

Afterword













35 IGNORANCE STUDIES

State of the Art

Michael Smithson

Ignorance studies finally have arrived and are flourishing. It has taken a while. My first paper on the social construction of ignorance and subsequent book on the topic (Smithson, 1985; 1989) have received more than half of their citations in just the last ten years. The classic paper on social functions of ignorance (Moore & Tumin, 1949) slept for longer, again receiving more than half of its citations in the last ten years, with its functions still being rediscovered by authors unaware of this precedent. Nevertheless, ignorance (as a gloss on all types of unknowns) at last seems to be widely accepted as a respectable and even mainstream topic for research and scholarship.

The 2015 publication of the first edition of this Handbook marked the culmination across several disciplines of a growing interest in ignorance as a topic for theorizing and empirical investigation. The advent of a second Handbook edition motivates an assessment of the state of the art. This assessment will be brief, intended as a commentary rather than a scholarly exegesis.

To begin, Figure 35.1 shows that the usage of "ignorance" in the corpus of published works collated by Google has increased steadily, starting in the early 1990s. This increase has been markedly stronger than other more well-established terms for unknowns such as "uncertainty". This graph focuses on recent trends, in contrast to the graph I provided in the first edition, which charted several such terms over two centuries.

How has the Handbook's first edition fared in terms of impact since its appearance in 2015? According to Google Scholar, the Handbook has been cited 238 times as I write this, with the annual citation-rate accelerating. Its individual chapters have been cited a total of 490 times, with the median for a chapter at eight citations and individual chapter citations ranging up to 58. More importantly, these citations have appeared across a wide variety of disciplines and domains. These are signs that the Handbook has been instrumental in expanding scholarly interest in ignorance.

An Ignorance Explosion?

In the overview chapter of the 2015 Handbook, I foreshadowed "the next ignorance explosion: A vast expansion of theoretical developments, empirical work, new methods, and applications in ignorance studies." To some extent, in the ensuing six years this prediction has

DOI: 10.4324/9781003100607-42





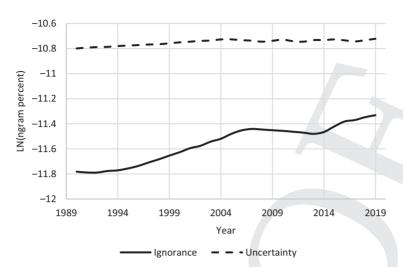


Figure 35.1 Ngram plot of the log-percentage of "ignorance" and "uncertainty"

been borne out. Since 2015, at least 17 books focusing on ignorance have appeared, several of whose authors also are authors of chapters in the first and/or this second Handbook edition. These books have expanded the study of ignorance in the domains of law, politics, science and technology, and especially the disciplines of anthropology, philosophy, psychology, and economics. A brief survey of these recent books and their connections with the first and second Handbook editions can provide a reasonably comprehensive overview of the current state and near future of ignorance studies. We shall begin with the four disciplines just mentioned.

An anthropological edited collection appeared in the same year as the first edition of the Handbook (Dilley & Kirsch, 2015). According to its editors, the contributors were asked to present examples where ethnographic methods were applied to settings in which ignorance is constructed and utilized, with an eye to theoretical development and elaboration as well as context-specific particulars. This volume is a successor to the High, Kelly, and Mair (2012) collection, which arguably first presented ignorance as an ethnographic object. The orientations and themes in most of the contributions are close kin to the anthropologically oriented chapters in the Handbook, specifically the chapters dealing with strategic and wilful ignorance. The examples range from wilfully ignorant individuals (e.g., in the context of sorcery practices) to institutions (e.g., in the setting of French colonial rule in 20th Century West Africa). While this collection seems to have had less impact than the Handbook, it nevertheless constitutes one of few serious forays into examining non-Western agnotological categories, beliefs, and practices. Dilley's chapter in this collection on mixed-race children removed from their birth-families and raised as French makes an interesting companion to Chua's chapter on absence and loss when a religion is suppressed, which discusses ignorance as a way of breaking with the past by refusing to learn about it.

Matthyssen's (2021) work on the Chinese concept of "muddle-headedness" as a desired state is difficult to classify, being a mixture of philosophy, anthropology, and psychology as well as being published in Palgrave's Indigenous Psychology series. Nevertheless, because it is, like the collection described above, among the few in-depth treatments of non-Western concepts about ignorance and its uses, I am cataloguing it here as an anthropological work. Although this book is not linked to the literature on ignorance studies, its theme is about non-knowledge. The





author investigates the expression "Nan de hutu" (难得糊涂), which approximately translates as "hard to attain confusion", and refers to an ancient Chinese tradition expressed by the Qingdynasty scholar Zheng Banqiao that there is a wisdom of not knowing. Matthyssen argues that a tradition that includes "playing dumb" provides both a strategy for coping with social complexities and a means to self-preservation, and is valued as such in Chinese culture to this day. There are potential connections here with Bennett's initial and revised Handbook chapter on literary ignorance, especially his claims that literature performs a Socratic function in making us aware that we do not know what we think we know and that it is resistant to any certainty about knowledge, wisdom, or truth.

Turning now to philosophy, in both their earlier and their revised Handbook chapter Haas and Vogt observe that philosophy has said little about ignorance in comparison to the vast amount it has had to say about knowledge. However, this tide may be turning. At least seven books addressing philosophical themes around ignorance have appeared since 2015 (Derose, 2017; DeNicola, 2017; Doris, 2015; Husak, 2016; Peels (ed.), 2016; Peels & Blaauw (eds.), 2016; Salecl, 2020).

Peels and Blaauw (2016) echo Haas and Vogt's claim that ignorance is nearly absent from epistemological frameworks, and the contributions to their volume attempt to redress this neglect. Indeed, McBrayer's (2016) chapter on the epistemological role of ignorance in theological frameworks reminds us that in those philosophical traditions ignorance (of God) has long been a central concern. Arguments are advanced in other chapters concerning questions such as whether anything we want to know about ignorance cannot already be inferred from knowledge (i.e., justifying ignorance as its own object of study), or distinctions between varieties of ignorance such as absence of knowledge and absence of true belief. Some of the chapters in this volume connect with chapters from the 2015 Handbook. The discussions about which distinctions among kinds of ignorance are needed has direct connections with Smithson and Pushskarskaya's (2015) chapter on neurocognitive research about how the brain processes different kinds of unknowns. Moreover, Pritchard argues that ignorance can also have epistemic value (e.g., as in double-blinding in experiments with human subjects and experimenters), as contrasted with Haas and Vogt's point that while absent information may have value the absence of information in itself does not. Likewise, the chapters by Fricker and Medina respond to Mills' "white ignorance" thesis and related debates at the intersection of political philosophy and epistemology.

Peels' (2016) other edited volume focuses on the moral and social aspects of ignorance, addressing issues of deception, ignorance as a moral excuse or a legal excuse, the role of ignorance in moral character, and its entailment via privacy and secrecy. A central concern for two chapters in this volume is how and when someone may be held responsible for acts done in ignorance, considering questions such as whether one is culpable for an act done out of ignorance but nevertheless may be blamed for being ignorant in the first instance.

Husak's (2016) volume is entirely devoted to the special case of when ignorance of the law may be an excuse. Husak's thesis is that ignorance of law should usually excuse the ignoramus from criminal liability. The arguments for excusing culpability on grounds of ignorance (either of facts or of the law) have an interesting tension when set alongside the sociological literature on strategic ignorance that examines the often deliberate use of ignorance claims by the powerful to excuse themselves from culpability (e.g., McGoey, 2012; 2019). The tension is generated by the contrast between the portrayal in conventional ignorance-of-the-law discussions of the ignoramus as a hapless victim and McGoey's demonstrations of how those with sufficient political credentials and economic power can mobilize ignorance for political and economic gains.







Michael Smithson

Whereas arguments about blameworthiness for acts out of ignorance tend to present such acts as unusual, Doris' (2015) primary thesis is that much of the time we act unreflectively, even unintentionally, and without foreknowledge of consequences. His perspective is allied with (and he makes use of) a considerable variety of psychological experimental demonstrations that humans are poor at knowing when their mental processes are occurring and what they are (e.g., inattentional blindness phenomena). A key point of interest here is the implication that people are routinely over-confident about their moment-to-moment self-awareness and, likewise, awareness of what is going on around them. Although Doris does not express it this way, this is a form of meta-cognitive ignorance that suggests a parallel line of inquiry to Klintman's knowledge resistance project: Ignorance resistance, an unwillingness or inability to admit to how little one knows, even by one's own standards.

Likewise, DeRose's (2017) appeal to contextualist solutions to problems regarding how we know that "sceptical" hypotheses are false has links with Michael's revised Handbook chapter's theme of "epistemic choreography", i.e., oscillations among alternative epistemological positions as a way of dealing with conflicting or incompatible alternative propositions. Our implicit epistemological viewpoints from which we assess our own and others' ignorance and/or knowledge may shift as we move from one context to another. In psychology, this phenomenon is known as "knowledge partitioning" (e.g., Lewandowsky & Kirsner, 2000; Kalish, Lewandowsky, & Kruschke, 2004). Knowledge-partitioning occurs when people's beliefs are conditional on the state of a normatively irrelevant cue. The cue partitions their beliefs into independent "parcels," such that depending on the state of the cue, they consult one parcel without reference to the knowledge or beliefs contained in the other parcels.

These last two themes intersect with literatures in cognitive psychology and behavioural economics. These two cognate disciplines only recently have explicitly engaged with "ignorance", although they have a lengthy tradition of researching and theorizing about "uncertainty". For the most part, that tradition has been disconnected from much of the ignorance studies literature. However, some recent forays have been made by psychological researchers into the ignorance domain.

For some time it has been acknowledged that unknowns and uncertainties fulfil important psychosocial functions contributing to psychological wellbeing (e.g., a review by Sweeney, et al., 2010). They also underpin important forms of social capital such as privacy, politeness, civility, division of labour, and trust (Smithson, 2008). And yet, psychology has neglected the issue of unknowns that people regard as beneficial, i.e., when and why there are some things people choose not to know.

This neglect is understandable, and has its roots in well-established findings that a variety of psychological disorders are at least partly due to sufferers' inability to deal with unknowns. The majority of research on affect and uncertainty has focused on negative responses to uncertainty, and thus uncertainty as a source of fear and anger. Thus, Carleton (Carlton et al. 2012; Carlton 2016) proposes that fear of the unknown is the fundamental fear of human beings. In the clinical literature, inability to tolerate uncertainty is seen as the core feature of Generalised Anxiety Disorder and a transdiagnostic feature across anxiety and depressive disorders (Carleton, 2016; McEvoy, Hyett, Shihata, Price, and Strachan, 2019).

Sweeney, et al.'s (2010) early review identifies the following functions that information avoidance can have: Avoiding demands for changes in one's beliefs, demands for undesired actions, and the onset of unpleasant emotions or cessation of pleasant emotions. The first two functions have long been treated in psychology as "confirmation bias", the tendency to avoid or discount information that challenges one's current beliefs. Such accounts resonate with the ignorance studies literature on wilful ignorance and in references in the current Handbook





Ignorance studies: state of the art

chapters (e.g., Kempner's and Firestein's) to the emergence of a "post truth" epoch typified by a discounting of science, and to several of Klintman's points in his chapter on knowledge resistance (see also Klintman, 2019).

More recent work by Hertwig and Engel (2016; 2020) and their colleagues has raised the topic of "deliberate ignorance" to broader attention in psychology. They propose what they claim is a typology of deliberate ignorance:

- 1. Emotion regulation and regret-avoidance
- 2. Suspense and surprise maximization
- 3. Performance-enhancement
- 4. Strategic
- 5. Enabling impartiality and fairness
- 6. Information management

These are not types of ignorance; instead they are various functions that ignorance can perform. Their list extends the earlier Sweeney, et al. (2010) list and borrows from earlier sociological work (e.g., Moore and Tumin, 1949). In their edited collection, they bring in scholars and authorities from outside psychology to discuss deliberate ignorance from multiple standpoints.

Another recent contribution that straddles psychology and behavioural economics is Kahneman, Sibony, and Sunstein's (2021) treatment of what they call "noise". Briefly, their version of "noise" is undesired variability in judgments by experts, such as disagreeing diagnoses of a patient by doctors, divergent economic forecasts by economists, and divergent sentences brought down by magistrates for similar crimes. Elsewhere in psychology, this kind of unwanted diversity in judgments has been studied as uncertainty arising from conflicting information or views, and has been demonstrated to be among the most aversive kinds of uncertainty (e.g., Viscusi, 1997; Smithson, 1999; Cabantous, 2007). The authors of this book seem unaware of this line of research in their own discipline, but as Kahneman admitted in an interview with Tim Harford in the *Financial Times* (2021), the book was produced in some haste. Nevertheless, it contains ideas that are relevant to ignorance studies, one of which is the tendency for networks of experts and professionals to over-estimate the degree of consensus among them. This is a potentially important and largely overlooked form of knowledge resistance, and in fact it amounts to a resistance against coming to terms with expert ignorance.

Moving from psychology to economics, an "outlier" has appeared in the form of a book on what its authors call "radical uncertainty" (Kay and King, 2020). Theirs is an attempt at popularizing a critique of neoclassical economics of the kind that Svetlova and van Elst raised in their 2015 Handbook chapter. Their starting-point is that for most important decisions and forecasting situations, we often do not know the probability of each possible event, nor do we have a complete picture of the variety of possible events. Along the way, they derogate standard neoclassical economists' criteria for effective decision-making, such as maximizing expected utility and optimization, as both impossible to achieve and irrelevant for most real-world decisional contexts. Instead, they champion much of what has come to be known as "bounded rationality" and "ecological rationality". Kay and King seem unaware of nearly all of what would be counted as ignorance studies, and their "radical uncertainty" has long been described by other terms in the ignorance studies literature. Nonetheless, their popularization has been effective in one sense: As I write this their book, which appeared in 2020, already has been cited more than 80 times.

Three of the books on my list land in the political-legal domain. Each of them examines a distinct type of deliberate ignorance, and in that sense they are related to the recent interest in





Michael Smithson

deliberate ignorance among psychologists as well as the more long-standing interest in wilful ignorance among philosophers and anthropologists. These books invite readers to view deliberate ignorance through different lenses but they share common themes in linking ignorance with processes of political, legal, and economic domination.

Somin's (2020) book is a second edition of his earlier work and is linked directly to his chapter on rational ignorance in the first and second Handbook editions. For Somin, the primary foundation of rational ignorance is that if a person believes that some information is not worth the time and effort it costs to acquire then by their own lights they are justified in not acquiring it. His key example of rational ignorance that nevertheless can have dysfunctional outcomes focuses on the widespread ignorance of voters in democracies about government and politics generally. Ordinary voters believe that their individual vote will have little impact, so they devote little effort to becoming well-informed voters. The dysfunctional outcome, then, is that political ignorance yields poor collective outcomes and enables the disproportionate political influence of wealthy and powerful vested interests.

McGoey's (2019) book is a wide-ranging examination of what has been known in law courts as the "Ostrich Instruction", i.e., the tactic of pleading ignorance to avoid culpability. As mentioned earlier, there are connections between this work and Husak's (2016) volume on ignorance of the law. Her investigations go well beyond the law court context, demonstrating that not only are wealthy and powerful elites better-equipped to make use of the ignorance plea strategy, but a potent source of their power lies in their ability to fix the boundaries between knowledge and ignorance for everyone else.

The collection edited by Barton and Davis (2018) takes the "Ostrich Instruction" theme into criminology, ignorance is a means to facilitating public acceptance of serious and/or mass harm. This argument is instantiated via case-studies involving topics such as institutionalised child abuse, imprisonment, environmental harm, health and safety violations, financial ruin, and migrant detention. Public acceptance is achieved by corporate and/or governmental through a combination of obscuring or denying the harms and deflecting responsibility for their occurrences.

The last two books on my list are the collection edited by Kourany and Carrier (2020) on how science produces ignorance or reinforces prior ignorance, and Klintman's (2019) Knowledge Resistance, which addresses questions concerning how and why people avoid or resist adopting what others regard as knowledge (see also Kourany's chapter in both the first and second Handbook editions and Klintman's chapter in this second edition). Pairing these books together highlights the fact that deliberate, intentional ignorance can be framed in ways that reflect moral stances about it. This is partly because this kind of ignorance invites moralizing to a greater extent than unintended ignorance does, in a similar sense that sins of commission often are judged as worse than sins of omission.

Moral stances adhere to some of the terms used to describe a state of ignorance and the process of its production. For example, consider the usages of "virtuous" ignorance versus "wilful" ignorance, and the "right not to know" versus knowledge "resistance". To be fair, it is difficult to come up with value-neutral terms for many kinds of unknowns. In cases where there are moral debates about ignorance and terms with moral implications are unavoidable (or useful), it is crucial to specify from whose viewpoint instances of ignorance are being morally judged and to bear Bloor's "symmetry" principle in mind when explaining such judgments. One person's declared "right not to know" often will be another's "knowledge resistance", as witness debates between insurers and their potential clients about whether genetic disease marker testing should be mandatory for descendants of heritable disease sufferers.







For the most part, the authors in both of these books are careful on these points. Klintman's treatment, for example, brings in inter-group relations, motivations to strengthen group cohesion, and cognitive-habit tendencies such as confirmation bias to account for the formation of divisive "knowledge tribes". Likewise, some of the most interesting debates described in the Kourany and Carrier collection analyze conflicts between scientists' rights to choose their research topics and the potential impacts of their research on people's rights, dignity, or risks; and these also connect with the literature on dual-use dilemmas (e.g., Rappert & Selgelid, 2013).

Future Prospects

It should be clear from this brief overview that ignorance studies are well-established and the topic of ignorance is joining the mainstream of research in several disciplines. These developments are salutary in many respects. Nevertheless, there still is much to be done and I will single out two issues that merit further attention: Integrating discipline-specific account of ignorance, and rebalancing negative and positive views of ignorance in disciplines where a negative view still prevails.



Many of the current and emerging accounts from the various disciplines still lack joined-up interdisciplinary thinking about ignorance. Much of the sociological literature pays little heed to the psychological or behavioural economics literatures on "uncertainty", for instance. The converse is true in psychology and economics; they neglect the social sciences. For instance, Kay and King (2020) mine the psychological and behavioural economics literatures but seem completely unaware that there is a fast-growing social sciences literature on ignorance, which is what their "radical uncertainty" really is. Hertwig and Engels (2016; 2020) are at least aware of the Handbook's first edition but they make almost no scholarly use of it, with the result that their catalogue of reasons why people choose not to know misses nearly all of its social functions such as privacy, networked specialization, trust maintenance (e.g., Smithson, 2008), or culpability denial (e.g., McGoey, 2019). And as mentioned earlier, Noise (Kahneman, et al., 2021) even ignores relevant theorizing and research within its authors' own disciplines (psychology and behavioural economics) about how people respond to unknowns that arise from conflicting information or views, which is what much "noise" really is about. Despite the fact that the study of ignorance has no natural disciplinary home, there is a danger of disciplinespecific studies of ignorance remaining siloed at the expense of attaining a larger picture of this complex topic. This second edition Handbook is suitably constituted and positioned to promote cross-discipline discourse and fertilization.

Turning now to topics in ignorance studies that would benefit from more attention, chief among these are the ways in which people find their own ignorance beneficial or functional, and likewise when people intend to benefit others by imposing ignorance on them. There is increasing attention in some quarters to the "positive" uses people have for ignorance but the dominant discourses still focus on ignorance that has negative outcomes. For example, in psychology the published scales on attitudes toward uncertainty and ambiguity contain no examples of beneficial or pleasant unknowns and are solely oriented towards measuring "intolerance" of uncertainty. They are incapable of registering attitudes regarding beneficial ignorance. The same applies to most of the literature on the relationship between emotional states and ignorance. Fear and anxiety are emphasized, to the neglect of positive affect states that actually require ignorance, such as hope, optimism, or aspiration. The literature on hope, for instance, largely ignores the point that if there is no uncertainty, there is no hope.





Michael Smithson

One of the main barriers to theorizing about beneficial ignorance is that many unknowns and ignorance arrangements that people regard as beneficial are not described directly in terms of ignorance. Enjoyable surprises (e.g., as in gift-giving), privacy, politeness or civility in communication, and a sense of personal freedom all are examples of this. Discourses about them typically do not elaborate the construction and maintenance of the unknowns or ignorance arrangements underpinning them. A productive line of work awaits researchers who will unearth those constructions and arrangements.

References

- Barton, A., and Davis, H. (Eds.) (2018). Ignorance, power and harm: Agnotology and the criminological imagination. Springer.
- Cabantous, L. (2007). Ambiguity aversion in the field of insurance: Insurers' attitude to imprecise and conflicting probability estimates. *Theory and Decision*, 62(3), 219–240.
- Carleton, R. N., Mulvogue, M. K., Thibodeau, M. A., McCabe, R. E., Antony, M. M., and Asmundson, G. J. (2012). Increasingly certain about uncertainty: Intolerance of uncertainty across anxiety and depression. *Journal of Anxiety Disorders*, 26(3), 468–479.
- Carleton, R. N. (2016). Into the unknown: a review and synthesis of contemporary models involving uncertainty. *Journal of Anxiety Disorders*, 39, 30–43.
- DeNicola, D. R. (2017). Understanding ignorance: The surprising impact of what we don't know. MIT Press.
- DeRose, K. (2017). The appearance of ignorance (Vol. 2). Oxford University Press.
- Dilley, R., and Kirsch, T. G. (Eds.) (2015). Regimes of ignorance: anthropological perspectives on the production and reproduction of non-knowledge (Vol. 29). Berghahn Books.
- Doris, J. M. (2015). Talking to our selves: Reflection, ignorance, and agency. OUP Oxford.
- Harford, T. (2021). Daniel Kahneman has lunch with the FT, Financial Times, 7 May, https://timharford.com/2021/05/daniel-kahneman-has-lunch-with-the-ft/
- Hertwig, R., and Engel, C. (2016). Homo ignorans: Deliberately choosing not to know. *Perspectives on Psychological Science*, 11(3), 359–372.
- Hertwig, R., & Engel, C. (Eds.). (2021). Deliberate ignorance: Choosing not to know. Strungmann Forum Reports.
- High, C., Kelly, A., & Mair, J. (Eds.). (2012). The anthropology of ignorance: An ethnographic approach. Springer. Husak, D. N. (2016). Ignorance of law: A philosophical inquiry. Oxford University Press.
- Kahneman, D., Sibony, O., and Sunstein, C. R. (2021). Noise: a flaw in human judgment. Little, Brown.
- Kalish, M. L., Lewandowsky, S., and Kruschke, J. K. (2004). Population of linear experts: knowledge partitioning and function learning. *Psychological Review*, 111(4), 1072.
- Kay, J. A., and King, M. A. (2020). Radical uncertainty. Bridge Street Press.
- Klintman, M. (2019). Knowledge resistance: How we avoid insight from others. Manchester University Press.
- Kourany, J., and Carrier, M. (Eds.). (2020). Science and the production of ignorance: when the quest for knowledge is thwarted. MIT Press.
- Lewandowsky, S., and Kirsner, K. (2000). Knowledge partitioning: Context-dependent use of expertise. Memory & Cognition, 28(2), 295–305.
- Matthyssen, M. (2021). *Ignorance is bliss: The Chinese art of not knowing.* Palgrave Studies in Indigenous Psychology.
- McEvoy, P. M., Hyett, M. P., Shihata, S., Price, J. E., and Strachan, L. (2019). The impact of methodological and measurement factors on transdiagnostic associations with intolerance of uncertainty: A meta-analysis. Clinical Psychology Review, 73, 101778.
- McGoey, L. (2012). Strategic unknowns: Towards a sociology of ignorance. *Economy and Society*, 41(1), 1–16.
- McGoey, L. (2019). The unknowers: How strategic ignorance rules the world. Bloomsbury Publishing.
- Moore, W. E., and Tumin, M. M. (1949). Some social functions of ignorance. *American Sociological Review*, 14(6), 787–795.
- Peels, R. (Ed.). (2016). Perspectives on ignorance from moral and social philosophy. Routledge.
- Peels, R., and Blaauw, M. (Eds.). (2016). The epistemic dimensions of ignorance. Cambridge University Press. Rappert, B., and Selgelid, M. J. (2013). On the dual uses of science and ethics: principles, practices, and prospects. ANU Press.





Ignorance studies: state of the art

- Salecl, R. (2020). A passion for ignorance. Princeton University Press.
- Smithson, M. (1985). Toward a social theory of ignorance. Journal for the Theory of Social Behavior, 15: 149-170.
- Smithson, M. (1989). Ignorance and uncertainty: Emerging paradigms. Springer Verlag.
- Smithson, M. (1999). Conflict aversion: Preference for ambiguity vs conflict in sources and evidence. Organizational Behavior and Human Decision Processes, 79(3), 179–198.
- Smithson, M. (2008). The many faces and masks of uncertainty. In Bammer, G. and Smithson, M. (Eds.) *Uncertainty and risk: Multidisciplinary perspectives.* Earthscan, pp. 13–26.
- Somin, I. (2020). Democracy and political ignorance. Stanford University Press.
- Sweeny, K., Melnyk, D., Miller, W., and Shepperd, J. A. (2010). Information avoidance: Who, what, when, and why. *Review of General Psychology*, 14(4), 340–353.
- Viscusi, W. K. (1997). Alarmist decisions with divergent risk information. *The Economic Journal*, 107 (445), 1657–1670.



