-based norms within the piece' (5) if alternates are found, is the alternative transitional or transformative These cases reveal a matrix of outcomes, with a spectrum of perspectives broadly categorised into three positions. The first is the 'conventional' perspective, effectively promoting 'business as usual' positions that ignore or minimally acknowledge climate change, or more broadly, ecological crisis. The second position is a 'transitional' one, that acknowledges the need to act more sustainably to mitigate human influence on the ecosystem, yet suggests that small, incremental measures can achieve this. The third perspective is the 'transformative' one, which adopts a robustly critical stance to the ecological problem, and suggests that radical measures are needed urgently to mitigate not just climate change, but human influence on the other eight planetary boundaries. This matrix, when applied to the media domains of advertising, journalism and art, reveals various potentials for these domains to contribute to the discussion of conventional, transitional and transformative paradigms with respect to sustainability.



**Title:** The uses of parody and irony in NGO's environmental advertising resistance: a powerful communication counter-strategy'

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**Abstract:** Along with the emergence of a strong digital counter-culture, Internet carries and supports formalized spaces of resistance and rebellion against traditional communication forms and discourses. A public rebellion focused on anti-consumerism, alter-globalization and anti-advertising has emerged on the web, with more and less radical strategies (Austin, Plouffe, Peters, 2005). The art of parody as well as homemade ironic and satirical videos subverting traditional media and ad campaigns have acquired a growing popularity on digital social networks, counting millions of views and more (Lim, Golan, 2011). From an individual-liberal perspective to a more cyber-libertarian discourse (Dahlberg, 2001 & 2010), these initiatives primarily issued from individuals. Nonetheless, organized civil society movements rapidly grasped such techniques in order to serve their own agendas and thus produced numerous parodies and satires such as the Pinnochio awards (Catellani, 2009) or the Greenpeace detox or palm oil free ad campaigns. In these cases, entertainment and humor act as food for thought and subversion weapons for a new, swift and powerful digital culture jamming (Klein, 2001, Harold, 2004, Carducci, 2006). These organizational uses question the role of entertainment as both an object of communication resistance as well as a strong tool to shift public opinion. A new form of hybrid rhetoric emerges, even stronger on the web (Bronner, 2013). It is based on a matrix of discontent resistance discourses (Fischer, 2001) and more subtle denunciation discourses, mixing an engaging and activist content, brand content codes and environmental and societal discourses. These actors use new forms of guerilla marketing tactics or discrete public relations strategies deployed by corporate actors and integrated them in their own strategies. In a sort of double negation were humor and irony often act as markers of inconsistent communication strategies, assuring a wide and fast dissemination through social networks, they put large multinational companies even such as Nestle, Dove, Mattel, Lego,



Disney, Danone or Xerox and their iconic brands under pressure (Stansbury, Barry, 2007, Thompson, 2005). In this paper we question the uses of parody and subversion in civil society's actors communication strategies directed against greenwashing and incoherent sustainable development communication campaigns. In the long tradition of Situationism and traditional Adbusters uncommercial advertising campaigns, parody as never been an end in itself but a mean to stimulate imagination and criticism in the viewer's mind. This article will present primary results, based on semiotic and content analysis. On the one side we analyze parodic communication campaigns and on the other side we study corporate responses especially those focused on public commitment. We include a wide variety of documents, from mockumentaries to digital viral marketing campaigns especially those from NGO actors such as Foodwatch, Greenpeace or Friends of the Earth. We will thus question the public commitment goals of these parodies that shall lead denounced organizations to take corrective long-term actions and adopt a coherent performative posture with their public engagement. Keywords: Reputation, brand, parody, subversion, resistance, NGO.

**Title:** NIMBY, risk communication and community development: The case of establishment of Kuokuang petrochemical plant in Taiwan

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**Abstract:** In the process of modernization, technologies have created many uncertain risks and led human beings into a self-confrontation risk society. Techno-science industries were intensely futureoriented public policies with emphasis on the creation of new opportunities yet accompany environmental pollution. Their facilities were often in the face with local communities' demonstrations and resulted in the phenomenon of 'NIMBY, not-in-my-back-yard'. NIMBY, under modernization perspective, was characterized as a terrorized issue. Based on elitism and problem-solving model, NIMBY was seen as selfish actions of local communities. However, NIMBY was related to risk communication between the state and society, which could test the capability of risk governance. Understanding the factors that determined community attitudes about risks, the needs of community development, and the range of alternative community relations strategies available to them were all important. The aim of this study was to explore the effects of NIMBY upon risk communication and the ways to overcome NIMBY in the community development. Taking the project of Kuokuang petrochemical plant in Taiwan for instance, this study put NIMBY into the framework of risk communication. In Taiwan, one of intensively debated of techno-science issues in recent years was whether Kuokuang petrochemical plant should be allowed to establish in the western coast of Changhua County. Some people welcomed the project because it might boost national economic growth and improve local people's living, while some people worried that the project would destroy the biggest wetland resources in the western coast where included precious cultural and biological diversity. Research questions were asked: What did local communities understand about risks from the petrochemical plant' How did local communities react to' What alternative options did local communities have' Research methods employed included: 'secondary analysis' of publicity materials, such as news coverage, booklets and relevant official documents; 'in-depth interview' with different 25 local people, including advocators and dissidents. This study found that local people regardless of advocators or dissidents were not benighted at all. They were reluctantly to adopt themselves living with risks together. This study also found that dissidents' arguments were not falling into zero-sum games. When the project of establishing Kuokuang petrochemical plant cancelled, dissidents actively initiated eco-tours instead. Moreover, they worked with NGOs on community-based conservation projects for community development. Therefore, local communities were beyond direct victims. They transformed themselves into 'citizen scientists', paying attention to ecological monitoring, environmental training and education in communities.



**Title:** Professional journalistic routines and the protest paradigm: The Big Potato Swap in traditional and alternative media

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**Abstract:** In early May 2011 a Belgian-Dutch research consortium initiated a field trial in the East Flemish municipality Wetteren, testing genetically modified (GM) potatoes on their resistance to potato blight. Later that month a social movement called the Field Liberation Movement (FLM) set up a highly mediatised action of civil disobedience. This marked the beginning of a fierce public debate on freedom of expression versus scientific freedom in the context of advancing commercialisation of science and industrialisation of agriculture, eagerly reported on by Flemish media (De Krom, Dessein & Erbout, 2014). This contribution seeks to understand how implicit patterns generally associated with the protest paradigm influenced media representations of this 'Potato Swap'. The protest paradigm asserts that groups challenging the status quo are routinely delegitimized in news reporting, painting them as irrational, hostile and incapable of valuable contributions to public debate (e.g. Boyle, McLeod & Armstrong, 2012; McLeod & Hertog, 1999). We conducted qualitative content analysis on the reporting of the protest and its aftermath (N=121) by two Flemish quality newspapers (De Standaard and De Morgen) and one online alternative news outlet (De Wereld Morgen). By examining three aspects in the data (framing, sourcing and social/legal consensus), we analysed which indicators of the paradigm could be discerned and what the consequences were for the media definition, interpretation and evaluation of the protest. Both mainstream newspapers adopted protest paradigm characteristics when covering the Potato Swap. Emphasis on the perceived destructive protest form clearly shifted attention away from actual protester concerns. However, there was a marked difference between these newspapers, with one of them only reaching for the paradigm as an initial routine response. By contrast, alternative news representations were consistently sympathetic. We could argue that three journalistic approaches become visible: a positivist, a constructivist and a critical approach. Prevalence of the protest paradigm is often attributed to i.a. ideological inclinations of mainstream media. Such explanations neglect the importance of journalistic processes in selection, coverage and representation of different truth claims. We conclude by discussing how patterns usually assigned to the protest paradigm may in fact be a product of professional normative routines. Consequently, criticism of these patterns in coverage should be seen as part of a broader critique on prevailing journalistic formats and practices.ReferencesBoyle, M., McLeod, D.M., & Armstrong, C. (2012). Adherence to the protest paradigm: The influence of protest goals and tactics on news coverage in U.S. and international newspapers. The International Journal of Press/Politics, 17(2), pp. 127-144.De Krom, M. P., Dessein, J., & Erbout, N. (2014). Understanding relations between science, politics, and the public: the case of a GM field trial controversy in Belgium. Sociologia Ruralis, 54(1), pp. 21-39.McLeod, D.M., & Hertog, J.K. (1999). Social control, social change and the mass media's role in the regulation of protest groups. In: D. Demers & K. Viswanath (Eds.) Mass Media, Social Control, and Social Change. A Macrosocial



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**Title:** The discursive struggle surrounding the introduction of nuclear energy in Belgium during the first oil crisis (1973-1974)

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**Abstract:** The current debate on energy 'its environmental impacts, its importance for economic growth, its role in geo-political power struggles, its social aspects, and so on ' is not new. The different discourses in the current debate have elements that go back many decades. In this paper we focus on an earlier episode of the debate on energy 'the first oil crisis (1973-1974)', a crucial moment in the history of the energy debate and in the development of a number of alternative discourses on energy. Using a discourse theoretical framework (Laclau and Mouffe 2001) combined with elements of critical discourse analysis and the procedures of qualitative content analysis 'a strategy which has been called discourse-theoretical analysis (Carpentier & De Cleen 2007) 'we will expose the ideological struggle between different views on the energy issue as it took place in mainstream and alternative media in Belgium. The first oil crisis can be considered a dislocatory moment (Laclau, 1990) during which the discourse of limitless economic growth powered by unfettered energy consumption, was endangered. The oil crisis led to drops in economic production, and saw the Belgian government take measures such as prohibiting people from using their cars on Sundays. The oil crisis also provided the context for the introduction of nuclear energy in Belgium in January 1974. The analysis shows how the promise of nuclear energy was meant to suture the dislocation caused by the oil crisis, to restore the stability of the discourse of economic growth. But the oil crisis also saw the emergence of alternative, critical discourses that contested the assumptions of the dominant discourse of economic growth and addressed issues such as the social desirability of continued energy-dependent growth, as well as the environmental risks of nuclear energy. Alternative media, we argue, played a special role here. Whereas real democratic debate 'offering real options' on the introduction of nuclear energy and on answers to the oil crisis had little space in mainstream media, a number of alternative media endeavored to complement and criticize mainstream media coverage. We study the emerging alternative discourses on energy heard mainly in those alternative media. Whilst these alternative voices remained marginal during the first oil crisis, their importance is real, not only because they offered a sometimes radical alternative, but also because these voices would soon become rather more present in the discursive struggle over energy, as the current state of the debate testifies.



**Title:** Fairphone and the (de)politicization of ethical consumerism

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**Abstract:** Developed by a social enterprise in Amsterdam, the Fairphone is a smartphone that attempts to inject ethical principles into the production of smartphones, reportedly by intervening in five aspects: mining, production, design, life cycle and consumer relations. The Fairphone is an example of ethical consumerism initiatives defined by old goals (advocacy and education) and new organisational principles (for-profit social enterprise). Contemporary ethical consumerism has been criticised by scholars that perceive a mainstreaming of ethical consumerism. While most theories of mainstreaming assert that ethical consumerism organisations are increasingly adopting apolitical and commercial goals, we argue that mainstreaming has been poorly operationalised. In opposition to scholars that use organisational forms (e.g. Low and Davenport, 2005) or for-profit versus non-profit (e.g. Hudson, Hudson & Fridell, 2013) to scrutinise mainstreaming, we revise the question of mainstreaming by redirecting our focus to ethical consumerism discourses. Furthermore, by drawing from the theory of agonistic politics (Mouffe, 2013), we present the concepts of depoliticization and politicization (Maeseele, 2015) to discern mainstreaming in ethical consumerism discourses. Politicization refers to framing ethical consumerism as a debate between alternative patterns of production and consumption, imbued with different values and interests. Depoliticization refers to the framing of ethical consumerism as a matter of individualised moral responsibility or rational problem-solving by consumers. Politicization raises the stakes in the debate of ethical consumerism, while depoliticization lowers the stakes, thus providing a better indication of mainstreaming than other theories provide. Using critical discourse analysis, selected documents found on the Fairphone website, including all press releases, are analysed to evaluate to what extent discourses are found to (de)politicize ethical consumerism. In addition, the coverage of all Flemish news- and magazines on the Fairphone is included till the 1st of September 2014, to study how the Fairphone is (re-)interpreted by traditional print media. The findings demonstrate two disparate discourses. The first, an instrumentalist discourse, argues that the Fairphone attempts to change the production of ethical consumerism by intervening in the production of smartphones in the global South. Combining instrumentalism with incrementalism, the goal of the Fairphone becomes to tackle the pre-set 'issues' in the production of smartphones oneby-one. The other, informist, discourse projects the Fairphone as an example that aids in developing a notion of what is 'fair' in the production of smartphones. In this discourse, Fairphone problematises the normal production of smartphones by providing information and standards by which to develop a notion of 'fairness'. Remarkably, we find that the media coverage makes sense of the Fairphone exclusively by drawing from the instrumentalist discourse. We argue that the informist discourse politicizes ethical consumerism, as it frames the Fairphone as a medium of debate between different alternatives of producing and consuming smartphones. The instrumentalist discourse depolitizices ethical consumerism by framing the Fairphone as an investment in a pre-defined trajectory of solving



'issues' in the production of smartphones. In relation to the debate about mainstreaming, we discuss the possible reasons and implications of the dominance of the instrumentalist discourse in the news coverage.



**Title:** 'Citizen science, citizen journalism: New forms of environmental reporting'

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**Abstract:** This paper offers an evaluative assessment of the fluid, evolving interface between citizen scientists and citizen journalists where the news reporting of environmental issues is concerned. Citizen science, depending on how it is defined, dates back over centuries, and has often been described using a host of different terms 'recent examples include 'do-it-yourself science', 'crowdsourced science' or 'democratised science', as well as 'mass scientific collaboration', 'participatory action research', 'volunteer monitoring' or even 'citizen cyberscience'. Just as the relationship between the 'amateur' and the 'professional' scientist can prove tense at times, such has also proven to be the case between journalists and ordinary members of the public who feel compelled to adopt a journalistic role, either temporarily or on a more sustained basis. Accordingly, this paper begins by exploring various definitions of citizen science with a view to pinpointing how those definitions have been applied in practice, thereby illuminating corresponding tensions between professional and citizen scientists. Next, attention turns to how citizen journalists' have helped to push environmental science onto the public agenda, with particular attention devoted to examining how they have covered environmental issues, hazards and crises. Two empirical case studies help to illuminate these issues: the Deepwater Horizon oil spill of the coast of the United States, and the Fukushima Daiichi nuclear plant meltdown in Japan. While many citizens engaged in this work find it personally fulfilling, often regarding it as a contribution to community service, others encounter significant difficulties 'including when questions of risk and scientific uncertainty prove controversial. The paper concludes by considering several issues worthy of attention for future efforts to enrich and deepen citizen environmental journalism.



Title: Constructed Environments, Nature and Neoliberalism in India: Perspectives from Karnataka and

Odisha

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**Abstract:** While traditional Indian thought was characterised by deep respect for the natural world, celebrating the interdependence and interconnectedness of all life, neoliberal conceptions of the natural environment are marked by commodification-viewing Nature as a resource for development, thus reinforcing the idea that humans are above Nature. Harvey (2005) notes that 'there are enough specific examples of environmental losses resulting from the unrestrained application of neoliberal principles' such as accelerated 'destruction of tropical rain forests since 1970.' The 'neoliberal state' sides with 'a good business climate as opposed to either the collective rights of labour or the capacity of the environment to regenerate itself (Harvey, 2005). In the course of neoliberalism, a set of 'invisibles' are thus created: in non-urban areas these outsiders or invisibles include animals, birds, rivers, forests, mountains and indigenous peoples; in urban areas too, 'invisibles' exist, with diminishing forest and tree cover, rivers die out and animals and birds are displaced. India's neoliberal agenda has meant the expansion of urban areas and as seen in the state of Odisha, the pursuit of rapid industrialisation and mineral-resource extraction has resulted in the displacement of indigenous peoples from their forest homes and destruction of natural resources critical to their survival (Mishra, 2013a). While communication has the potential to shape our perceptions of Nature, thus also shaping the way we act towards Nature (Milstein, 2009) and environmental degradation, most Indian media organisations look for event-dependent environmental issues that appear more dramatic (Mishra, 2013b), overlooking issues that appear seemingly small and irrelevant. The social media, however, as Robert Cox (2006) points out, have democratised the generation and dissemination of news. The social media have been critical in changing the flow of environmental information by picking issues uncovered by mainstream media. Drawing from case studies in the Indian states of Karnataka and Odisha, where rapidlyexpanding urban areas have led to the destruction of forests, displacing birds and animals, polluting environments and streams, this paper takes a conceptual approach to look at social construction of nature, environmental degradation, and environmental activism in the social media. While social media have inherently provided a forum for environmental information exchange and awareness, ground realities seem to be far removed from their online constructions. Cityscapes, driven by images of consumerism, are designed to keep Nature out, thus ensuring that we engage with distant or constructed environments and not the natural world.



Title: PANEL: Communicating environmental knowledge: Technologically-mediated practices

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**Abstract:** Networked information technologies are changing the way environmental knowledge is produced and communicated. The goal of this panel is to illustrate how digital technologies and infrastructures are vital in sustaining and structuring the communicative practices around biodiversity/environmental information. On the one hand, the digitization and availability of research data on the Internet enables its circulation among increasingly diverse publics 'across disciplines, with government actors, the public, and so on. On the other, social media and Web 2.0 platforms create spaces that facilitate communication between professionals and amateurs and provide opportunities for participation. The presentations trace several innovative ways in which scientists and nonscientists are producing and circulating environmental knowledge. These cases challenge the established (social, scientific or political) order in different ways, and open up spaces in which alternative sustainable futures may be shaped. Two presentations explore 'citizen science,' in one case, for monitoring deforestation and illegal minig activites and the other for georeferencing biological data. The environmental science and policy literature recognizes the importance of citizen engagement as a means of collecting data, advocating for social change and environmental justice, making science more inclusive, and enhancing social-ecological connections (Agrawal, 2001; Fortmann, 2008). Our cases support findings in the literature that citizen science projects can increase scientific literacy and generate 'ecological knowledge, inquiry, and place-based nature experiences' and that they may help channel environmental information within social networks (Dickinson et al. 2012, 2013). A third presentation provides historical context to better understand how the spaces for exchange between scientific professionals and amateurs have changed with the advent of digital technologies. A final presentation discusses individual and collective commitments to open data policies in Canadensys, a network of biodiversity researchers, and the incidence of 'open data' on its use by environmental policy makers. Taken together, the presentations highlight the vital role of information technologies in creating spaces for the production and circulation of knowledge among heterogeneous groups of actors, thereby offering the possibility to challenge established ways of working in environmental communication and policy. Long before the advent of Web 2.0, Bucchi (1996: 386) suggested that 'communication of science at the popular level may 'provide an open space where stimuli, ideas and information may be merged and exchanged among different actors and across disciplinary fields, in the absence of the constraints and conventions which bind scientific work and communication at the specialist level.' They also point to the multiplier effect of digital media in terms of visibility 'local practices are expanded when data are made available on the Internet ' and to the potential of such initiatives for fostering environmental engagement. Paper titles and authors: Monitoring the environment online: Alerta Ambiental Alejandra Paniagua Georeferencing collections data to promote environmental knowledge and engagement Lorna Heaton, Patricia Dias da SilvaMaking Ecological Data Public: The



Case of the Canadensys NetworkFlorence Millerand, Bruno Schmitt-CornetArènes d'échange entre professionnels et amateurs de la botanique au QuébecRicardo Vidal Panel Chair: Lorna Heaton Discussant: Bernard Schiele



**Title:** PANEL: Communicating environmental knowledge: Technologically-mediated practices

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**Abstract:** Paper Title: Georeferencing collections data to promote environmental knowledge and engagement This presentation aims to analyze how non-specialists contribute to the production and communication of scientific knowledge about the environment. Over a period of nine months, we observed the digitization project underway at the Marie-Victorin Herbarium (Montreal) in which volunteers are photographing and georeferencing specimens in a database that follows international standards in biodiversity research. As they carry out this work, they increase their knowledge of and sense of place on a local scale, at the same time helping to build a resource for others, including local authorities, policy makers, environmental activists, or simply citizens with an interest in their local environments. In an era dominated by large-scale environmental change and unprecedented biodiversity loss, natural collections supply an important source of information as to what lives or grows where. What is more, because such collections contain historical data, they can be used to establish biogeographical patterns as to how the environment has changed over time, and analyze the interrelationships of various contributory factors (Pyke and Ehrlich 2010). However, most historical specimen records contain only vague textual descriptions about the locality (Guralnick et al 2007). Retrospective georeferencing is the process of assigning geographic coordinates (latitude and longitude), as well as a measure of 'uncertainty,' to a record. This links it to a specific location and makes it computer mappable. Hill et al (2012) propose using citizen science approaches, where volunteers are asked to help create or process scientific data, to increase the pace of retrospective georeferencing. We first describe the individual and collective georeferencing practices of volunteers. We then discuss the significance of visualizing georeferenced specimen data on a map for both the individuals producing this information and for others who consult the database. Volunteers are most interested in their local environments' species distributions in their municipalities, or environmental changes near their homes. Using the example of a project on threatened and vulnerable plants, we show how georeferencing enhances their understanding of local environmental issues, and may even lead to engagement. This confirms and extends findings that citizen science engages the public in participatory scientific learning and environmental advocacy (Cornwell and Campbell 2012, Ellis and Waterton 2004, Shirk et al. 2012). Furthermore, volunteers are extremely aware of the importance of their georeferencing work for understanding larger trends and analyzing environmental issues. Thus, they are also engaged on a global level to produce a resource that others' local authorities, policy makers,



environmental activists, or simply citizens 'can draw on. For some of the volunteers we observed, georeferencing is a way to sound the alarm by making environmental changes concrete and visible, which confirms Pyke and Ehrlich's (2010) observation that visualizations not only enable data analysis and communication of results, but also serve to engage the interest of audiences who may otherwise be indifferent to the topics being researched.



**Title:** PANEL: Communicating environmental knowledge: Technologically-mediated practices

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**Abstract:** Paper title: Monitoring the environment online: Alerta AmbientalThis presentation analyzes citizen's use of an online platform to signal the violation of their rights from acts of deforestation and illegal mining activities, compile a database and ensure follow-up by relevant authorities. Alerta Ambiental was established in 2014 by the Peruvian Society for Environmental Law and citizens of Madre de Dios, a remote region particularly hard hit by illegal mining operations. Also supported by Peru's Environment Ministry, the platform encourages citizens to monitor activities in their environment, pressures local and national authorities to take action and seeks to increase visibility of the damage done to the environment beyond Madre de Dios. Concerned citizens register with the platform and complete a form with whatever information they have. The Alerta Ambiental team then visits the site with local authorities and marks the exact location using a cartography module. Alerta Ambiental then acts as an intermediary to monitor the complaint process with the relevant authorities. Alerta Ambiental is part of the wider trend of 'citizen science'. Within the vast literature on this subject, certain researchers have focused on the ways in which the public becomes engaged in participatory scientific learning and environmental advocacy (Cornwell and Campbell, 2012; Ellis and Waterton, 2004; Shirk et al., 2012). Danielsen et al. (2014) demonstrate the importance of locally-based natural resource monitoring for conservation in developing countries. The extension of traditional environmental monitoring activities to the Web radically changes the scope of such monitoring (Cornwell and Campbell, 2012). We base our analysis on observations of the platform and interviews with the project directors. The platform makes visible and public the extent and effects of deforestation or illegal mining activities by sharing the maps, photographs and associated information online. New allegations and weekly case updates on the platform are sent to strategic allies and especially journalists, who have the ability to publicize what is happening in Madre de Dios. The platform also aggregates information: working together, citizens can add information or comment on what is written and thus improve the content of the database. The platform also uses Facebook and Twitter, so that information can be taken up and passed along by anyone using these services. Another advantage is to provide a reliable, anonymous channel for treating complaints and ensure prompt follow-up. By encouraging citizens to participate actively in monitoring their environment, Alerta Ambiental is giving the citizens of Madre de Dios a voice and, hopefully, a sense of empowerment in the face of problems and conflicts in their local contexts (Evans et al. 2005). Our work extends that of O'Rourke and Macey (2003) on community environmental policing, as well as that of Johnson et al (2014) who explore citizen scientists as agents for environmental advocacy in non-web contexts. It also provides evidence that the interests of citizens' need not always be placed in opposition to government authorities and shows a way in which they can collaborate to find solutions to environmental problems.



Title: PANEL: Communicating environmental knowledge: Technologically-mediated practices

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**Abstract:** Paper title: Making Ecological Data Public: The Case of the Canadensys NetworkDigital infrastructures such as the Internet play an increasingly important role in scientific activities, and this is especially the case in the field of environmental research (Borgman et al, 2007; Baker & Millerand, 2010). Development of large databases and international Web portals aiming at making ecological science and biodiversity data publicly available has accelerated over the past ten years (e.g. the Global Biodiversity Information Facility (GBIF)). These initiatives promote full and open sharing of scientific data in line with Open Science and Open Data movements (Arzberger, 2004). This paper focuses on the case of Canadensys, a Canada-wide effort to make the biodiversity information held in biological collections freely and openly available. Drawing on an analysis of negotiations around the definition and adoption of an open data policy by the Canadensys network and the ways various actors interpret this policy in their daily activities, we show how individual and collective commitment to the « open » revolves around three main elements. First, leading scientific institutions are playing a key role in promoting open access to research data, thus defining a broader framework for environmental and biodiversity research. Second, biodiversity as a field is marked by a collective adherence to its societal relevance, that translates into a growing awareness of the need to foster information sharing and interdisciplinarity among researchers. Third, commitment to the open movement seems to be grounded in deep personal engagement of participants toward environment conservation and protection. Following previous analysis (Bowker, 2010; Granjou et al, 2013), we argue that initiatives such as Canadensys actively contribute to shaping an epistemic culture strongly focused on collaboration and sharing for ecology and biodiversity in particular. We also point to several challenges an open data policy entails in practice for participants in terms of ethics 'when not sharing is better appropriated for specific data (eg. precise location of endangered plants) ' and in terms of data practices ' when publishing data implies a minimum of standardization for highly heterogeneous data. At a time when large-scale infrastructures for scientific data sharing raise considerable hope for doing 'better science' more collaborative, interdisciplinary, and socially relevant -, it is important to better understand the implications of the 'open' movement on the redefinition of research activities and of how they may evolve in the next future.



Title: PANEL: Communicating environmental knowledge: Technologically-mediated practices

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**Abstract:** Paper title: Arènes d'échange entre professionnels et amateurs de la botanique au QuébecDepuis toujours, les amateurs ont contribué à l'activité scientifique, bien avant qu'Internet ne rende leur rôle et leur contribution un peu plus visible. Le développement des sciences naturelles en particulier s'est accompagné de la participation des non professionnels qui contribuent bénévolement à la construction de connaissances. Ces amateurs de la science réalisent des tâches de collecte, d'observation et de classification, notamment dans l'ornithologie, l'écologie et la botanique (Charvolin et coll., 2007, Miller-Rushing et coll., 2012). À cet égard, la contribution des amateurs s'est rendue essentielle à la production des connaissances dans la mesure où elle est inscrite dans une structure professionnelle qui permet de tirer profit de ses apports (Mayfield, 1979). Ainsi, amateurs et professionnels des sciences naturelles parcourent une longue route traversée de complicités et de démarcations qui mobilisent et reconfigurent quotidiennement leurs frontières identitaires (Meyer, 2008). Cette presentation fournit un contexte historique face auguel évaluer comment les espaces pour les échanges entre les professionnels et les amateurs scientifiques ont change avec l'arrivée des technologies numériques. Elle se veut une exploration de la présence des amateurs de la botanique au Québec depuis la période d'entre guerres à nos jours, à partir de l'examen des pratiques non professionnelles en botanique et des pratiques relationnelles entre professionnels et non professionnelles dans différents espaces de rencontre : Cercles des jeunes naturalistes, Institut de botanique, Sociéte canadienne d'histoire naturelle, etc..Les historiens des sciences naturelles au Québec, et particulièrement de la botanique, ont souvent mis l'attention sur le parcours des professionnels plus marquants ou ils se sont concentrés sur l'analyse des conditions d'institutionnalisation du domaine (Chartrand et coll., 2008 ; Fournier, 1986 ; Descarries-Bélanger et coll., 1979). Ils montrent que la présence des amateurs reste accessoire ou limitée au rôle de « pionniers » de la science. Ils soulignent par ailleurs l'importance de certaines époques, en l'occurrence l'époque de la Nouvelle-France, de la période de la fin du XIXe au début du XXe et la période d'entre guerres, qui ont été traversées de pratiques d'exploration, de collecte et de partage, où se sont entremêlés loisir, recherche et éducation. Ce faisant, on y observe différentes façons dont des « enthousiastes » non professionnels voire des amateurs ont participé à la botanique via des associations, des pratiques de vulgarisation et des espaces de rencontre. Cet éclairage historique permet de resituer les pratiques amateurs actuelles, mediatisées par Internet en particulier, dans la lignée de pratiques anciennes qu'elles viennent prolonger et étendre.



**Title:** The Depoliticization of Environmental Discourse and Politics

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**Abstract:** Over the past decade, a diverse school of academics, particularly in the fields of environmental geography and political ecology, has been concerned with the identification and critique of the post-political or depoliticized nature of environmental discourse and politics (Goeminne, 2012; Kenis & Lievens, 2014; Kenis & Mathijs, 2014a, 2014b; Machin, 2013; Swyngedouw, 2010). This literature signifies the emergence of depoliticization as an analytical concept in environmental discourse research. Broadly speaking, depoliticization refers to how consensual and/or technomanagerial discourses serve to conceal issues of power, conflict and exclusion, thereby precluding a democratic debate on the alternative political programs at stake in environmental policy, and impeding transformative, socio-environmental change beyond the existing hegemonic neoliberal order. Drawing from post-foundational and agonistic political theory on the one hand (Mouffe 2005, 2013) and research into recent case studies on the other (Maeseele 2015; Maeseele et al., 2014; Pepermans 2015), this paper will argue that the added value of the concept of depoliticization lies in its contribution to the study of the nexus between discourse, power and environmental policy. More specifically, I will focus on how power is exercised in depoliticizing discourses on the basis of mechanisms of exclusion which have the effect of naturalizing particular ideological configurations and courses of action. In doing so, this paper subsequently (i) explores the development of depoliticization as a concept in discourse research on the environment, (ii) provides a critical assessment of this concept by discussing some of the most well-known critiques, and (iii) offers novel analytical and empirical insights by discussing the results of a longitudinal and comparative research program to investigate the depoliticization of specific environmental policy fields in media discourse, such as GM food and climate change. In the end, we find how an analytical focus on depoliticization allows us to reveal which ideological preferences and assumptions underlie the promotion of specific courses of action or policy strategies, and how this entails the discursive exclusion of particular actors and demands. This paper concludes by mapping out some research challenges and ways forward.



**Title:** Debates and definitions: A qualitative metasummary of visions for the future(s) of science

journalism

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**Abstract:** Drawing on recent studies on models of science journalism (Secko et al., 2013), this paper examines how some science journalists are currently seeking to better define and distinguish themselves in the midst of a growing array of informational environments. Such attempts draw on a sense of urgency that has emerged over the last decade about the future of science journalism. While science journalism is often argued as an important source of information for non-specialists, it has been heavily criticised as unable to connect with citizens in ways that allow meaningful engagement with science (Schäfer, 2011). This critique has grown as diverse informational environments have appeared online (Brossard, 2013) and questions have arisen about whether science journalists can still be considered dominate narrative authorities, especially when considered against the emergence of popular scientist bloggers and evolving audience-user roles (Secko et al., 2011). While some see science journalism in a state of crisis (the extent of which is debated), others suggest science journalists need to articulate agreed-upon frameworks to become more active in shaping visions of their future. This paper examines this debate through the lens of the 2014 Kavli Symposium on the Future of Science Journalism (Secko and Fleury, 2014), which brought together fifty journalists and experts from 16 countries to discuss the future of science journalism. Using methods of thematic qualitative metasummary (Sandelowski and Barroso, 2003), and supported by participant observation of the symposium, the paper assess a 'definition' of science journalism that arose during the symposium ' one that represents a particular vision of the future when compared to various theoretical models of science journalism (Secko et al., 2013). Overall, the paper adds to a growing literature (Allen, 2011) that aims to find productive ways forward in rethinking science journalism's role within a changing online landscape. References Allen, S. (2011). Journalism, 12(7): 771. Brossard, D. (2013). Proceedings of the National Academy of Sciences, 110(Suppl 3): 14096-14101. Sandelowski, M., Barroso, J. (2003). Nursing Research, 52(4), 226-233. Schäfer, M.S. (2011). Sociology Compass, 5(6): 399-412. Secko, D. M., et al. (2011). Journalism, 12(7), 814-831. Secko, D. M., et al. (2013). Journalism Practice, 7(1): 62-80. Secko, D. M., Fleury, J-M. (2014). Kavli Symposium on the Future of Science Journalism. http://www.kavlifoundation.org/sites/default/files/image/news/Final DetailedReport KavliSym 2014.p df



**Title:** 'Fracking' Communication and Public Perception: A Multi-Level Modeling Approach

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**Abstract:** The recent development of unconventional sources of oil and natural gas using hydraulic fracturing (also known as 'fracking') has generated a great deal of controversy in the U.S. Proponents have argued that fracking is associated with great benefits, as it will create more job opportunities while facilitating a rapid transition to carbon-free electricity generation. However, opponents are concerned about the potential adverse impacts of this technology on ground water quality, public health and communities in close proximity to the drilling activities. Prior research has shown that a majority of the U.S. public has developed ambiguous attitudes toward fracking, which are likely to be influenced by a number of contextual and psychological factors, such as the proximity to fracking wells, local regulatory environment, value predispositions, familiarity and mental associations. In addition, mass



media use (e.g., newspaper and television) has been shown to relate to individuals' attitudes toward fracking. However, researchers have yet to identify the mediating variables that explain the relationship between media use and public opinion about this issue. Using a nationally representative sample (N=853), we examine the role of risk and benefit perception in mediating the effects of news media use on public attitudes. Our multi-level model indicates that while public affairs media use is positively related to public support for fracking, science media use is negatively related to it. An analysis of mediation shows that the effects of public affairs media use is mediated by perceiving benefits in fracking, whereas the effects of science media use is mediated by risk perception. These results not only indicate that journalists working for different sectors may cover the issue of fracking through different lenses, but also suggest the effects of both benefit- and risk- themed news coverage are equivalently powerful in terms of influencing public opinion. In a next step, we will analyze the sentiments of the major newspapers for each state (e.g., percent of optimism versus pessimism) and use that as a group-level variable to predict residents' attitudes. This ongoing effort will allow us to further explore the effects of news media use at both individual and aggregate levels. Aside from offering insights into the media effects on public opinion, our results show that public support is positively related to the average number of fracking wells in the state over the last decade. This can be explained by the fact that in states where hydraulic fracturing is prevalent, residents are more likely to lease their lands to drilling companies and hence be optimistic about the payoffs. At the individual level, females, non-white people and those with lower incomes tend to be less supportive of fracking. In addition, people who are more deferent to scientific authority and who are trusting of industry tend to be more supportive. In summary, our study demonstrates the dynamics of public opinion formation surrounding the fracking issue may be more nuanced than previous research has suggested and largely contingent upon the local industrial experiences and communication environment that citizens are exposed to.



**Title:** Communicating climate science - best practices in journalism

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**Abstract:** In 2013 and 2014 the IPCC AR5 reports were launched, and underlined growing scientific certainty when it comes to anthropogenic global warming. Earlier research (Boykoff & Boykoff 2004, Lorenzoni et.al. 2007, Hulme 2009, Boyce & Lewis 2009 Pearce 2010) has demonstrated a variety of challenges when it comes to communicating the results of climate science and climate politics to a broader public. This last IPPC reports came as the world is preparing for the Paris summit 2015, deemed to be the most decisive one for the future of climate change adaptation and mitigation since 2009. The MediaClimate network, active since 2008, has previously analysed the coverage of climate summits in a range of countries (Eide et.al. 2010, Eide & Kunelius 2012) and has identified a wide variety in volume of coverage as well as discursive practices. At the summits, climate politics and politicians are at the forefront, as clearly shown from the coverage, but what happens when the main actors/news sources are scientists' This paper takes findings from the coverage of IPCC AR5 reports in 18 countries as a point of departure, but has its main focus on 'best practices', by analysing a sample of newspaper stories linked to the launch of the four reports. The sample has been created after a call to network members, in which the following criteria were presented: Criteria identified for selecting best practices:\* Reporting, which manages to explain the research in a balanced and engaging way\* Reporting, which connects the IPCC research to people's everyday lives ' and give some space for the 'view from the ground'\* Reporting which in creative ways challenges politicians and their responsibilities, including well-written opinion pieces. A sample consisting of suggested stories from a variety of genre, is analyzed, with particular regard to accuracy and creativity in communicating the science, including visual effects. The evaluative norms are critically examined and discussed in an attempt at further defining 'good climate journalism'. Key words: climate change, best practices, climate journalism



Title: Consent and Resistance: Pipelines, Petroleum Producers, and the Battle for Public Perception.

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**Abstract:** 'It's more than a pipeline. It's a path to our future.' Northern Gateway Pipeline adOver the past few years citizens of the province of British Columbia (B.C.) have been privy to a systematic symphony of corporate-led voices, continuously extolling the virtues of oil (bitumen) extraction in Northern Alberta (the oil/ tar sands) and of oil pipeline construction through B.C. as a means of transporting the valuable resource to ports on the Pacific coast and on to foreign shores. Print, television and online advertising, comprehensive company and industry websites, videos and 'Fact' books, all aim at enhancing public awareness, enlightenment, and, naturally, persuasion and compliance; legitimizing the industrial activities, marginalizing expressions of dissent, and assuaging fears arising in wary publics. The many serious environmental and health impacts associated with extensive bitumen mining in the Alberta tar sands have received increased attention and alarm in recent years. In British Columbia a public relations battle ignited when Calgary-based pipeline company, Enbridge, announced its plans to construct a 1,177 kilometre pipeline from Bruderheim, Alberta, through the province of B.C., to Kitimat, on the west coast. Pipeline controversy in the province has expanded to include Kinder Morgan's proposal to twin their existing Transmountain pipeline running from Edmonton to the Burrard Inlet in Vancouver, thereby increasing tanker traffic to more than four hundred tankers per year. Combining analysis of message construction, reception, and resistance, attention in the paper will initially focus upon the websites associated with the Northern Gateway pipeline, the Canadian Association of Petroleum Producers, the Canadian Energy Pipeline Association, and individual oil and pipeline corporations, analyzing the integrative propaganda at work. The 'dominant representations of the world-as-we-know-it' on display on these sites will be analyzed for the rhetorical, symbolic and representational strategies chosen to 'engineer consent.' Central to this analysis is attention to the construction of the concerned and caring corporate citizen and actor; with anchors linking representations of concern for family, community, and care and stewardship of the environment with ongoing commitment to oil extraction. With never a drop of oil in sight, audiences instead witness the majesty of British Columbia in all of its scenic glory; snow-capped mountains, rushing river waters, vibrant, untouched forests, spirit bears and Orca whales, all combining with the assured, sincere voices of workers, guaranteeing all will be well, and that indeed oil does mix with water. The quest for hegemonic ideological consent is always an active process. In this vein, attention will be devoted to various voices of resistance in the pipeline battle. Awareness of and resistance to the corporate celebration of extracting and moving oil has been formidable. Interviews with organizations including Dogwood Initiative and Rainforest Alliance will focus upon the challenges faced in presenting alternative narratives to the steady stream of corporate ads and content courting the B.C. public. Finally, a preliminary audience reception study will focus upon message construction, interrogating audience awareness and critical reception of the persuasive strategies utilized in select corporate advertisements.



**Title:** How to communicate catastrophes' Multiple threading among humans and politics

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**Abstract:** Climate is changing. Droughts, hurricanes, floods, extreme temperatures and a number of weather phenomena have become more frequent, urging humanity to question the finitude of Earth's resources as well as human limits: consumption, the concept of adapting and the way we inhabit and co-exist in an ever changing environment. The current situation in Brazil 'marked by unprecedented droughts and floods 'defies local governments and populations to think of new policies and of a new relation towards natural resources, mainly water. In a world drowned in signs that have increasingly been divested of meaning and devoid of potential of real change, in what ways it is possible to frame a potent communication regarding climate' Which possibilities can we make to communicate the catastrophe' How to make the global threat seen, heard and felt in a powerful manner"Potency', here, is not as much related to the sense of triggering responses and reactions on individuals as it is to propose new ways of living, existing and conceiving a world where the stark separation between nature and culture, environment and society, seems to lead to an inevitable collective doomed fate. To bring about this potency and transformative latent capacity of communication is the aim of the studies that culminated on the conception of ClimaCom magazine, publication developed by the Science Communication and Climate Change subnetwork, coordinated by the Laboratory of Advanced Studies in Journalism at Campinas State University (Labjor-Unicamp) and the Brazilian Climate Network (Rede CLIMA). The magazine moves in a double-flow direction: diagnosing the ways in which the general media has been communicating climate change, as well as experimenting new possible ways of communicating. In this paper, it is our goal to analyze, within both flows, how the notion of human and



policy affect and shape each other, setting a problematic field with the notions of Latour's collective (2004), of the other in Viveiros de Castro (2014) and of becoming in Stengers (2009). We intend, thus, to contribute to the politicization of climate change and to an effective public engagement with Science and Technology systems.



Title: Debating the Brain: Critical Media and the Emergence of a Neuro-Chemical Social Imaginary

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**Abstract:** Developments in neuro-technologies in the pharma-medico sector give occasion to question the new ways in which the human mind and body are constructed and governed biopolitically (Rose and Abi-Rached, 2013). The promises of technology and science may have lead the way to the development of a neuro-chemical social imaginary which is becoming increasingly dominant for the way that mental 'diseases of the brain' are represented. Despite the relative hegemonic strength of the neuro-chemical social imaginary, neuro-technologies have also been contested and debated in the public domain from the point of view of patients, relatives and citizens in general. The paper therefore explores the way in which knowledge representations of the neurochemical social imaginary take different forms in the public debate about technology. A special emphasis is put on the political role played by critical media leaden to the research question: How are representations of neuro-technologies debated, contested and challenged by the media'The governance and the politics of mental illness are emerging fields of research (Rose and Abi-Rached, 2013; Horwitz, 2002; Bunton and Petersen, 1997; Pickersgill, Van Keulen and Katzrothman, 2011). Many of these studies adopt an approach based on Foucauldian governmentality, science and technology studies (STS) or neuro-sociology (Williams, Katz and Martin, 2011). While this field of research plays a crucial role in problematizing dominant images of the brain, the role of the media is as yet relatively unexplored in terms of their contribution to contestations of the hegemonic processes fixating the meaning of (mental) illness amongst political and scientific elites (Laclau, 1990; Dahlberg, 2011). Public contestations in the media may give a (perhaps limited) scope for a certain level of democratisation and empowerment in the otherwise highly expert and science driven field of neuro-technology. Drawing on particular neuro-technological examples, such as the medical treatments of ADHD in children and anti-depressant medicine, the paper focuses on how the brain is represented in the media. This will allow for an understanding of how the critical media communicate about the complex interplay between scientific discourse, technical promise and public ideas and images about health and mental illness. The analysis is conducted as a qualitative study based on 125 newspaper articles from the period 01.01.14 ' 31.03.14. The data set is collected from three broadsheet Danish newspapers using the search word ADHD (65 articles) and depression (60). The analytical strategy is based on discourse analysis based on structured qualitative coding (Miles and Hubermann, 1994). The coding categories are developed specifically in order to explore how mental illness is represented in the media and how hegemonic ideas about 'the brain' are debated, contested and confirmed in the media debate. On the basis of the analysis, the paper argues that a neurochemical social imaginary can be traced in the public debate and that it has important consequences for the way that the human brain becomes an object for research as well as on object for governance to be studied, governed and mediated in particular ways.

