When Experts Disagree

WEXD

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Abstracts
(Alphabetical order)

Scientific consensus and public perception of science
Rafael Alves Batista, University of Oxford

Disagreement among experts is common across many fields of science and is an integral part of the scientific process. In recent years, however, the very definition of science has been subject of dispute, and there have been calls for changing the scientific method. Prominent examples of these matters arise in fundamental physics. In particular, it has been widely debated whether string theory is a scientific theory de facto; the idea of multiverse too has been deemed unscientific. The inflationary period that is believed to have taken place shortly after the big bang is a controversial topic as well. These debates are not always confined to within the realms of science. The debate concerning inflation, for instance, which has raised

great stir amongst physicists, was triggered by an article written by specialists in a popular science magazine; this was followed by a swift reply backed by many prominent physicists, drawing attention from the public to this supposedly controversial topic. Was the choice of a popular science magazine adequate to initiate this debate? Should scientists openly discuss the topic of disagreement publicly? How do these disagreements impact the public perception of science? Does the lack of consensus within the scientific community makes science less trustworthy in the eyes of the public?

The Scientist as an Advocate
Shane Bergin, UCD

This talk will examine the role of scientists as advocates. As the institution of science continues to come under sustained political pressure, we will explore the role individual scientists can take to give voice to their concerns.
An analysis of those who contributed to the Irish March for Science will form the basis of a broad conversation on the values, issues, and institutions people cited as reasons for their participation. Particular attention will be paid their perceptions of truth, facts, knowledge and expertise. Since the election of President Trump late last year, the term 'alternative facts' has become part of our every-day vernacular. In the associated scramble for who and what to believe, science has been positioned as having the facts or, indeed, the truth. One might argue that this is a rather narrow definition of science that does it little service. The strength of science lies far more in how it operates that what it produces yet this idea has received little attention in science education or public engagement. This talk will explore how we have arrived at the point where science has been backed into a tight corner.
Finally, I will propose that examining how science education and communication are perceived, researched, and carried out, is critical to addressing perceptions of science and the expertise of scientists.

Testimony, epistemic communities, and practical risks
Felix Bräuer, Humboldt University Berlin

Under which conditions are we justified to believe what people tell us? Traditionally, the answer has either been reductionist [1] or anti-reductionist [2]. Either testimonial justification reduces to inductive justification, or we have a presumptive – though defensible – right to believe what we are told. However, some philosophers have defended a third option, arguing that there isn't one definitive answer. Different cases of testimony call for different epistemic treatments.[3] This raises the question of which factors decide which epistemic treatment is appropriate for any given case. This paper examines and criticises a recent answer by John Greco and defends an alternative, risk-dependent, account.

Greco argues for the following position: Whether reductionism or anti-reductionism is

appropriate depends on whether the parties that exchange information are part of an epistemic community, which he defines as “a collection of cognitive agents, joined in relationships of cooperation, with respect to one or more information-dependent practical tasks” (Greco 2016, 491). If the testimonial exchange happens within an epistemic community we are prima facie justified to believe what we are told, otherwise we need inductive reasons. [4]

This paper develops two problems for Greco’s account. (1) It is shown that a standard no- defeater condition – common to reductionism and anti-reductionism – can handle the cases Greco puts forward to argue for his account, leaving the appeal to epistemic communities unmotivated. (2) A case is presented where the recipient of testimony needs inductive reasons to believe what she is told, despite the fact that she and her interlocutor are both part of the same epistemic community.
In light of the above problems, an alternative proposal is put forward that draws on insides from the pragmatic encroachment debate. [5] The practical risks connected to receiving false testimony determine which epistemic treatment is appropriate. If the stakes are low, we have a presumptive right to believe what we are told, but if the stakes are high, we need inductive reasons to do so.

[1] Cf. e.g. Hume (1748/1999), Fricker (1994, 1995), Van Cleve (2006)

[2] Cf. e.g. Reid (1785/2002), Coady (1992), Burge (1993), Foley (2001).

[3] Cf. Fricker (1995), Greco (2012, 2015a, 2015b, forthcoming), Freedman (2015).

[4] Cf. Greco (2015a, 2015b, 2016).

[5]Cf. Fantl and McGrath (2002, 2007), Stanley (2005), Grimm (2011), Freedman (2015).

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David Hume and Thomas Reid on Fidelity to Promises and Trust

Ruth Boeker, UCD

Keeping one’s promises is one example of trust. In this paper I will examine David Hume's and Thomas Reid's different accounts of fidelity to promises.

According to Hume, fidelity to promises is an artificial virtue. This means that promises for Hume are the invention of society and unintelligible in a state of nature. Only after we have formed social conventions that govern our interaction with others and realized that society would not function effectively if people broke their words do we feel obliged to keep our promises.

Reid is a sharp critic of Hume and rejects Hume's view that fidelity to promises is artificial. Instead Reid argues that fidelity to promises and trust are natural aspects of human nature. The disagreement between Hume and Reid concerns the widely discussed question in British moral philosophy whether we are by human nature self-interested or benevolent. While Hume’s account of fidelity to promises aims to accommodate the self-interested aspects of human nature, Reid offers a more optimistic view than Hume. I will identify the strengths of each position.

In the final part of the paper, I aim to show how the disagreement between Hume and Reid can shed light on 20th and 21st centuries debates about the concept of trust such as Karen Jones's and Katherine Hawley's views. For example, trust understood as an affective attitude (Jones 1996) presupposes an optimistic view about human nature (akin to Reid's view). If trust is understood in terms reliance plus

commitment, as Hawley argues, then there is more scope to accommodate more pessimistic views about human nature – though they aren't presupposed in Hawley's view – and commitments can, though don't have to, be understood as artificial inventions of society similarly as Hume suggests.

The Perspective of Trust, Trust Relationships, and Trust in Democracies
Dr. Christian Budnik, Universität Bern

The vast majority of philosophical accounts of trust assume that trust is a mental state of some kind. The accounts then differ regarding the exact nature of the mental state in question and/or regarding its specific content. According to 'pragmatists' about trust, it is possible for a person to (rationally or appropriately) trust another person without taking into account features of this person that speak in favour of trusting her. According to 'evidentialists' about trust this is not possible – instances of (rational or appropriate) trust always involve a (rational or appropriate) response to specific features of another person, i.e. evidence of her trustworthiness. According to pragmatists, you can always single-handedly decide to trust another person; according evidentialists you cannot do that.

In my paper I argue in a first step that both the pragmatist approach and the evidentialist approach are faced with specific problems. The pragmatist cannot account for the *value* that we place on trusting other people: Trust is typically understood as a remedy in situations of epistemic and agential uncertainty, and it is not clear why we should feel secure about trusting people in the absence of reasons that would speak for their trustworthiness. The evidentialist, in contrast, cannot account for the distinction between trusting another person and *merely relying* on her to do something: If I judge another person trustworthy in a particular respect, then it seems natural for me to predict her future behavior on the basis of this assumption of trustworthiness, but this kind of predictive expectation is a hallmark of mere reliance and must not be confused with the phenomenologically and normatively richer attitude of trust.

Faced with these problems I think we have reasons to rethink the systematic framework of the pragmatist and the evidentialist account, and this means to question the assumption that trust is primarily a mental state. In a second step I therefore argue for an alternative approach according to which trust characterizes a specific *perspective* that a person can take on another person. Two elements are crucial to taking the perspective of trust: Firstly, you have to regard another person as non-instrumentally motivated to take your reasons into account in her own deliberations; and secondly, you necessarily invoke a temporal and reciprocal dimension in your relation to the other person – a dimension that works towards a full-blown *trust relationship*. Understanding trust along these lines has important consequences for the ways in which we conceive of a number of trust-related phenomena. One important context in which this is the case is the sphere of political relations between citizens, political experts and democratic representatives. By way of example I argue here that – contrary to what is taken for granted e.g. in political science – we do not have any reason to trust our fellow citizens and our elected

officials, and that there is no such thing as rational trust in political experts. I argue that invoking the notion of trust in these contexts is not only irrational, but that it paves the way for populist distortions of political reality. Instead of worrying about trust and trustworthiness in the sphere of politics we should try to shape our institutions in a way that makes us able to *rely on each other* with specific matters, and relegate references to trust to contexts in which we regularly interact with other people on a personal basis.

Science on Trial – The Politics of Expertise and Social Behaviour after the L'Aquila Earthquake

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In October 2012, a municipal court in the Italian city of L'Aquila made global headlines when it found seven scientists guilty of manslaughter and imposed prison sentences. Around the world, the trial led to hostility towards Italy, including an open letter from the American Academy for the Advancement of Science (AAAS) to the country's president, who was asked to block the court case. Critics called the indictments 'unfair and naïve', alleging that the state prosecution accused the scientists of failing to predict an earthquake, which is impossible. This paper is based on eighteen months of ethnographic fieldwork in L'Aquila, which included participation in court hearings and the consultation of legal documents, as well as interviews with the state prosecution, the judge, plaintiffs, witnesses and local people. I show that, rather than punishing experts and scientists for failing to predict a natural disaster, the court case sought to illuminate intersections regarding trust in expertise, knowledge of complex natural phenomena, political power, and social behaviour.

The city of L'Aquila had been experiencing a series of weaker earthquake tremors since autumn 2008. The area is prone to seismic hazards and one of the most dangerous zones in Europe. In early 2009, intensity and frequency of tremors increased. The local population was concerned. An amateur scientist then warned of an impending catastrophe, claiming that he had developed a novel method of radon detection that allowed the hitherto unthinkable: earthquake prediction. As panic grew in L'Aquila, the national government dispatched a high-profile body of scientists, the Major Risks Commission, to meet in L'Aquila, consider the evidence, and advise the authorities. The commission members convened and reassured the local population: the ongoing tremors were a positive event, discharging energy constantly, and there was no danger for the city's inhabitants. No warnings were issued or precautionary measures advised. One week later, two weaker but noticeable tremors rocked the city at night. In the past, under similar circumstances, many Aquilani had chosen to sleep in their cars. Following the Major Risks Commission's expertise, however, local people interpreted the shocks more positively, as a routine discharge of energy, and stayed indoors. Two hours later, a powerful earthquake destroyed large parts of the city and killed 309 people, trapped in collapsing buildings.

The state prosecution subsequently collected evidence to demonstrate that the Major Risks Commission had influenced interpretations of seismic events and of social

behaviour, and contributed to the high number of casualties by failing to assess the situation and communicate risk properly. The trial unearthed that government officials had instructed commission members to reassure townspeople and rubbish predictions. The experts had negligently complied and ignored relevant evidence. The court case explored the role of trust in reliable expertise in complex societies and revealed Italian interpretations regarding the intersection of expert knowledge, state politics, and behaviour. In the end, I suggest, the trial sought to restore trust in expert opinion by illustrating that political influence and individual negligence had corrupted scientific expertise, which could otherwise have saved lives.

Broken Trust: A Gadamarian Take on Experts, Choice, and a Return to the Humanities

James Butler, Boston College

As we witness what are arguably steps backwards in social progress, we are witnessing the decline in trusting experts. This strikes many as starkly bizarre given the technological age that we live in. The amount of highly specialized industries has increased seemingly exponentially with the proliferation of technology. Thus, we require more specialized persons with expertise in the myriad of fields. But there is a breakdown of trust in the expert that has left us grappling with the question of how to reestablish this trust and in whom. To answer some of these questions we must examine how this breakdown came about and how we can respond to this crisis. I argue that this breakdown stems from the impossible task and role that has been placed on the expert and that at least a significant part of the remedy is found by a return to a cultivation of one's own practical wisdom and discernment through a return to the humanities.

I draw upon Hans-Georg Gadamer's extensive writings on the expert to explicate what he sees as the expert's role in society, how this came to be and why he sees this as problematic. Gadamer argues that we have placed an unfair burden of being the judge of correct action on the expert. This impossible task is further complicated by the expectation that the expert is to be provider and guarantor of solutions that can never been known with the exactitude of modern scientific method that is demanded in our scientific age. The assumption that finding the precise method for uncovering truth is at the heart of the assumption that the expert is, or was, supposed to deliver us from the troubles of our human lives in part by making the decisions for us. One thinks of the "talking heads" that appear on news programs to simply tell us how we should react to a new policy because they are an expert in the field that the policy affects. The consequence, and why I see this as problematic, is that there is decline in the development of one's practical wisdom, or Phronesis. Developing one's practical wisdom entails developing the way in which we discern by weighing opposing arguments, evidence, and consequences of our actions as best as we can, given the situation we find ourselves in. Gadamer argues the same point however, where I see his argument being particularly relevant is that without the development of one's practical wisdom we lose trust in experts because they are simply who we completely rely on to decide for us and to offer us the solutions that cannot be delivered. Furthermore, this distrust in an expert's judgment is fueled by a

competitive market, so to speak, of experts. One merely has to shop around for the expert's opinion that already best line up with one's worldviews.

The solution that I offer is a return to the humanities and hermeneutics as equally significant avenues of inquiring to science and method. However, this requires a two-fold move: first, the developing one's practical wisdom. Second, for experts to avoid the temptation of relying on the method of science to be the only harbinger of truth and knowledge. I am ultimately calling for an institutional shift in our societies to reevaluate the place of the humanities but to make this shift occur we cannot ignore the task that is before us all which is to cultivate our practical wisdom because in the end, we are the ones who must choose our moral actions.

Self-Trust and Epistemic Experience

Anna Bortolan, UCD

In this study the structure of self---trust and its relationship with epistemic experience are investigated from a phenomenological perspective. In the philosophical literature self---trust has been depicted as a form of confidence in one's own cognitive and practical abilities (Govier, 1993), the conviction that one is able to think and act so as to meet the demands of everyday life and to reach one's goals. In this paper I expand upon this view by suggesting that self---trust is primarily a bodily and affective form of experience which modulates in multiple ways our epistemic activities. Drawing on phenomenological accounts of self---consciousness and experiences of ability (e.g. Slaby 2012), I will first argue that self---trust is rooted in a bodily sense of one's potentialities, a background feeling of one's capacity to act and to bring about effects. I will suggest that self---trust can have various degrees and its two extremes can be characterised, on the one hand, as the feeling of lacking any possibility to exert control over oneself and the external world and, on the other, as the sense of possessing unlimited power to influence the course of events. I will then show that self---trust deeply modulates epistemic affects such as feelings of certainty, wonder, curiosity, and doubt (De Sousa, 2008; Morton, 2010), thus playing a fundamental role in the affective and cognitive dynamics which are at the core of various forms of personal, intellectual, and scientific enquiry. I will also show that self---trust should not be identified with a sense of epistemic agency --- or agency more in general --- but is rather presupposed by it. While the sense of agency is experienced upon performing a particular cognitive activity or action, self---trust can be present independently of whether one is acting or not. Self---trust, I will argue, is best viewed as an experiential sense of our capacity to reach or of having reached our desired outcomes and, as such, it is a condition of possibility for our ability to engage in purposeful action and thinking. To illustrate and further develop the account of self---trust put forward in the first part of the paper, in the second section I examine the experience of people affected by obsessive---compulsive disorder (OCD) and schizophrenia, highlighting the epistemic impact of the alterations of self---trust they undergo. First, I argue that the compulsive behaviours which are typical of OCD originate in a diminished sense of self---trust. People who

suffer from OCD, I will claim, experience a reduced sense of their ability to act competently and influence the external world, and it is because of this that they do not have confidence in the validity of their judgements and effectiveness of their actions, and feel compelled to repeat them over and over again. I will argue that schizophrenia, on the other hand, is marked by the presence of an inflated feeling of trust in one's bodily and agentive capabilities, suggesting that this is involved in the emergence of certain delusions and hallucinations.

Trust and Competence
J. Adam Carter, University of Glasgow

According to Karen Jones (e.g., 2012) all virtue-based accounts of *trustworthiness* (e.g., Potter 2002) are fundamentally unworkable. I argue, however, that the most serious objections to such views can be sidestepped entirely (while retaining many of their key advantages) by modelling trustworthiness along the lines of a *competence* (e.g., Sosa 2009; 2010; 2011; 2015). Once trustworthiness is viewed as a competence, it will be shown that a structurally similar move can be made (albeit with important differences) to give a competence-based account of *trust* itself. Drawing from Ernest Sosa's bi-level virtue epistemology, the competence based account of trust I propose distinguishes between two levels of trust—*animal trust* and *reflective trust*—and shows how the two relate to one another. I conclude by outlining how the bi-level account of trust proposed has the resources to overcome certain epistemological objections that face more traditional proposals.

Trusting Experts: Two Problematic Views and an Escape from Skepticism
Isaac Choi, Yale University

Our society's reliance on expertise ever increases, yet there is growing distrust of the epistemic establishment. Somewhere between the extremes of reflexive skepticism and immediate acceptance of expert opinion lies an Aristotelian golden mean. I hope to make progress in locating this balanced position by evaluating two possible positions drawn from the epistemological literature and proposing my own view.

The first position comes from the debate over default entitlement or *prima facie* justification for testimony *simpliciter*. This could give us some reason to simply accept expert judgments. However, when experts disagree, any *prima facie* justification the layperson has for one expert's claim will have a rebutting defeater from their opponent. Even with just one expert involved, unlike the straightforward subject matter of the bulk of testimony, correct answers are difficult to obtain in expert domains and mistakes are easily made. We seek out second and even third opinions when a medical diagnosis is serious. This background knowledge about the fallibility of experts and how frequently they disagree provides undercutting defeaters. The situation is similar to perception when we recognize we are in a tricky perceptual environment.

These rebutting and undercutting defeaters undermine John Hardwig's view that simply trusting experts and choosing not to think for oneself is often the rational attitude, since laypeople are incapable of properly assessing expert reasoning. He presents a *reductio*: if such simple trust were not rational, then large numbers of laypeople hold to irrational beliefs. In response, this seems like a sound deductive argument, considering the defeaters mentioned and the pervasive gullibility recently witnessed regarding political rhetoric and fake news.

Going to the other extreme, Bryan Frances has proposed a new kind of skepticism that, while not aimed at laypersons, can be adapted to lay-expert situations. He argues that the average philosopher or scientist cannot rule out highly anti-commonsensical views that have expert proponents, such as eliminativism regarding beliefs, physical objects not being colored, and the non-existence of character traits. Unable to rule out these views, they lose their knowledge concerning beliefs, colored objects, and character. Frances's position can be extended: when a layperson discovers that some experts believe eliminativism, she too loses her relevant knowledge. So a layperson who finds that experts disagree on a question cannot have knowledge regarding that question. She has a rebutting defeater that she cannot currently neutralize, with no rational reason to believe one expert over the other.

I propose that this agnosticism need not be permanent. The layperson who learns about the relevant evidence and arguments improves her epistemic position regarding the question. It requires time and effort to learn, but the experts were once laypeople themselves and improved their epistemic position over time, so it is possible. The layperson need not become an expert herself; she only needs enough knowledge to understand the evidence and see if and why they are good reasons for a view. In the end, we have no other options if we desire the truth concerning our most important questions.

Public trust vs. interpersonal trust
Christopher Cowley, UCD

I start by comparing 'public' trust (when non-experts trust experts such as dentists) to 'interpersonal' trust (where one friend trusts another). Trust between friends is much more closely linked to identity, and this means that one friend's 'absolute' trust in her friend (in a sense I will explain) can be admirable. I then consider a kind of trust half-way between the public and the interpersonal: the trust in one's religious leader, and I enquire what absolute trust means in this context, and in what way it might or might not be admirable.

What do reactive attitudes tell us about trust?
Aisling Crean, University of Glasgow

Trust is a mental state directed at agents or at persons. Annette Baier (1986) famously argues that this is what distinguishes trust from 'mere' reliance. While we

might *rely* on inanimate objects from time to time, they're not appropriate targets of the rich interpersonal trust that often obtains between people. Holton (1994) developed Baier's idea arguing that we might plausibly see trust as an aspect of what Strawson once called 'the participant stance': trust is a mental state identified via its distinctive connection to reactive attitudes around resentment and betrayal. I rely on my alarm clock to wake me up but should it fail to ring, feeling resentment towards it would be inappropriate. In contrast, if I trust you to meet me at 5pm at the train station as you promised, and then you then fail to show up, it's appropriate for me to feel resentment. We may rely on objects and persons from time to time, but only persons, and never objects, are the appropriate targets of trust.

The connection between trust and reactive attitudes like resentment and betrayal seems like a strong one and this is why so many accounts of trust emphasize the mutuality, emotional affect, and complex relationships involved in trusting someone (Baier 1986, Holton 1994, Jones 1996). But here's another interesting thing about trust: it doesn't seem require a *direct* relationship to the person trusted. Many commentators agree. Holton (1994) writes that 'I can, for instance, trust someone to look after a third party or to look after themselves' (1994:65). Jones (2004) likewise permits trust outside of direct relationships. Hawley (2013) notes you might trust your daughter's friend to keep her promise to your daughter to give her a lift home and that you will likely resent your daughter's friend if she proves unreliable. Trust doesn't seem to *require* that the person I trust has a direct relationship to *me*.

The idea that trust doesn't seem to require a direct relationship is a familiar one but it sits uneasily with the idea that trust *must* involve a strong connection to reactive attitudes as Baier, Jones, and Holton all suggest. After all, it's implausible to think that *you* are the one betrayed when your daughter's friend fails to keep her promise. The only person betrayed in this case is the person who has been invited to trust and that's your daughter, not you. So is the connection between trust and reactive attitudes not quite what we thought? For it seems that there *can* be trust without the attendant feeling of betrayal when trust is breached.

This paper argues that there cannot be genuine trust without attendant feelings of resentment and betrayal when trust is breached. It explains why cases like Daughter's Friend are not genuine cases of trust by spelling out when such feelings are inappropriate and what, in other cases, might make them appropriate. I conclude with some remarks on what this might teach us about the relation between trust and trustworthiness.

Expertise, Trust and Conspiracy Theories: On the improvised nature of conspiracy theories and conspiracy theorising

Matthew R. X. Dentith, Auckland

Conspiracy theories are often taken to be examples of unwarranted beliefs put forward by pseudo-experts which typically rely upon suspicious kinds of evidence. Yet contemporary work in Philosophy challenges the idea belief in such theories is prima facie irrational. Rather, philosophers have argued conspiracy theorising is

both understandable—because conspiracies do occur—and that if we take an evidential approach—judging individual conspiracy theories on their particular merits—belief in such theories can turn out to be warranted in a range of cases.

Drawing on this work, I argue that if there really is a problem with belief in conspiracy theories, it is a problem which comes out of the largely 'improvised' nature of expertise associated with conspiracy theorising. Whereas there are recognised experts in the sciences, whose expertise we trust and thus rely upon when it comes to assessing evidential claims with respect to scientific theories, there are no such recognised experts when it comes to assessing the particulars of conspiracy theories. Indeed, the role of trust with respect to who we take to be the relevant experts in any given case plays a large role in lay agreement or endorsements of theories, conspiracy or otherwise. Understanding the interplay between expertise, trust in experts, and thus what counts as evidence for or against a conspiracy theory makes the task of appraising particular conspiracy theories harder, but this is not, I argue, an insurmountable problem.

Regulatory versus testimonial expertise: the case of central banking
Jérémie Dion and François Claveau, Université de Sherbrooke

Central banks are expert communities who are supposed to "promote the good of the people" (according to the Bank of England for example). The "people" accordingly rely on central banks to perform key societal functions. The reliance of laypersons is rational only if these institutions are trustworthy. But how is it possible for laypersons to form justified beliefs in the trustworthiness of central banks? This question raises a well-known issue in the lay-expert relationship (Hardwig 1991). By addressing the issue in the case of central banking expertise, this paper contributes both to our general understanding of rational trust in experts and to a timely epistemic assessment of institutions which have significantly grown in influence since the 2007-08 crisis.
Our contribution centers on the distinction between having regulatory expertise and having testimonial expertise in a domain. As applied to the domain of central banking, members of central banks act as *regulatory* experts when they make decisions on, most importantly, which monetary policy to pursue. They share this type of expertise with other public regulators such as members of drug authorization agencies. Yet, members of central banks also play a prominent role as *testimonial* experts, that is as providers of information to laypersons on how central banking works and how it should work.

Most testimonial experts are not regulatory experts – e.g., an academic researcher working on cross-country differences in drug authorization procedures is typically at arm's length with the actual regulators. In addition, most regulatory communities do produce some testimonial expertise on their domain, but they do not spend a large fraction of their resources on this task and are not the main source of information on their domain. Central banks stand out in this respect: in the last decades, they have become dominant testimonial experts on central banking through the "scientization" of their identity (Marcussen 2009; Mudge-Vauchez 2016). For instance, more than

half of the articles in the three main academic journals on central banking are now authored by staff from central banks (Claveau, Dietsch and Fontan, *forthcoming*).
The main goal of this paper is to assess how, for such a community, the imperatives of the two types of expertise partly reinforce and partly undermine each other. We use both in-depth empirical research (institutional analysis and computer-assisted textual analysis) and conceptual analysis to pursue this goal.

Our main thesis is twofold. On the one hand, the explicit goal of central banks in ramping up internal research – i.e., becoming better *regulatory* experts – is likely to be met. Indeed, the standard tools (e.g. Longino 1990; Goldman 2001) for laypersons to assess the trustworthiness of experts pronounce in this direction. On the other hand, the scientization of central banks and its accompanying research concentration have worrisome consequences for testimonial expertise on some central banking topic. Most importantly, pronouncements on the proper delegation of powers to central banks – a topic that is trending up in public discussions – suffer from a serious credibility deficit when they come from central bankers themselves (because of concerns about conflict of interest).

Beyond the empirical specifics of the central banking community, this paper is meant as a contribution to the reflection on the rational trust of laypersons in experts. It advances this reflection by analyzing how rational trust should be differentially affected by the intermingling of regulatory and testimonial expertise.

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Just Because They Say It Doesn't Make It So: On Group Consensus
Jaime Edwards, University of Chicago

Individuals, both lay-people and theorists alike, are subject to numerous cognitive and motivational biases that consistently distort their judgments in pronounced ways. However, people often expect that group deliberation will correct for these biases, and therefore tend to accord group consensus a heightened epistemic status. I will argue that this confidence is unwarranted—group deliberation proves unreliable for correcting for the biases that undermine individual judgments, and often even exacerbates them. In light of this, I will argue that deliberative consensus *qua* consensus provides no added epistemic weight.

First, I will examine the mechanisms which bias group deliberation, highlighting two phenomena in particular[1]. *Cascade effects* occur when group members assent to perceived group consensus despite privately-held information indicating they should dissent. This results either from informational signals (individuals give too much epistemic credence to the perceived views of the majority) or for motivational reasons (individuals publically assent to the majority view to show solidarity and/or avoid censure). *Group polarization* describes the tendency of deliberating groups to move towards more extreme positions than individual members held pre-deliberation.

Second, I will argue that biased beliefs prove nearly impervious to debiasing[2]. Even if a person accepts that their group is subject to deliberative biases in general, they cannot recognize when a particular judgment has been biased, since biased judgments do not have phenomenologically distinguishing features. Moreover, even if a particular bias results in false judgments that might frustrate the judger's ability to deal effectively in the world, the judger may never realize this, because such feedback is often delayed and/or ambiguous, and so a connection between the biased judgment and the frustrated outcome is never made. Finally, the false beliefs of a group do not necessarily frustrate the group's aims, and these aims may in fact depend upon promulgating falsehoods (e.g. advocacy groups, niche-academic departments, etc.), and so there is no negative feedback at all.

Third, I will argue that these results demand epistemic caution with respect to the group consensus. Following Tuomela[3], I will urge redescribing group beliefs in terms of individual acceptances. Understood in these terms, group belief offers a type of testimony, although a peculiar one—we are told, not that the members of a group actually believe something, but that they are willing to accept it as true insofar as doing so accords with their position in the group. They may do so because they personally believe it (for either sound reasons or on the basis of unsound informational cascades); they may personally disbelieve it, but accept it in light of motivational pressures (either out of fear of being punished, or from a desire to express solidarity); or, they may personally disbelieve it, and this may be a perfectly acceptable position to express within the group, but they may accept it along with the other members because the group has deemed this the best stance for the group to take publicly.

[1] Cf. Sunstein, CR. (2009). *Going to extremes: How like minds unite and divide*. New York, NY: Oxford University

[2] Cf. Hogarth, R. M. (2001). Educating intuition. Chicago, IL: The University of Chicago Press.

[3] Cf. Tuomela, R. 1992. Group Beliefs. *Synthese 91*: 285-318.

Trust and doubt: a subtle balance between two essential driving forces of science

Parizot Etienne, Paris Diderot University

Scientific approach usually begins with sincere questioning, and any genuine questioning involves an important part of doubt, including doubt about "the obvious". Yet, paradoxically, trust also plays a crucial role in science. The subtle balance between trust and doubt, or even distrust, is hard to determine and apprehend, especially from outside the scientific community. Understanding the interplay between these two seemingly opposite attitudes is important, not only to conduct efficient scientific research building on past achievements and acquired knowledge, but also because it has strong connections with the way science is perceived outside its own environment. While a substantial part of the society is showing mistrust and suspicion towards science, how much trust should scientists or experts expect from the general public, considering that they actually strive to promote knowledge as opposed to belief? And to what extent can knowledge be invoked when internal debates are ongoing and experts themselves appear to disagree? More generally, who or what should be trusted? Scientists? Science products (results, opinions, recommendations…)? Science as a process or methodology? Whenever trust in science is considered, the value of the scientific community should not be overlooked. Eventually, what could lead the citizens to trust "science" may simply be what makes scientists trust each other, which involves a deeper understanding of how the community works. In a rapidly changing technological and knowledge environment, it is important to address science-related issues in the broadest perspective and framework of a global scientific or knowledge-oriented community, within which the balance between trust and doubt is dynamically adjusted. This should also be taken into account in the education programs. While the current recommendation of the European Commission for science education is to "focus on competences", one may actually argue that this is precisely what should not be done…

Genuine participation in participant-centred research initiatives: the rhetoric and the potential reality

Oliver Feeney, NUIG

It has been argued that too many deliberations and decisions in different health and genetic research contexts have been focused mainly on the perspectives of medical-research professionals and only seldom on the perspectives of the patient-research participant. In recent years, integrating this perspective in policy has been considered an important aspect for public health and research as part of a broader participatory approach. Information and Communications Technology (ICT) may become a useful tool for reviving the democratic ideal of participatory engagement in fields such as health-related research through its potential to facilitate the reconstruction of

hierarchal relationships as relationships more egalitarian in important respects. On the face of it, this trend seems to be reflected in Participant-Centred Research (PCR) initiatives that are considered by some to place patients and research participants – particularly through use of ICT – increasingly at the centre of decision making. The particular issue posed in this paper is whether, or to what degree, ICT-based PCR Initiatives actually attempt a level of genuine 'participation', in the sense that it has been traditionally understood and as evident in the broader non-ICT research context. Or whether it is merely the case that such research initiatives have increased contact with participants through ICT and are otherwise non-participatory in any important normative sense of the word. We highlight that genuine 'participation' should enable a reasonable minimum threshold of participatory engagement through, at least, three central participatory elements: educative, sense of being involved and degree of control. While we would agree with criticisms that genuine participation seems more rhetoric than reality at present in some well-known initiatives, there can be observed some level of partial, but genuine, participatory engagement facilitated by ICT, as well as the potential, at least, for a greater ICT-facilitated participatory engagement on all three participatory elements. Finally, we outline some practical steps such initiatives should take to further develop these elements and thereby their level of ICT-facilitated participatory engagement.

Trust me: News, Credibility Deficits, and Balance
Carrie Figdor, University of Iowa

Testimonial knowledge depends on trust in the source of the information. A trust or credibility deficit can contribute to an increase in beliefs that are acquired or held for reasons or goals other than truth. This is shown in motivated reasoning, when a person retains beliefs that bind them to a primary social group rather than altering them in the face of disconfirming evidence. It is also shown in testimonial injustice, when a person downplays or disregards evidence provided by someone against whom one is prejudiced (and, more generally, against anyone who is not trusted). In short, the role of trust in testimony is modulated by other factors that also play a role in fixation of testimonial belief and knowledge.

My goal in this presentation is to articulate this modulation in testimonial knowledge (or belief) as it is realized in public consumption of mass media in the U.S.. I focus on the journalism of verification (or objective journalism), which aims to provide accurate, epistemically justified facts for public consumption. On my account, journalism of verification predictably will founder in a divisive political environment because the trust deficit that characterizes this environment primes the public to process news in epistemically suboptimal ways. In the U.S., Donald Trump's oft-repeated claim "Trust me" (or its variant "Believe me"), and some voters' judgments that they did not trust Hillary Clinton, are symptoms or expressions of this trust deficit in the U.S. population. The trust deficit lies behind such epistemic issues in the U.S. as resistance to belief in human causes of climate change. Communications theorists have argued that this reveals the failure of the deficit model of science communication, which holds that providing the public with more facts will result in better belief fixation and better public policy. On my view, the deficit model also fails

in the general case: epistemically suboptimal testimonial belief fixation strategies are more likely in any environment, large or small, that is characterized by a trust deficit.

I also argue that practices associated with the journalism of verification can adjust to a climate of suspicion but cannot compensate for it. In particular, the norm of balance – roughly, of getting both sides of a story – has been strongly criticized for contributing to U.S. public disbelief in the science of climate change. I argue that the norm of balance should be revised (not abandoned) so that it takes non-epistemic reasons for belief fixation into account. On this view, balance would require making explicit and justifying the degree of credibility assigned to sources. Balance so understood will not compensate for a trust deficit to overcome the epistemically suboptimal reasoning that it primes. Rather, it prepares the media to contribute to the use of more epistemically optimal belief fixation strategies when (if) social stresses abate.

Do as I say, not as I do: What can an obese cardiologist can tell us about trust in ethical expertise?

Lily Eva Frank, Eindhoven University of Technology

Physician's advice can have significant impact on health-related behavior. Imagine that after a visit to a cardiologist, blood tests, and an EKG, she recommends lifestyle changes that will likely decrease my risk for a future cardiac event: stop smoking, decrease salt-intake, and lose a weight. Now imagine my cardiologist is significantly overweight and a smoker. This should not change the epistemic status of the advice she gives or the trust I have in it. Her advice is based on expertise, analysis of and observation of my physical state and habits, medical knowledge, and training. In this paper I argue that what underlies this doubt has to do with trust and trustworthiness.
In discussions of expertise in ethics, critics assert that professional philosophers are not ethical experts. This is clear when we examine their lives--they are no more likely than others to be paragons of virtue. This criticism assumes that one of the necessary features of expertise is that expert follows their own advice.

If the cardiologist's expertise is undermined by her obesity, what can this tell us about expertise? It could be that the physician represents such an esteemed member of society that we expect her to live according to high standards of conduct in all respects, socially, healthwise, and even morally. Thus our trust in her character is undermined, if she does not follow her own advice. It may be that part of expertise is acting on one's own advice. Maybe this only applies to advising professions; an architect who lives in a shodily designed home may be subject to the same kind of doubt, but a mathmetician who cannot do her taxes might not have her expertise undermined. It is unlikely that philosophers are held in the same high social-regard as physicians. Knowing that they fail to practice what they preach does not undermine their expertise.

One might say that weakness of will, however, *does* plausibly exclude someone from being an ethical expert. We don't seek the moral counsel of war criminals or wall-street swindlers; we don't trust them. Tempting as this explanation is, it relies on a

metaethical and moral psychological assumption. Central is the discussion regarding internalism and externalism about moral motivation. The expert opinions offered are not inherently connected to motivation. Would it be a problem however, if we discovered that in our ethicist lives by a very strange moral code or has truly repugnant moral beliefs? This is akin to the cardiologist taking massive doses of vitamins daily, because she believes that they will cancel out all the negative health impacts of her diet.
The conclusion I draw in this paper is that cases, such as the physicians or the ethicists are problematic because they suggest a general failure of rationality, not a failure of expertise. This means that they do not undermine trust in expertise, but in the person.

Policy-Making and the Duty to Gather Evidence
Katherine Furman, Durham University

Hall and Johnson (1998) endorse an extensive epistemic duty to seek evidence. They argue that in order to achieve the ultimate epistemic goal of believing 'all and only true propositions', one has an epistemic duty to gather evidence whenever one experiences subjective uncertainty about a proposition. Further, and perhaps more importantly, one might have a moral duty to seek evidence when one's failure to do so will foreseeably result in harmful action – Rosen (2004) describes this as your 'procedural epistemic obligations'. Presumably, the higher the stakes of the intended action, the more weighty the associated procedural epistemic obligations. We would thus expect policy makers, whose actions have implications for the lives of many, to be subject to extensive evidence gathering duties. Further, in situations where it is unclear who the experts are, or one has reason to distrust the putative experts, we might anticipate that the duty to gather evidence will be even weightier, especially in the high stakes context of policy development.

However, policy makers (especially elected officials) are typically laypersons in matters of science, and many policy decisions rely on scientific evidence. Levy (2006) and Jones (2002) argue that one is ill-placed to engage in evidence-gathering activities on topics outside of one's domain of expertise. They argue that the barriers of entry to scientific debate are high, and that laypersons are unable to assess the arguments presented by scientists on opposing sides of a disagreement. At best, the layperson is no better off epistemically after their evidence-gathering and they might even be epistemically worse off as a consequence. Jones concludes that policy makers ought to leave the business of evidence-gathering and debating to the scientists themselves, and trust whatever mainstream position emerges from that process.

The case of AIDS denialism in South Africa in the early 2000s seems to support Levy and Jones's position. In this case, former South African President, Thabo Mbeki, was concerned by the question of why southern Africa is disproportionately affected by AIDS compared to the rest of the world. He thus faced subjective uncertainty about the science of HIV and AIDS, and engaged in extensive independent evidence-gathering. This would presumably be endorsed by those who support duties to

gather evidence. However, Mbeki is a scientific layperson, and he became persuaded by a marginal group of scientists that HIV does not cause AIDS. Policy was developed on this basis, and ARVs (anti-retrovirals - the drugs used to suppress HIV replication) were withheld via the public health system. This had tragic consequences, and best estimates suggest that it resulted in 171, 000 new HIV infections and 343,000 deaths between 1999 and 2002.

However, to conclude that policy makers ought not to engage in evidence gathering, even on topics outside of their expertise, is extremely counter-intuitive. A third position needs to be developed, between that which endorses extensive evidence gathering duties in all circumstances, and that which denies that the duty to should apply when the subject is outside of the agent's expertise. In this paper I argue that the decision theory literature on 'the value of additional information' can help to clarify under which circumstances it is appropriate for policy makers to engage in independent evidence-gathering.

The War against Experts and the Reification of National Identity
Paul Giladi, University of Sheffield

A marked feature of recent political upheavals in Europe and the US is the breakdown of trust in experts. Another important aspect of the turmoil in many social democracies has been the rise of neo-nationalistic rhetoric about the 'will of the people' and national identity. In this paper, I shall argue that a particularly helpful way of connecting these two interrelated socio-political phenomena is by regarding fascistic discourse as construing experts as inauthentic members of given societies. What is especially worrying about the demonization of expertise is not simply the distressing nature of harrowing instances of testimonial injustice against rational agents, but also crucially how neo-nationalist and fascist conceptual frameworks pervert the social sphere by bringing in cognitive pathogens into the space of reasons.

Focusing specifically on the UK's EU membership referendum campaign and its relevant fallouts since 23rd June 2016, I argue that the prominent leaders of the Leave Campaign took advantage of the socio-economic deprivation caused by the 2007-8 global financial crisis to paint a picture of experts and policy-makers as disengaged agents with no concerns for ordinary members of society. A particularly troubling consequence of such a narrative not only created seemingly now-entrenched societal divisions, but also created a hermeneutical climate for conversation about Brexit that was so febrile that the latent fascism and neo-nationalism underpinning the Brexit narrative has led to the demonization of any competent rational agent critical of Brexit: those with expertise are now branded as enemies of a reified and Platonised 'people'. This has perverted the space of reasons and poses a significant threat to democratic institutions by misrecognising experts and liberal policy-makers as not 'true' members of society.

Science isn't a democracy, but consensus is (higher-order) evidence nonetheless

David Harker, East Tennessee State University

Genuine scientific controversies are commonplace, but must be carefully distinguished from the illusion of controversy. In recent decades, special interest groups have regularly undermined scientific authority, in large part by creating the misleading impression that particular scientific claims are far from settled and that the relevant scientific community is acutely divided on even core issues. Improving public attitudes towards scientific expertize requires a better understanding of both the strategies that are being employed to create the false appearance of controversy, as well as the misconceptions and cognitive failings of non-experts' that makes us vulnerable to such deceptions. In many cases, of course, these strategies are developed in direct response to public fears and desires, or to public confusions about the nature of scientific inquiry or knowledge-claims more generally.

In this paper, I consider misconceptions and strategies that relate principally to the non-expert's inability to reliably evaluate technical arguments and analyses for themselves. Those that seek to discredit mainstream scientific conclusions advise and encourage non-experts to evaluate the scientific evidence directly. They insist that science is not a democracy and hence that it doesn't matter whether there exists a (near) consensus among experts. Both the advice and the claim about scientific process each contain something importantly correct, but each is also easily distorted in ways that can infelicitously and unjustifiably corrode public confidence in even well-established scientific conclusions. These problems are exacerbated by cognitive biases such as the Dunning-Kruger effect; their persistence is plausibly explained in terms of resolutions to cognitive dissonance.

One promising response to such problems appeals to the epistemologist's notion of 'higher-order evidence' (HOE). HOE is evidence which suggests that my ability to evaluate an issue is less reliable than I had previously presumed. For example, suppose I confidently infer some conclusion, based on available evidence, but am then reminded that I haven't slept in over twenty-four hours, that the problem I've engaged is not straightforward and mistakes could easily have been made, and that sleep deprivation compromises cognitive reliability. The rational response to HOE seems to be a reduction in confidence in the initial conclusion, but this has important implications both for how we understand the significance of scientific consensus, as well as how we conceive of the advice that we should each *evaluate the evidence for ourselves.* In the first case, the concept of higher-order evidence helps illustrate in what sense it is correct to say that science isn't established by majority vote, while simultaneously recognising that consensus should also play an important evidentiary role for everyone. In the latter case, evaluating the evidence surrounding a scientific issue requires not just an assessment of pertinent data, methods and analyses, but also higher-order evidence that concerns an individual's ability to reach sensible judgments on their own. Ignoring HOE is a failure to incorporate all relevant evidence, but incorporating HOE should generate beliefs that depart from mainstream science far less often and far less radically.

Living in different worlds: the paradigm-dependence of trust
Leah Henderson, University of Groningen

Scientific theories can be regarded as organised into hierarchies, with higher levels sometimes called ‘paradigms' or ‘frameworks', and lower levels encoding more specific or concrete hypotheses. Evaluation of a theory in the light of the evidence then also reflects this hierarchical structure. At a lower level, more specific or concrete hypotheses are compared with one another against the background of a particular framework or paradigm. At a higher level, the frameworks themselves must be compared. This comparison of frameworks has been very controversial. According to Thomas Kuhn and his followers, the comparison between frameworks or paradigms is not driven by the evidence, but by a complex social process of persuasion and conversion. Yet many have thought that the rationality of science requires that there be some sense in which one paradigm or framework is better supported by the evidence than another. In fact it is possible to model how the comparison of different frameworks in science can be systematic and evidence-driven using hierarchical Bayesian models. However, these models have not thus far taken into consideration the possibility that the evaluation of which sources of information to trust might itself depend on the framework. When that is taken into account, the story changes. Trust in sources is determined in part by new evidence fitting with the existing framework. In cases where it does not fit, this may lead to rejection of the framework, but it may alternatively lead to an erosion of trust in the source of the conflicting evidence. This may result in polarisation between adherents of different frameworks. Associated with one framework may be trust in a certain range of sources and distrust of others, whereas with respect to a different framework, different sources may be regarded as trustworthy.

This type of polarisation can occur between different paradigms within science. It thus poses a challenge to the rationality of scientific theory change similar to that posed by the Kuhnian. But similar polarisation may also occur between the framework constituted by the scientific world-view itself and the framework constituted by alternative world-views, such as religious world-views. For example, according to a scientific world-view, scientists are to be trusted, and further scientific evidence which fits with the world-view boosts trust in scientific sources. But suppose that according to a religious world-view, religious leaders are to be trusted more than scientists. Then further evidence which conflicts with the world-view may not undermine the world-view but rather may further undermine the trust in scientists. The connection of these ideas to psychological studies on belief polarisation will be explored.

Is the Moral Philosopher an Expert? A Recent Icelandic Experience
Henry Alexander Henrysson, University of Iceland

The reliance on expert advice to policy makers is a well-documented and thoroughly discussed fact in modern societies. Recently, the focus has turned to the democratic

legitimacy of the experts' contribution. Two main strands of thought have emerged. On the one hand are those who accept the importance of expertise in a modern democratic society if this expertise is backed up with necessary levels of transparency and accountability. The other side is more prone to simply reject the experts' opinions and insist on the public having a say on all important issues, even sometimes cheering the public to go against the expert advice, however evidence-based the advice appears to be.

Since the 2008 economic crash, Iceland has gone through periods where both sides have had their time in the limelight. This study focuses on how one particular field of inquiry, ethics, has fared in this environment. The public attitude towards ethics has been ambivalent, to say the least. Generally speaking, there has been a widespread (if somewhat incoherent) call for ethics to be more widely applied in the Icelandic society. Important part of the report of the Special Investigation Commission of the Icelandic Parliament (2010) was for example the findings of the Working Group of Ethics, which evaluated the collapse in the light of flaws in morality and work practises. Furthermore, there has been a constant demand for a bigger role for ethics in the Icelandic education system. However, when ethics has been called upon in more specific investigations the tone has quite often changed somewhat with vocal public figures emphasising that an expert's ethical view is, frankly, only one voice among many and that the public should make up its own mind without such external advice. This view was for example quite prominent in the discussion on whether the Icelandic state should take on liabilities on behalf of the Icelandic Depositors' and Investors' Guarantee Fund, the so-called "Icesave dispute".

This paper investigates three topics with respect with Iceland's experience since 2008. First, the paper asks whether there is such a thing as expertise in ethics, which the society can benefit from – particularly in turbulent times when the levels of trust have dropped considerably. Drawing on this perspective, this paper revisits some of the ethics experts' opinions during the Icesave Saga, as well as some of the more forceful reactions towards their findings. Lastly, this paper introduces an example of a recently established role of an ethical advisor in a public advisory committee in Iceland, which operates with high levels of confidentiality and very limited guidance what kind of ethical expertise is being sought from the relevant person. With reference to the discussion on these three topics, this paper seeks to identify criteria how an advice on potential moral implications and other ethical considerations should be presented to policy makers and governing bodies.

Taking Credit: Trust and Transactions in Economics
Patrick Honohan, Trinity College Dublin

The relationship of trust to finance is central but ambiguous. Building and maintaining trust seems important from the perspective of society, as is suggested by research findings identifying trust in financial contracts as causal for economic growth, as well as by the evident role of trust in ensuring effective intergovernmental financial relations. Many of the practices of finance are designed to overcome a lack of trust. (For example, lacking trust, lenders often require the borrower to post collateral.

Likewise, regulators impose precise, quantified rules on banks in part because they do not trust them to behave prudently.) In seeking to avoid the need for trustworthiness, though, such practices often have the side-effect of undermining trust. Market participants often follow the letter only and not the spirit, seeing the contracts and rules as obstacles to be worked around in a manipulative manner, instead of operating in a way that would prove their trustworthiness. The need to moderate such behaviour presents still-unresolved challenges for policy makers.

Political Trust
Attracta Ingram, UCD

This paper defends a version of political trust as fundamental to the political ideal we call constitutionalism. It argues that that political trust is a practical necessity for the relationship between legislator and electors. It also argues that the constitutional ideal of democracy is one we should promote and uphold against the attack of populist nationalism. Sometimes we should not trust out compatriots but rather the institutions such as separation of powers that we have developed under the general ideal of the rule of law. The paper questions the view politics of faith and political scepticism define opposite ends of a spectrum on which politics is forever destined to play out, with populism always a possibility. Instead we should see the populist and constitutional versions of democracy as a radical but not inevitable conflict, a battle to be won or lost rather than a tolerable disagreement.

The People's Trust: Trust, Distrust and Obligation
Nikolas Kirby, University of Oxford

INTRODUCTION

The 2017 Edelman Trust Barometer, the most authoritative global index on trust, declared that 'trust is in crisis around the world'. Trust levels have collapsed to record lows. Unprecedented distrust surrounds government, the elites that occupy them, and the institutions that they operate, precipitating it seems the rolling series of populist events across the world – from Duterte to Trump, BREXIT to the rise of Le Pen. Actors, on all sides of politics are asking, how can they rebuild trust between the people and government?

These public discussions disclose an intuition that distrust threatens the very legitimacy of government regimes, even if they are democratic. The assumption is that some level of popular trust, or at least the absence of systematic distrust, is a necessary condition for a government's right to rule, and hence our obligation to obey. This intuition, however, goes almost entirely unexamined in contemporary political theory. The dominant liberal analytic theories say almost nothing about the relationship between trust, distrust and government legitimacy. This is a mistake.

This paper aims to begin filling this gap by justifying three key principles which might form the basis of the first general theory of how trust and distrust condition our

obligations in political theory.

RESEARCH CONTEXT

Whilst there is a nascent philosophical literature on the meaning, rationality and value of trust, a general theory of how trust and distrust might affect our *obligations* – to each other and government – is missing from contemporary political theory. In large part, this is a function of its default 'ideal theory' methodology. Ideal theorising aims to determine what obligations various agents owe to one another under certain 'ideal conditions'. These conditions are akin to 'first-best conditions' in economic theory, and indeed often include such conditions as perfect information. In particular, one 'ideal condition' in philosophy is that all agents can rely upon one another to comply with their obligations. However, little thought has been given to how the realisation of such a condition in the real world implicitly requires deep reserves of trust between individuals, communities and institutions. And, almost no thought has been given to how such obligations may be very different when this condition does not hold. Thus, just as economists began to theorise in the 1960s about how markets change under second-best conditions of imperfection information, this research proposes to begin the project of theorising about how our moral obligations change under 'non-ideal' conditions of imperfect trust.

THREE PRINCIPLES

This paper aims to outline and justify three core principles structure such a theory of how trust and distrust condition our obligations.

The first principle is that no agent can be obliged to act on any principle that makes her deeply vulnerable to another agent she reasonably distrusts. Under ideal conditions we may be obliged to share, disarm, and co-operate with others in ways that make us deeply vulnerable to one another. However, where in non-ideal conditions complying with these obligations would make us deeply vulnerable to those we reasonably distrust, then those obligations must be modified accordingly.

The second principle is that, whereas the first principle implies that vulnerability and reasonable distrust are barriers to the operation of the obligations of ideal theory, there is an underlying obligation to reduce or eliminate those barriers. Thus, where reasonable distrust exists, individuals are obligated to create and support structures that overcome such reasonable distrust. This is because, once they are overcome, the obligations of ideal theory can begin to (re-)apply.

The third principle is that, since the first two principles hold for obligations and agents in general, then they must apply *a fortiori* to obligations to obey governments in particular. Thus, on the one hand, applying the first principle, some level of reasonable trust (or, at least the absence of reasonable distrust) of a legitimate government will be a necessary condition of its authority. On the other hand, applying the second principle, since in general all agents have an underlying obligation to support efforts to reduce reasonable distrust amongst themselves insofar as it qualifies the obligations of ideal justice, then all agents have an obligation to support

the creation, consolidation and continuance of any government that is the best available means of doing so. In other words, where a particular government – new or continuing – is the best instrument that a group of individuals has to achieve trust amongst themselves, then all of those individuals have an underlying reason to support that government's institutions.

IMPLICATIONS

This paper will conclude by sketching some of the implications of these principles in three domains.

First, contemporary political theory has generally failed to say much about democratic institutional design such as the rule of law, separation of powers, bureaucracy, constitutionalism, bicameralism, the powers and responsibilities of government officials, and the role of the fourth estate. The core principles of trust finally provide a way of theorising about such institutions that does not merely reduce to their instrumental value or democratic authorisation. Trust is the conceptual thread that explains why virtues of accountability, impartiality, transparency and integrity, go directly to the heart of a democratic regime's legitimacy; and, why particular vices such as corruption, counterfeit, and misuse of power are so corrosive of that legitimacy.

Secondly, contemporary ideal theory has long been attacked by both feminists and conservatives for failing to account properly for the importance of social institutions, such as family and community. However, sociological and psychological research demonstrates that such institutions are often preconditions of social trust. Our very ability to trust others at all, for example, often turns upon having safe and positive childhood home environments. As such, this paper shall explain how even a secular, liberal government has an obligation to support such social institutions, in order to fulfil its broader obligation to promote trust.

Finally, this research aims to explain how other forms of government – particularly within developing, transitional and emergency contexts – may have qualified legitimacy where democratic institutions are absent, corrode or fail. This paper shall explore particular contexts in which non-democratic structures of authority may be better able to fulfill the three core principles.

Economic literacy and trust in economics: evidence from a national survey
Ashley Lait & Alvin Birdi, Economics Network & University of Bristol

The proposed session would present the Economics Network's recent work on communication and understanding of economics. Along with ING, the Economics Network ran a YouGov survey on the public's understanding and perceptions of economics and organised a symposium at HM Treasury which explored economists' ability to successfully communicate their discipline.

Securing an audience's trust is a vital part of effectively communicating information. It is therefore of particular concern that the ING-EN survey showed a lack of trust in economists, especially among those who have never studied the subject, older age groups and those who voted 'leave' in the June 2016 EU referendum. Furthermore, the survey indicated that the public see the views of economists as subjective and dictated by personal opinion and political persuasion rather than verifiable data and analysis. Nevertheless, the survey did indicate both a recognition of the importance of economic understanding for civic life and a strong desire to learn more. How then can we best explain our discipline and communicate effectively with an interested but sceptical audience?

The survey also revealed the absence of voices in the discipline that are trustworthy and authoritative. Indeed, the survey respondents overwhelmingly reported that public figures (such as Brian Cox in physics or David Attenborough in natural history) are important for communicating their discipline, but were unable to identify a similar figure in economics. The symposium, held in May, examined these issues, presented original research and explored avenues for the development of economic literacy through formal education, traditional media and social media. As well as presentation of the survey results, the session would draw on the contributions from the HM Treasury symposium to present possible ways forward to improve trust, communication and understanding between economists and the public.

Knowledge from scientific expert testimony without epistemic trust

Jon Leefmann and Stefan Lesle, Friedrich-Alexander-Universität Erlangen-Nürnberg

A common view about knowledge from expert testimony goes like this: Experts testify what they perceive as true while laypersons – without being in an epistemically adequate position to access the truth – are in charge to decide whether to trust or not to trust the received information. This picture conceives of knowledge from expert testimony as a transfer of information under the condition of epistemic dependence. It, thus, identifies the layperson's lack of justification for her testimony based beliefs as a central epistemic problem. Can the layperson's belief from expert testimony ever be knowledge, if it is solely based in epistemic trust?

This view has neglected much of the context in which the communication of knowledge is situated. Political Scientists, for instance, wouldn't testify to laypersons, if they didn't consider their expertise of public importance. In turn, laypersons have no reason to approach political scientists, if they are neither interested in information about some specific political phenomena nor have any practical disadvantages from their ignorance. The concept of expert testimony implies a communicative situation, in which a layperson intends to ask an expert for a piece of information or in which an expert addresses a layperson as a receiver of testimony.

Starting from this contextualized picture of testimony we will reconsider the epistemic relation of scientific experts and non-academic laypersons as a process of collaborative knowledge production. We will argue that experts and laypersons have good reasons to engage in this collaboration in virtue of mutual dependence. Experts

need to be believed outside academia, if they want to acquaint the expert status for a wider community and want their beliefs to have practical effects. Laypersons in turn depend on expert knowledge in reaching their practical goals efficiently and benefit from the epistemic division of labor. Both, the concept of the expert and the concept of the layperson do not exclusively depend on the amount of justified, true beliefs of the epistemic subject. They also depend on their mutual acknowledgement as knowers.

Though not unprecedented in the social study of science and in philosophy of science, this alternative view on expert testimony faces a strong objection: Epistemic trust in expert opinion cannot simply be justified in virtue of the mutual practical interests of experts and laypersons. Basing knowledge solely in mutual interests renders the concept of "knowledge" inadequately relativistic. As an answer to this objection, we suggest to model the process of collaborative knowledge production between experts and laypersons as a procedure of question and answer. In this procedure a *true* belief can be accepted as knowledge only, if all relevant doubts within the community of experts and laypersons have been dispelled. As a result knowledge from expert testimony is possible without a laypersons' epistemic trust. Wholehearted participation in a discursive process leading to mutual agreement that the belief in question *cannot be rationally rejected* is sufficient. There is no trust required except the general trust that the epistemic procedure is suitable to promote mutual agreement.

As Economists Learn to Trust: Lessons from Nobel Prize Winners in Economics

Cormac Mac Fhionnlaoich, UCD

One might find it surprising to learn that while a number of well-regarded economic scholars focus their research on theoretical issues associated with financial markets for most of their careers, in the latter years they write on themes associated with trust. For example, Michael Jensen, famously considered to be the father of Agency Theory has written on the theme of trust and integrity (Erhard and Jensen 2014) , while Maureen O' Hara, most associated with the Market Microstructure Theory (O'Hara, 1997) has recently written on the theme of trust and ethics (O'Hara, 2016). Why this recent focus on behavioural characteristics? Is it perhaps that they have learned that the limitations of financial modelling and their application in financial markets have not served society well, as exemplified most recently by the global banking crisis of 2008?

Many eminent economists in their review of the banking crisis have come to the somewhat unsurprising conclusion that the fault-lines lie with individual and group behaviours, whether bank executives, regulators or governments (e.g., Nyberg, 2011; Honahan, 2010). In general, four behavioural factors are common to these studies: moral hazard, adverse selection, group-think and herding. Each of these factors relates to issues of trust: the lack thereof, or misplaced trust or indeed overreliance on trust, whether in institutions, counterparties or colleagues.

A review and deeper consideration of the foundational contributions of recent *Nobel Prize-Winners in Economics* may help to illuminate the crucial impact of (lack of) of trust in financial markets and institutions. George Acklerof, Michael Spence and Joseph Stiglitz (prize-winners, 2001) highlight the impact of moral hazard and adverse selection on the potential destruction of markets, while John Nash and Thomas Schelling (prize-winners in 1994, 2005) use Game Theory to demonstrate cooperative and non-cooperative behaviour. This work implicitly highlights trusting behaviour as a means of sustaining economic transactions. Other Nobel laureate who's work relates to this theme include Elinor Olsen and Oliver Williamson (prize-winners, 2011) for their analysis of economic governance, wherein any improvement in the conditions of governance demands trusting behaviour and incentive mechanism to encourage trust between market participants and stakeholders.

In this study, I endeavour to illuminate the lessons from economists who have had the courage and foresight to engage with the topic of trust with a view to counterbalancing more traditional perspectives on markets, institutions and governance that ultimately have not served society well. Once their insights are gleaned, subsequent research must then consider how market participants might respond these lessons such that the flawed behaviours of the past can be avoided. Also, the governance of markets and institutions needs to be addressed with a view to incentivising trusting behaviours. Well publicised case studies of aberrant behaviour may help – these being prominent in the press, while stories of individuals, executives and corporations that engage in trusting behaviours also need to be developed and featured.

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Measuring public trust in economics

Carlo Martini, University of Helsinki

Does the public trust economists? Does it trust their research? Should economics aim at building a more trustworthy discipline? With respect to those question, the state of the a airs today is that we do not know. Not only, we do not have the tools for knowing. The main goal of this paper is to substantiate the previous assertions: namely, that (a) we do not know whether there is public trust in economics, and (b) we do not have the necessary tools for knowing how much the public trusts economics as a science and economists as experts.

According to reports of recent surveys, generalized distrust in society and institutions like science is increasing (Funk and Raine 2015, Hosking 2014, European Commission 2016, Gawande 2016), even though scientists are still highly trusted at least in some regions of the world (Edelman 2016, Lindholm 2016). We may be tempted to conclude that economists are highly trusted too, and that seems corroborated by the high-level of public and private reliance on economists: From private corporations to governments and NGOs, economists' contribution to, and participation in society is one of the highest amongst the social sciences (Fourcade 2009). Yet, if we listen to prominent media outlets and economists' public appearances, we might conclude instead that there is deep and generalized mistrust towards economics science (Colander 2009, Smith 2013). The crisis of trust (Thoma 2015) goes so deep as to even challenge the very status of economics as a legitimate science (The Economist 2013, Levinovitz 2016). Given this state of a airs, it is only safe to claim that we know that we do not know. In fact, we have some information, but we know much too little, because surveys on public trust in economics are not available, except for a few exceptions (Sapienza and Zingales 2013), and most of the general surveys are heavily focused on natural sciences, medicine and technology (Pope et al. 2014).

There are a number of reasons for wanting to have a reliable and objective methodology for studying how much trust there is between economics and the public: 1) We can expect a science that is trusted to be more effective; for example, medical innovations are more likely to be adopted if the lay-public trusts medicine (Chalmers 2002). Since so much economics is policy-oriented (Fourcade 2009), effectiveness should be an important criterion in judging economics.
2) As it is sometimes reported in media and popular outlets, generalized mistrust in economics may be a red herring: It seems puzzling that so much mistrust is reported in surveys and in the media, and yet we can observe a high level of public reliance on economics. We may wonder what the polls really show, because much of the evidence from everyday life seems to show that people do place trust in others, including economists (O'Neill 2002). 3) Participatory and interdisciplinary models of

science are much praised today (Longino 1990, Koskinen 2016), but they usually require a high level of trust going from the scientists to the public, and back, as well as a relatively high level of scientific literacy. Trust in science and scientific literacy are related, but when it comes to economics we have relatively good research on the latter (Totenhagen 2015) but limited reliable information on the former.

In this paper I review and analyse current surveys on public trust in science and focus on the lack of attention to social sciences and economics in particular. I then motivate the need to study the level of public trust in economics. By analysing the tools currently available for studying public trust in science, I motivate the second main assertion in this paper (see b, above): the methodology required for studying public trust in economics cannot be directly translated from current methodology for studying public trust in the natural sciences; but rather, it needs to be adapted to the specific purpose, hence the need to focus on a methodology for studying public trust in economics.

Testimony, Trust, and Second-Order Evidence

Erin Nash, Durham University

Non-experts rely on expert testimony to form many of the beliefs they then use as premises in practical reasoning. In the first part of this paper, I highlight the important role that *second- order evidence* plays in helping non-experts to assess the trustworthiness of expert testimony, and hence to identify which claims to adopt in their practical reasoning. Second-order evidence is evidence about putative experts, and the processes they have used to arrive at their first-order claims.[1] I argue that the role of second-order evidence becomes even more salient when experts disagree, or when non-experts perceive experts to disagree, as non- experts must then assess the trustworthiness of multiple parties to adjudicate between two or more conflicting first-order claims.

By providing an account of non-experts' use of second-order evidence to perform these assessments, I demonstrate how second-order evidence and its communication significantly influences how well-calibrated non-experts' beliefs about first-order facts are. If, for example, upon consulting the second-order evidence, a non-expert perceives the putative experts and the processes they used to come to a collective position to lack credibility or be untrustworthy, they may discount their testimony in some way. This can be positive when it results in non-experts forming more accurate beliefs about first-order facts. However, on the other hand, such discounting may be unwarranted if the putative second-order evidence non- experts base these evaluations on is itself misleading, inaccurate, or false, as non-experts may then discount some experts' testimony without good reason. I explain how this, in turn, affects the decisions non-experts make, either about policy, or their actions and behaviours in general. My analysis therefore helps us to better appreciate the practical significance of second-order evidence, through its critical influence on non-experts' evaluations of trust.

In the second part of this paper I draw attention to the dependence of non-experts on intermediaries, such as the media, to provide pertinent second-order evidence, in addition to, and often together with, the transmission of experts' first-order claims. I argue that these intermediaries often have a poor track-record of conveying *adequate* and *accurate* second- order evidence: they frequently omit and mispresent second-order evidence in a way that is likely, under the circumstances, to lead non-experts to hold significant and consequential misperceptions of the epistemic landscape. To illustrate these points in more detail, I use an example of the way a major newspaper treated conflicting expert claims over the impact of anthropogenic climate change on sea level rise.

I conclude by identifying three ongoing and emerging challenges that exacerbate the issues I have discussed: (i) the lack of relevant expertise within these intermediary organisations; (ii) the decline of resources and respect for investigative journalism and similar practices that help to uncover and reveal second-order evidence; (iii) the extraordinarily low and declining levels of trust in these intermediaries across many contemporary liberal democracies.

[1] Second-order evidence includes, for example: the degree of expert agreement; how the consensus has formed; the appraisals of contributory experts and their claims by meta- and interactive experts; contenders' potential interests and biases; indicators of honesty; and contenders' qualifications and track records of success and integrity (Goldman 2001; Coady 2006; Anderson 2011; Coady and Corry 2013, 22–34; Lane 2014).

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On Agency and Trust in the Epistemology of Testimony

Ed Nettle, UCD

Telling somebody something is a kind of intentional action. It is also the kind of action that is capable of conferring knowledge to its audience. One of the central explanatory tasks that the epistemologist of testimony faces is to say what it is about the intentional agency exercised in the course of a telling that can allow for knowledge to be made available to its audience. An 'agency-based' explanation is one that claims that it is precisely *because* testimonial utterances are the products of an exercise of such agency that they bear their epistemic significance.

One of the most prominent kinds of agency-based explanations makes central appeal to the concept of *trust.* It says that, at least for a central class of cases, a relation of trust must hold between audience and speaker in order for the audience to acquire whatever knowledge the speaker makes available in telling them something. Trust-based accounts typically appeal to facts about the *intentions* with which speakers produce their utterances in elucidating that relation; they claim that it is because the audience recognises that the speaker intends such-and-such in producing their words that they are able to learn from them. For example, according to Richard Moran's influential trust-based account, in telling somebody something, the speaker intends to take responsibility for the status of the belief they intend their audience to acquire by recognising this very intention. Audiences' standing in the trust relation to the speaker involves their recognition of the content of such intentions. Given the alleged necessity of trust for testimonial knowledge acquisition, facts about the speakers' intentions are thus seen as key to explaining why such acts have their epistemic significance.

Such accounts, though, fail to provide an adequate explanation of the epistemic significance of our words. That is because they cannot explain why the facts about speakers' agency that they appeal to can bear epistemic significance. Our recognition of the content of speakers' intentions, alone, cannot provide us with a genuine epistemic reason to believe that things are as they say them to be because our recognising that the speaker is acting with such an intention cannot rationally undermine evidence that they are speaking falsely. We would, I argue, better pursue an agency-based explanation by appealing to facts about the speaker's *reasons* for telling, not just their intentions in doing so. That is because (1) our reason for telling somebody that *P* can be the fact that *P*; and (2) these reasons that are facts can be made manifest to our audiences by our telling them that *P*.

Trust, Mistrust and Distrust: the Role of the Future in Gaining Trust
Katherine O'Donnell, UCD

This paper argues that a successful appeal to the benefits of a shared future is a constitutive element in gaining trust. Following the work of Onora O'Neill, Annette Baier and Virginia Held in the critique and redefinition of how to think about trust and how to establish trustworthiness, this paper returns to the concept of trust as it was formulated in western political philosophy during the age of Enlightenment, when political governance was shifting from an insistence on obedience to a model of a social contract.

With a focus on the distinction between actively trusting and passively taking for granted, this paper explores the intuition that trust cannot be established between parties unless there is at least an implicit agreement to move forward towards a shared future. This intuition is elaborated with reference to Miranda Fricker's work on epistemic (in)justice.

Epistemic Exploitation and the Erosion of Trust
Dustin Olson, University of Rochester

Using climate-change denial as our exemplar, this paper seeks to introduce the concept of epistemic exploitation and defend the thesis that epistemic exploitation has a corrosive effect on epistemic trust and serves to defeat testimonial justification. Most of our judgments on most subjects rely on information acquired from others' testimony. This reliance increases to the degree that the information in question is understood by only a specialized few, or is not easily accessible, or is too voluminous for one to reasonably peruse. There is thus a necessary division of epistemic labour given the volume, complexity, and diversity of information needed to make informed decisions when navigating our increasingly complex and diverse world. Given the necessity of this division of epistemic labour, a certain degree of epistemic trust is required. All things being equal, epistemic trust is generally desirable; epistemic distrust fractures those divisions of epistemic labour, inhibits our ability to form reasonable judgments, and produces a type of epistemic anarchy. Nevertheless, current trends reveal increasing levels of epistemic distrust.

I propose that a phenomenon motivating this trend, a phenomenon that has a markedly corrosive effect on epistemic trust, is what we might call *epistemic exploitation* (EE). EE can be conceptualized as the dissemination of information with the express purpose of influencing others to act on the basis of that information in a way that benefits oneself. An important caveat here is that the exploiter is disinterested in the truth-value of the information being disseminated. The exploiter's intent in propagating exploitive information is to prompt others to act in ways that benefit the exploiter; such intent is not to report truths. The exploitation rests on our epistemic interdependence discussed above.

In its most banal form, EE occurrences are not malicious. The goal is not to distort the truth; rather, the accuracy of the report is of secondary importance given the agenda of the exploiter. In its more egregious occurrences, EE is the willful dissemination of distorting influences. Consider, e.g., how different institutions have contributed to general skepticism surrounding expert consensus on anthropogenic climate change. Institutions participant to EE include media sources that sensationalize an issue without appropriate proportionality or deference to epistemic authorities, with the goal of increased ratings or website 'clicks'; corporate advertising and propaganda, with the goal of maintaining high profit margins; political candidates shilling for donations and votes; financially motivated scientific experts playing the role of provocateur on behalf of business interests. Each of these iterations of EE have a dual corrosive effect on epistemic trust. On the one hand, the distorting influences, malicious or otherwise, undermine trust in those who *do* seek to accurately report information. On the other hand, a general sense that all information carries an implicit agenda, regardless of the testifier, is fostered.

Trust, Uncertainty and Society: the Public Perception of Scientific Uncertainty in the Climate Science Debate
Cormac O'Raifeartaigh, Waterford Institute of Technology

There is little question that scientific expertise does not command the public trust it once enjoyed, a phenomenon that has become particularly noticeable in fields such as medical science, evolutionary biology and climate science. In this seminar, we will argue that a significant, but largely unacknowledged, factor in this growing distrust may be the public perception of uncertainty in scientific measurement and prediction in these fields. We will further argue that the problem is particularly marked in the case of interdisciplinary fields such as climate science.

We will first consider the issue of uncertainty in laboratory measurement, the manner in which it is quantified and the manner in which it is addressed. We will then consider the issue of uncertainty in theory, with particular emphasis on the predictive power of scientific theories and models. The use and abuse of statistical methods in modern science will also be discussed, particularly in the case of interdisciplinary science.

Taking modern climate science as an important case of emerging interdisciplinary knowledge at the intersection of science and society, we will consider how uncertainties in measurement and prediction are quantified by practitioners in different fields of climate science, and describe how experimental results from these diverse investigations, along with their different associated uncertainties, are interpreted as an unmistakable signal. We will then compare the view of climate scientists with the portrayal of climate uncertainties in the media and consider the relation between the public perception of climate uncertainties and the rise of climate scepticism.

Trust in experts, truth and authority: some elements of a political epistemology
Gloria Origgi, CNRS – Institut Nicod

What is an expert? It is someone whose epistemic authority is granted and legitimized by political stakeholders who have an interest in delegating part of their authority to the cognitive authority of experts. That is, expertise is not just knowledge. It is delegated authority. And, as any form of authority in democracy, it needs to be legitimate. I will present some reflections about the sources of legitimacy of expertise in democracy and relevance of an epistemic approach to democracy to grant legitimacy to expert knowledge.

Traceability, Expert Opinion and Trust in Climate Change Assessments
Wendy S. Parker, Durham University

Much attention has been given to the treatment of uncertainties in climate change assessments, such as those of the Intergovernmental Panel on Climate Change (IPCC). The IPCC itself provides chapter authors with a guidance document that outlines factors to consider when assessing uncertainty and illustrates how uncertainties can expressed at different levels of precision. The same document calls for authors to provide “traceable accounts” of key findings, including those reached

via expert judgment. Exactly what constitutes an adequate traceable account, however, is not entirely clear, and what IPCC authors provide can sometimes seem inadequate to readers looking to understand the justification for key claims. Indeed, a lack of traceability for some crucial conclusions has occasionally led to accusations that IPCC experts are just 'making things up'. In this talk, I consider what an adequate traceable account might look like in the context of climate change assessments, reflect on the challenges of providing such traceability and consider the extent to which traceable accounts might enhance trust in assessment reports.

Why are economists most trustworthy when the public isn't watching?
Don Ross, University College Cork

Economists generate public distrust because (i) those, mainly microeconomists, who most effectively influence policy do so invisibly; (ii) those, mainly macroeconomists, who don't influence policy tend to develop distorted, empirically unmoored beliefs while (naturally) pretending that they *are* influencing policy; and (iii) those, mainly other macroeconomists, who influence policy that is visible to the public tend to be excessively risk-averse for that very reason.

Trust, Experts, and the Epistemic Environmentalism
Shane Ryan, Nazarbayev University

My paper has three parts. First I provide an analysis of trust. Next I discuss the epistemic significance of the relationship between experts and non-experts at an abstract level. Finally, drawing on the first and second parts of the paper, I examine how that relationship within the current epistemic environment can be improve.
Trust is relevant to discussions across a range of areas in philosophy, including social epistemology, ethics, political theory, and action theory. While my focus in this paper is on the relationship between experts and non-experts, I take this analysis of trust to hold beyond that relationship. I provide the following analysis for trusting: Trusting is the belief or disposition to believe on the part of R, the trustor, in the competence of S, the trustee, to *Φ,* and R's approval of what she believes or is disposed to believe is the will of S to Φ, where Φ is something about which R cares.

My paper then examines John Hardwig's treatment of the relationship between experts and non- experts. Hardwig makes the case that the non-expert is dependent on experts for much of what she takes herself to know and is dependent on experts for knowledge that lies in expert domains. He further argues that this dependence is rationally appropriate. He writes that if a non-expert recognises a putative expert as an expert, then that non-expert is generally rationally committed to accepting the views of the expert. My paper in particular focuses on and defends Hardwig's claim that if we're to gain knowledge in an expert domain, we have to trust the testimony of the expert. The alternative is scepticism in domains that require expertise.

I sketch out particulars of the trust relationship between experts and non-experts in our epistemic environment. This involves considering cases in which experts are

unfairly not trusted by a significant proportion of populations, on, for example, global warming and evolution, and also cases, such as those documented in *Merchants of Doubt*, in which a small number of experts abuse their position as experts. It also involves considering cases in which experts get things wrong, such as on some recent election results and the failure of many economists to foresee the Great Recession of the late 2000s. Having considered such phenomena, what trust involves, and the epistemic significance of the trust relations between experts and non-experts, I outline a number of applied epistemological responses to these phenomena responses, although I focus on an application that would assist the public to monitor the track-record of individual experts and potential conflicts of interests.

The use of experts to manipulate public trust: A case study (the animal industry and animal welfare scientists)

Patrizia Setola, UCD

My claim is that public trust in experts (in the specific case animal welfare scientists) is utilized by the animal industry to manipulate public choices, and that this manipulation is made possible by a synergy of factors, some of which are issues intrinsic to the notion of 'animal welfare science'.

As emphasised by Onora O'Neill (2002), 'what matters in the first place is not trust per se but trustworthiness'; thus for my purposes it is *assumed* that publics tend to trust experts, science, and knowledge. Deciding whether this trust is warranted, however, requires shifting the gaze towards the qualities and conduct of the experts involved, the practices of the science, characteristics of the public, and complex relations between these variables.

The context for my argument is provided by 1) the aims (both explicit and implicit) of the animal industry; 2) the role of animal welfare science in – more or less consciously – advancing the aims of the animal industry by leveraging on public's trust in the perceived objectivity of science; and 3) the heterogeneity of the concept of 'public'.

The aims of the animal industry are to maximize profit while marketing their products in ways that reassure increasing public concern about animal welfare. To this purpose, the industry avails of a range of experts, including animal welfare scientists.

The explicit aim of animal welfare science is to help better understand the needs of other animals, through systematic measurement of a variety of indicators. As such, it has the potential to positively impact on use, legislation, codes of practice, and the husbandry of animals, and inform the public. This, however, contrasts with the stark reality of increasing animal exploitation, giving rise to a 'seeming paradox: the more we know, the worse things are getting for animals.' (Bekoff and Pierce, 2017).

In an attempt to understand this paradox, I identify four problems which are exploited by the industry to its advantage, in order to retain public trust. These are: 1) the

definition problem; 2) the ethical problem; 3) the collusion problem; and 4) the heterogeneity of the public problem. The first three concern directly the concept of 'animal welfare science': 1) there are different definitions of 'animal welfare', which lead scientists to emphasize different areas and use different criteria of evaluation. 2) While the concept of welfare implies a normative component, the ethical aspect is lost in the process of producing operational, measurable, 'objective' definitions of welfare. Yet the appearance of scientific objectivity is precisely what secures public trust. 3) An obvious reason for concern is that experts are funded by the industry. This has effects on the evaluations made by animal welfare scientists, even without conscious collusion on their part. Finally, 4) the industry takes advantage of public *ambivalence*. Consumers are willing to trust the experts: they choose to believe that the animals whose products they consume live 'good lives', in order to lessen their own unease.

Trust in Science, Wicked problems and Democracy

Haris Shekeris, University of Grenoble

Scientific experts are increasingly called upon to act as advisors on matters of public policy. Often the problems on which they are called to deliberate upon are wicked problems, which, among their other characteristics, lack definitive formulations, admit of no 'true-or-false' solutions, and responsibility has to be undertaken for their particular ways of resolution (Rittel and Webber 1973). I will argue that in cases of wicked problems, where the scientific input is more akin to "science-in- the-making" or contested rather than settled science, and where the stakes and thus the responsibility is high, then the lay public ought to place its trust in the procedure followed rather than with the expertise of the scientific experts involved. As regards the procedure, then this should have the following necessary ingredients: transparency, random selection of experts and stakeholders from among a wider pool, ample time for deliberation among the committee formed by the experts and the non-expert stakeholders and majority voting as a stopping rule.

In diagnosing the current predicament regarding the lack of trust in scientific experts, I will claim that this is due to the perceived remoteness and inaccessibility of scientific knowledge – technology increasingly reaches lay people in the form of black boxes, whereas academic knowledge is often produced in faraway labs and couched in hard-to-decipher notation or language. I will argue that these perceptions, together with evidence of rampant elitism and technocracy in political decision-making arouse justified feelings of distrust towards Science as a knowledge-producing institution by lay people. I will argue that under these circumstances such distrust towards Science and scientists is justified.

Given the increasingly important role of scientific knowledge in the resolution of wicked policy problems, I will argue that one way that Science qua knowledge producing and problem- solving institution may regain the trust of the public when it comes to its role in policy-making is by aligning itself to the democratic process of deliberation and majority voting. These two related methods are especially suited for problems where responsibility is sought for, and furthermore, as the resolutions to

wicked problems are not truth-apt, deliberating and voting upon potential solutions does not give the impression that truth is a matter of voting.

Assuming that a key objective of scientists and policy-makers alike is to restore genuine trust – rather than mere reliance – in the institutions that produce knowledge (Science) as well as those that produce policy (the State as well as transnational organisations) then the choice of aligning the two in a manner which is both transparent and familiar to the public, as is deliberation and majority voting, would go a long way towards restoring trust as well as producing better decisions due to their increased legitimacy. Finally, I will briefly defend the proposed specific measures of transparency, diversity and random selection of the deliberators, ample time for deliberation and majority voting via arguments derived from political philosophy and epistemology.

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Trust & Big Data

Judith Simon, University of Hamburg

The realities and promises of applying Big Data in different societal domains have stirred tremendous hopes and fears. While defendants praise big data as the "new oil" and urge for more public trust, critics have raised concerns regarding the negative implications of data practices on societal values such as privacy, equality or autonomy. Questioning the premises of such common request for more trust in big data practices and in recognition of potential threats to civil liberties, I will argue that before addressing trust, we need to first focus on trustworthiness: only if systems are trustworthy and can reliably signal their trustworthiness rational trust in data-based processes and applications can be possible. Without such trustworthiness only blind trust can be achieved which should be neither philosophically nor politically attractive.

Feminist Epistemology and Trust in Climate Modelling

Tina Sikka, Newcastle University

In this talk, I explore the ways in which uncertainty in science can be interpreted as beneficial rather than injurious to the production of reliable knowledge. My case study is that of climate science and, in particular, the role and interpretation of climate modeling. I begin by identifying current scientific endeavor as existing at a crossroads wherein contemporary climate science can be described as a form of 'postnormal science' that poses a distinct set of 'wicked problems.'

Generalized uncertainty, conflicting interpretations, and the lack of simple solutions have created conditions under which trust in expert opinion has been undermined. Furthermore, more often than not, the media has played an aggravating rather than

helpful role. In particular, I examine the values, assumptions, and norms that constitute contemporary climate modeling focusing on AOGCMs (atmospheric-oceanic general circulation model) specifically. My thesis is that it is possible that science can be value laden, and productively so, while continuing to maintain a commitment to trustworthy knowledge by drawing on feminist science studies as articulated by Helen Longino. Longino maintains that scientific practice that is empirically adequate but also heterogenous, novel, interactionist, decentralized and consistent with human needs, can be a boon to science. I argue that it can also serve this function in the case of climate science. Correspondingly, in the course of this talk, I demonstrate how this mode of scientific practice in modeling can also be used to better communicate achieved conclusions and 'scientific truth' about climate change to an increasingly skeptical public.

Genuine participation in participant-centred research initiatives: the rhetoric and the potential reality

Edward E. Spence, Charles Sturt University

It has been argued that too many deliberations and decisions in different health and genetic research contexts have been focused mainly on the perspectives of medical-research professionals and only seldom on the perspectives of the patient-research participant. In recent years, integrating this perspective in policy has been considered an important aspect for public health and research as part of a broader participatory approach. Information and Communications Technology (ICT) may become a useful tool for reviving the democratic ideal of participatory engagement in fields such as health-related research through its potential to facilitate the reconstruction of hierarchal relationships as relationships more egalitarian in important respects. On the face of it, this trend seems to be reflected in Participant-Centred Research (PCR) initiatives that are considered by some to place patients and research participants – particularly through use of ICT – increasingly at the centre of decision making. The particular issue posed in this paper is whether, or to what degree, ICT-based PCR Initiatives actually attempt a level of genuine 'participation', in the sense that it has been traditionally understood and as evident in the broader non-ICT research context. Or whether it is merely the case that such research initiatives have increased contact with participants through ICT and are otherwise non-participatory in any important normative sense of the word. We highlight that genuine 'participation' should enable a reasonable minimum threshold of participatory engagement through, at least, three central participatory elements: educative, sense of being involved and degree of control. While we would agree with criticisms that genuine participation seems more rhetoric than reality at present in some well-known initiatives, there can be observed some level of partial, but genuine, participatory engagement facilitated by ICT, as well as the potential, at least, for a greater ICT-facilitated participatory engagement on all three participatory elements. Finally, we outline some practical steps such initiatives should take to further develop these elements and thereby their level of ICT-facilitated participatory engagement.

***Ceteris paribus* Laws, Epistemic Reliability and Epistemic Trust in Applied**

Science

Michael Stoeltzner, University of South Carolina

Taking up recent debates about epistemic reliability and epistemic trust, I argue that, in applied science, both are better ascribed to networks of ceteris paribus (cp-) laws than analyzed in terms of decisions that are combined with individual ethical evaluations of epistemic attitudes. Due to the complexity of applied science, it is not always possible to list the alternatives and to assign probabilities and values to them. Since applied science also operates under normality assumptions, an account of cp-laws, such as Pietroski and Rey's, that only requires an existential quantification over the set of cp-conditions seems attractive. Defending, as regards applied science, this account of cp-laws against the standard objections, I show that existential quantification corresponds to an act of epistemic trust that permits a working social division of cognitive labor.

Recognizing Expertise: An Epistemic Collective Action Problem

Nick Tebben, Towson University, and John Waterman, University of New England

It is tempting to think that respect for expertise has reached its nadir in Western democracies. Voters in the UK voted for brexit despite warnings about its dire economic consequences. The consensus among climate scientists, that human activity is altering the climate, is dismissed by roughly half of the electorate in the United States. The pressing question then seems to be: what changed about how people decide whom to trust, such that expertise is no longer respected?

We wish to argue that respect for expertise has not declined in Western democracies, and that nothing has changed about how we decide whom to trust. Philosophers like to pretend that the process of inquiry is shaped exclusively by epistemic considerations. If that was true, our respect for a putative expert would be a function of their *source features*: their past reliability, their formal training, and so on. But it's not true. Inquiry, like everything else that we do, is a practical endeavor, and so the behavior of inquirers is shaped by practical reasons. In fact, we argue, it is shaped by broadly *economic* considerations.

Information can have more or less value. The exchange of high-value goods limits credulity and produces caution. When buying a house, we are careful to check that it does not need a new roof. Likewise, when presented with information that is valuable to us, we are careful to check its reliability. Thus an expert's reputation among his or her fellow experts is likely to reflect his or her actual epistemic credentials. What one climate scientist says to another matters enough to the latter that they will make sure that they are being told the truth. When experts are vetted only by each other, this process will lead to broadly trusted public intellectuals and a culture of apparent trust. But this will just be a product of the application of a credulous assessment mechanism to a monopolistic information environment. Most of what experts tell us is of little direct value. Even if climate scientists are right, it doesn't matter whether or not I drive *my* car. Given that others will not do their part, the information that human activity is causing global warming is of no practical significance to me. When it doesn't matter to us whether the information that we receive is true or false, there is little incentive to spend resources checking it for reliability. We predict that people will

default to reliance on low-fidelity, low-cost means of assessing expertise (such as group affiliation) when information is i) freely distributed and ii) of relatively little worth. And, we would like to add, typically the information provided by experts meets both of these conditions.

This would be of little significance if putative experts had to secure the approval of their fellow experts before having a role in public discourse. What has changed is that experts are no longer vetted solely by other experts. To play the role of an expert in public discourse, passing peer review, or publishing in *The New York Times* is no longer necessary. A viral tweet will suffice. Our central point, however, is that the mechanisms by which expertise is recognized have not changed. Those who vet experts have always done so for practical purposes. When there are effective gatekeepers to public discourse, and experts vet each other, practical purposes and epistemic purposes coincide. But when experts are vetted by the public, this convenient coincidence breaks down, and cable news hosts, instead of climate scientists, end up being recognize as experts.

Echo Chambers and Epistemic Bubbles
C. Thi Nguyen, Utah Valley University

In the last tumultuous political season, we became increasingly aware that something had gone wrong with the social structure of our epistemic lives. It became clear that different groups of people were getting access to vastly different sets of information. Recent analysis of Facebook feeds and Twitter networks reveal that their user's informational input is being radically filtered, that users are being exposed largely to arguments and views with which they already agree (An, Quercia and Crowcroft 2014; Saez-Trumper, Castillo and Lalmas 2013). Many of us started to wonder: had we become trapped in echo chambers of our own making?

The recent conversation has, however, blurred two distinct, but interrelated, social epistemic phenomena, which I will call *epistemic bubbles* and *echo chambers*. Both are problematic social structures that lead their members astray. Both reinforce and exaggerate ideological separation. But they are quite different in their origins, mechanisms for operation, and potential avenues for treatment. Both are structures of exclusion, but epistemic bubbles exclude through omission, while echo chambers exclude by manipulating trust and credence. The recent discussion has tended to treat the two terms as synonymous, and focused on the phenomenon of epistemic bubbles. But, I will argue, echo chambers are a far more pernicious phenomenon. Their members are set up to reject future contrary evidence; they reinforce themselves in the face of oppositions; and they are far harder to escape.

Mature and Immature Expertise: How Conceptual Inadequacies Can lead to the Undermining of Public Trust in Economics
Ben Trubody, University of Gloucestershire

One of the possible ways public trust maybe undermined in the field of economics and economic expertise in general is that there is a conflation of 2 types of expertise. I will argue, via Thomas Kuhn (1996), that the 'hard' sciences due to the presence of a sovereign paradigm and normal science produces what we might call 'mature expertise' (ME) – this is the sort of expertise that we are all familiar with. ME is what Goldman (2001) wrote about when informing the public of who to trust during times of epistemic dispute. Why, in general, we should trust an evolutionary biologist over a Creationist scientist. The presence of a sovereign paradigm (e.g., evolutionary theory) means it is easy to tell a good and bad biologist apart. Not all fields of study, however, have a sovereign paradigm, yet do still contain experts. These we might loosely associate with the 'soft' sciences. The conceptual problem here is that due to the absence of a sovereign ruling paradigm we do not get the emergent normal science so we lack fundamental agreement over what the field is 'about'. These fields Kuhn describes as immature sciences, which in turn produce 'immature expertise' (IE). These are experts in that they can do things and posses knowledge the general public do not, existing in a community of peers back by institutional norms, but are not the same as ME. This is where a subject like economics lies. Due to this lack of fundamental agreement it is difficult to tell a good economist from a bad one, because the same standards, norms and rules of ME do not apply. Where all those economists who missed the 2007-8 global financial crises all just bad at their jobs or is prediction of global recessions actually quite difficult given the diversity of ways of doing economics? As Dobzhansky (1973) wrote 'nothing in biology makes sense except in the light of evolution', the same cannot be said of economics. There is no core or fundamental theory that underpins the entire field of economics, unlike the way evolution underpins all of biology. According to Ha-Joon Chang (2014) economics consists of 9 major schools of thought each of which disagrees over what economics is 'about' making different metaphysical, theoretical and ideological assumptions given individual, collective and social behaviour as to how economies function. Each in turn possess different methodologies, metrics and concepts that shape how 'data' is interpreted or indeed what counts as 'data' at all. All of which means that when most of the world's economists missed the 2007-8 global financial collapse we have to understand it was not a mass failing of expertise, but rather, it highlighted the inadequacies of the majority of mainstream economics. The ability to *accurately* and *routinely* predict future phenomenon, like astronomers do, is a marginal ability of most economists. Moreover, the comparison between 'astronomical' and 'economic' expertise is simply unfair. The conflation, however, of such standards as to what 'expertise' comprises, in what are also disparate fields leads, I argue, to an erosion of public trust in the performance and abilities of economists.

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Expert disagreement exceeding measurement uncertainty is unreasonable

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Expert disagreement exceeding measurement uncertainty is unreasonable

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The gold standard for any empirical science is the replicability of its research results. But the estimated average replicability rate of key-effects that top-tier psychology journals report falls between 36% and 39% (objective vs. subjective rate). Since this suggests a broad failure to separate stable from random effects, it makes the standard mode of applying null-hypothesis significance testing (NHST) doubtful as a strategy to obtaining trustworthy data. This issue extends to neighboring social sciences that generate empirical data. Hence, *wide* disagreement among experts is expectable, and need not be "irrational" either, if and insofar as trustworthy data that would settle such disagreement remain absent.

We submit that the *replicability crisis* is "home-made" because more sophisticated statistical inference strategies can deliver empirical results whose replication is sufficiently probable—and would then be *known* to be trustworthy, or not. We argue that the crisis can be overcome if empirical results are integrated into research programs, such that rival hypotheses are evaluated against stable data (*justification context*), rather than merely evaluating the stability of data against random fluctuations (*discovery context*). We explain six increasingly important research results (along with their measures) that become available as a research program develops so as to eventually corroborate a point-hypothesis:

(1) *preliminary discovery*: α-error or merely a *p*-value (to establish that data are non-random)
(2) *substantial discovery*: α and 1−ß-error (to gauge replicability based on a specific effect-size, d, and a particular sample size)
(3) *preliminary falsification* of H_0: $L(d_{H1}>0)/L(d_{H0}=0)$ (to establish a H_1-hypothesis that deviates in one direction from the H_0-hypothesis as more likely than the random parameter d=0, where 'L' abbreviates 'likelihood')

(4) *substantial falsification* of H_0: $L(d_{H1}>\Delta)/L(d_{H0}=0)$, where Δ is the theoretical minimum effect size value (to establish a H_1 as non-random and also exceeding Δ)
(5) *preliminary verification* of H_1: $L(d_{H1}=\Delta)/L(d_{H0}=0)$ (to corroborate the theoretical parameter Δ against the random parameter)
(6) *substantial verification* of H_1: $L(d_{emp,\ H1})/L(d_{H2}=\Delta)<4$, given approximately normally-distributed data, where d_{emp} is the empirical effect size[1] (to indirectly corroborate Δ against the maximum-likelihood estimate of empirical data, d_{emp})

These six results only hold in a *probabilistic* sense. Therefore, expert disagreement (that data *can* arbitrate to begin with) is unreasonable, once its extent exceeds the magnitude of the relevant measurement errors. But since *trustworthy* data presuppose *small* errors (α-error=ß-error<.05), the room for reasonable forms of relevant expert disagreement would become rather limited.

Keywords: confirmation, knowledge accumulation, psi-hypothesis, replicability crisis, significance-test, research programs, test-power, meta-analysis

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Going back to the well: Economics, Elections, and Trust in Politics
Tom van der Meer, University of Amsterdam

The fear of declining political trust has been a returning theme in political science for several decades. Yet, outside a few exceptional cases, there has been no evidence of a structurally declining trend in political trust. Rather, trust has shown trendless fluctuations that have differed in size and length across time and countries. This presentation summarizes findings from various recent research papers that aim to explain these fluctuations in political trust via cross-national, longitudinal survey research. Specifically, I focus on two explanations. First, while it does not explain cross-national differences, economic performance explains a large part of these fluctuations, including the serious drops in political trust witnessed in various countries over the last decade. Second, elections have a cleansing effect, providing a boost in political trust that counters the slowly declining trends during governmental

[1] If the likelihood value of the theoretical parameter does *not* fall outside the 95%-interval place around the maximum-likelihood-estimate, we take the theoretical parameter to be substantially verified (and thus corroborated), because the empirical result and the theoretical assumption lie within an acceptable interval. The corroboration threshold is the ratio of the two likelihood-values, i.e., the maximum ordinate of the normal curve (.3989) and the ordinate at the 95%-interval (.10), which to good approximation yields 4.

periods. I end by going in-depth into a quantitative case study to isolate and explain this cleansing effect of elections.