

“I don’t think anybody really knows”: Constructing reflexive ignorance in climate change adaptation

Vanessa Bowden¹  | Daniel Nyberg¹ | Christopher Wright²

¹Newcastle Business School, The University of Newcastle, Newcastle, NSW, Australia

²Sydney Business School, The University of Sydney, Sydney, NSW, Australia

Correspondence

Vanessa Bowden, The University of Newcastle, Newcastle, NSW 2300, Australia.

Email: vanessa.bowden@newcastle.edu.au

Abstract

Responding to the existential threat of climate change is often seen as requiring greater reflexivity. Imbued with notions of resilience and reflection, reflexivity is assumed to contribute to pro-environmental change. However, as the need to manage climate impacts becomes more immediate, political struggles over climate adaptation have become increasingly apparent. These impacts occur most often within local communities, in the context of competing economic interests and differing interpretations of climate science. Thus while it is increasingly difficult to deny climate change, conflicting priorities can lead to ignorance. In these circumstances, how communities build and share knowledge, and negotiate responses is central. Based on a study of a vulnerable region in Australia, we identify three processes through which the local community mobilized to disrupt local climate change adaptation. These included emphasizing uncertainty about the science of climate change, encouraging fear about property prices, and repositioning property owners as victims of climate adaptation policy. We argue that this response to climate adaptation constitutes the production of *reflexive ignorance*, which reinforces skepticism around scientific authority and defends particular economic interests.

KEYWORDS

adaptation, climate change, ignorance, reflexivity, risk

1 | INTRODUCTION

Despite the scientific consensus over a worsening climate crisis and the growth of social movements for climate action, carbon emissions and the consumption of fossil fuels continue to increase (van Renssen, 2018). While the gap between awareness and prioritizing climate change has been known for some time (Whitmarsh, 2011), the lack of action is confounding considering that the risks are ever more present. This is particularly the case when it comes to adaptation. While climate adaptation has largely been seen as a technical and pragmatic challenge, for which there is ample time to respond (Biesbroek et al., 2013), not only is it becoming increasingly urgent, but it is apparent that it is also highly complex, involving competing economic, social, and political priorities (Porter et al., 2015). Developing technical solutions is not enough; rather, effective adaptation requires knowledge of the social, cultural, and political frameworks within which responses to risks are developed.

One explanation for the insufficient response to climate change has been that particular social institutions or individuals lack reflexivity (Boström et al., 2017). This failure is seen in the context of reflexive modernization, whereby the risks imposed by industrialization become increasingly evident and important features of modernization are broken down and remade (Beck, Giddens & Lash, 1994). For instance, Beck (1994) has argued that because previous assumptions about progress, science and technology have been the cause of so many environmental risks, this new era of modernization would involve a more skeptical perception of science and technology, which would then become more democratic through increased public scrutiny and participation in decision making. While the current state of climate politics suggests the former prediction to be correct, there is little doubt that the latter is but a hope for the future.

Despite the fossil fuel industry's success in obfuscating climate science and delaying policy responses (Oreskes & Conway, 2010; Wright & Nyberg, 2015), there is now growing public awareness of climate change evident in polling data (Poushter & Juang, 2019) as well as new social movements for climate action. However, even with current international climate agreements in place, tangible action in reducing the carbon emissions remains limited (Spash, 2016). These developments suggest that while climate denial might be shifting to the margins, meaningful climate action is still being ignored. Such ignorance is not, then, about a lack of information, or knowledge, but is produced within specific social practices (Ungar, 2000). In providing a framework for understanding these processes, the sociology of ignorance has the potential for understanding resistance to climate change beyond denial and explaining the lack of action as a relational process which, we argue, can be usefully termed *reflexive ignorance*.

Investigating climate change adaptation in the local government area of Lake Macquarie, Australia, our research examines how local community negotiations and debates over climate impacts produce ignorance. We trace the ways in which key stakeholders mobilize resources and create narratives to actively produce "strategic unknowns" (McGoey, 2012a) and disrupt planning for climate change adaptation. We argue that this production of ignorance is a reflexive response to the perceived economic threat of discussing climate change in relation to property values. While the response is initiated by particular actors, the broader community becomes complicit in the process as other priorities displace climate adaptation. By bringing together the concept of reflexivity with the sociology of ignorance, we seek to further develop the literature on reflexivity by showing that reflexivity has just as much potential for defending the status quo as it does in promoting social change; indeed, in our case, it can be seen as a central mechanism through which ignorance is socially constructed. These insights also have value in understanding the local production of ignorance, even in situations when communities are confronted by the serious impacts of risks such as climate change.

1.1 | Climate change and ignorance

It has been suggested that the vexed debate over climate change and decarbonization has been worsened by a political era of "alternative truths" and "fake news" (Innes, 2020; Mallard & McGoey, 2018). This debate can be

understood through the “knowledge-ignorance paradox,” in which “the exponential growth in the volume and complexity of information” has, somewhat ironically, produced ignorance (Ungar, 2000, p. 298). In this situation, rather than choosing to outright deny particular facts or knowledge regimes, ignorance can be understood as constructed in practice.

In a thorough examination of how ignorance, non-knowledge, and types of knowledge have been used over time, Gross (2007, p. 749) argues that the “term ‘ignorance’ should function as a kind of cover term that generally points to the borders and the limits of knowing, including intentional and unintentional bracketing out of unknowns.” It is this bracketing that is of interest for the sociology of ignorance—the processes by which particular choices are made, and actions or outcomes are taken, which may occur outside of the realm of knowledge. Ignorance, then, is not just a “lack of knowledge,” but “has a substance of its own, as the product of specific practices” (Mair et al., 2012, p. 3). In this sense, ignorance is relational—a dialectical process which can be studied through “the accumulated ways a group of people make sense of the world” (Souleles, 2019, p. 516). For instance, in relation to the 2003 invasion of Iraq, Ungar (2008) speaks of a “chain of ignorance” whereby multiple individuals and institutions, usually responsible for overseeing democratic processes, failed to do so. Ignorance, then, provides an explanation for why communities “don’t know” (Ungar, 2008, p. 322).

Thus, just as the study of knowledge can be focused on the ways in which certain “truths” come into existence, so the production of ignorance can be studied as social practice. As McGoe (2012a, pp. 2–3) argues:

That is, rather than seeing knowledge as a process of pitting “facts” against each other, we need to understand “the cultural reproduction and transmission of ignorance” (McGoe, 2012a, p. 4) in order to see the ways in which ignorance is productive. In this regard, recent work in the sociology of ignorance has shown that it “is every bit as socially determined and mappable as knowledge” (Souleles, 2019, p. 517).

As a means of understanding this more specifically, McGoe (2012b) has developed the notion of “strategic ignorance.” Central to this is the idea that ignorance can be deliberately developed as part of a strategy seeking particular outcomes. McGoe (2012b, p. 570) shows how organizations can deliberately preclude, obfuscate, and deflect knowledge from emerging, and that this can be productive for a more effectively functioning organization. This suggests that strategic ignorance can be purposive—that is, keeping certain aspects of knowledge away from particular actors can result in a positive outcome. Thus, rather than assuming that ignorance consists simply of a *lack* of knowledge, it is more useful to explore how ignorance is *produced*, and to what ends (Mallard & McGoe, 2018). While McGoe’s (2012a, 2012b) concept of strategic ignorance can certainly be assigned to some of the disruptions to action on climate change, we suggest that this can also be seen as a reflexive movement. This differs from previous discussions of strategic ignorance as being doxic or preconscious (as noted by McGoe, 2012) in that, rather than focussing on cognition, we are seeking to describe the mechanics of the social construction of ignorance.

1.2 | Is reflexive modernization the solution?

While there have been multiple uses of the concept of reflexivity within different disciplines, these have most commonly—with some exceptions—depicted it as a positive quality; a means of resilience, and reflection (Lynch, 2000) which can be mobilized in the face of adversity. Lash (1994, p. 115) outlines two ways in which reflexivity is made use of in the literature; one being a description of structural changes and the other as an individual quality. Thus, we can see that underlying assumptions about reflexive modernization (the former) is the notion that we are in a time of rapid social change, and reflexivity is the means by which such change is navigated (the latter). This is evident in how reflexivity is assumed to follow a logical process in response to risk—a calculation of consequence which is then acted upon “according to instrumental means-ends rationality” (Farrugia & Woodman, 2015, p. 629). As argued by Beck (1994), reflexivity entails not simply “*reflection*,” but (first) *self-confrontation*” and a fundamental reorientation of our social relations (p. 5, original emphasis).

In this way, reflexive modernization is often seen as inherently ecological (see, for instance Mol, 1996; Mol & Spaargaren, 2000; and Dunlap, 2014). This has led to the argument that corporations and conservative politicians have engaged in “anti-reflexivity” in their efforts to undermine action on climate change (McCright & Dunlap, 2010; Young & Coutinho, 2013). However, the anti-reflexivity framing makes a number of processual assumptions about reflexivity. First, it orients reflexivity toward an objective version of truth and risk. That is, that the truth of climate change, once realized, will become a priority for those who have this information. Second, it follows that upon reflecting on the problem, institutions and individuals alike will respond in ways that seek to alleviate the problem.

As a personal quality, reflexivity is often used to suggest a freeing up or release from previously constricting social structures and roles of late modernity. For Giddens (1994, p. 75), reflexivity can be used to take greater control over one's identity—“we have no choice but to choose how to be and how to act.” More broadly known as the individualization thesis, this opening up of possibilities and choice is seen as inherently requiring increased reflexivity. Similarly, within Archer's (2003) typology, reflexivity is largely described as a cognitive process, an “internal conversation” through which individuals negotiate their “ultimate concerns.” Reflexivity is thus seen as “a property of the subject that allows the formation of life projects ... the way in which the subject agentically negotiates the world” (Farrugia, 2013, p. 287). As argued by Farrugia and Woodman (2015) however, such notions tend to valorize reflexivity at the expense of recognizing the influence of broader social conditions.

In contrast, Adkins (2003) argues that reflexivity may well reinforce existing traditions and norms. For instance, gendered norms such as “feminine skills” may be strategically employed as a means of negotiating and succeeding in the workplace (Adkins, 2003). These nuances between self-reflexivity and broader social processes can be explained with the notion of hermeneutic reflexivity, a recognition that reflexivity involves the embodied interpretation of experiences in time and place and stresses how subjectivity informs the orientation of reflexivity (Lash, 1994). For example, Sharp and Threadgold (2019) have shown how gendered privilege can be ignored by men seeking to assert their feminist credentials—a practice they call “reflexive complicity.” In this way, it can be argued that reflexivity needs to be understood in the shared practices of agents involved in knowledge (or ignorance) production (Adkins, 2003).

These varying uses of reflexivity suggest that it may not always involve a critical reassessment of existing practices and trajectories. Rather, reflexivity may involve embracing, re-asserting, or reinventing existing values as a means of stabilizing—or even improving—one's position. Thus, it does not necessarily follow that reflexivity in and of itself will result in pro-environmental behaviors. Rather, it can be operationalized in order to defend the status quo as easily as it might be used to engage in change. In the study that follows, we argue that the ways in which communities respond to climate adaptation is a reflexive practice of constructing ignorance, based on the perceived economic vulnerability that climate change entails.

2 | CLIMATE CHANGE ADAPTATION IN LAKE MACQUARIE

Our qualitative research explores the dynamics of climate change adaptation in an Australian coastal community. Lake Macquarie is a regional area which has been recognized as particularly vulnerable to climate change. It has large sections of residential housing built around Australia's largest saltwater lake, which is vulnerable to flooding and coastal erosion. In 2008, the local council adopted a climate adaptation policy that incorporated future sea-level rise projections. Using various scientific inputs—specifically from the Intergovernmental Panel on Climate Change (IPCC) (2007) and the national science organization, the CSIRO (2007)—the council identified approximately 7,000 properties which were at increased risk of flooding associated with climate change impacts.

In late 2011, following the release of the draft flood management plan, the council contacted property owners about further developing the planning policies. Council staff ran six community workshops at different locations in the region which were attended by approximately 350 residents (Stevens et al., 2012). They also conducted a

survey and compiled a range of reports seeking input from residents. Given that a key outcome of these activities was a request for consultation with property owners, the council decided to engage in a process to further develop its policies (Stevens et al., 2012). However, in the meantime, a number of property developers, real estate agents, conservative politicians, and residents came together to oppose the council's policies.

A prominent local property developer threatened to sue the council, arguing that the changes were unnecessary because climate change was hypothetical, and the policies were impacting on property prices (Cronshaw, 2011a). A number of these meetings, at which council staff and councilors attended, were described as intensely antagonistic. As one former councilor (Noah) recalled:

The tension was confirmed by one of the residents opposed to the policies (Sarah):

They [council representatives] were actually insulted and verbally assaulted on several occasions. Yelled at. They had people in tears.

Public meetings continued through 2012, when in January, three prominent climate skeptics spoke at a public meeting which was attended by about 300 people who argued that the policy was flawed and the sea-level rise information was incorrect (Cronshaw, 2012a). In March, another public meeting which included concerns about a rate rise, was attended by 180 people, and a rally of 120 people (again including climate skeptics) held in August (Cronshaw, 2012b). The campaign was carried out through public meetings, media coverage, direct lobbying, and involvement in the council-initiated consultation process. Over a period of 10 years, there was intensive media coverage of the implications of the council's climate adaptation plans, revealing major concerns around property development restrictions, valuations, and insurance premiums (Cronshaw, 2012c).

In response, the council undertook an intensive collaborative governance program of consultation. Beginning with training 30 staff over 2 days in the processes of collaborative governance, a further 2-day workshop was held for community residents in April 2013 aimed at developing a shared definition of the "dilemma" to be solved (Stevens et al., 2013). From this workshop, a smaller group of volunteers (approximately 15) were engaged to work with council staff on developing the plan. The council staff, along with community members who had been involved in the consultation, eventually released an adaptation plan that was seen as appeasing the community's concerns. Our research shows, however, that this appeasement resulted in the diminution of climate change impacts and the plan had no additional funding attached.

3 | METHODS AND ANALYSIS

We sought to understand the movements and motivations of the various interest groups involved in the adaptation planning process. In order to gain an understanding of the background and timeline of events, as well as the key actors and issues involved, we first gathered published information on the topic which was available in the media, and government documents. This included 266 newspaper articles, and 119 reports, websites and government documents which were published between 2008 and 2017. While these gave some insight into the events in the case study, we sought to understand the debates within and between the different groups, how the different stakeholders in the process saw their own and other's participation, what their priorities in terms of outcomes were, and to what extent these were shared between those involved.

For this purpose, we interviewed 46 people from the different groups and organizations involved in the process. This included former and current council and local government employees (11), politicians (7), media and business representatives (13), experts and consultants to the council (5), and residents in community organizations involved in consultation processes and campaigns on the issue (10). Interviews were carried out between December 2017 and December 2018, and were semi-structured, covering a range of topics including interviewees' views on the adaptation measures, interactions with other groups and representatives involved with the

issue, opinions on government and the consultation process, and concern for climate change. Interviews were fully transcribed and initially openly coded according to the general interview topics. This initial round of coding revealed some key similarities and differences between the different groups, reflecting differences in priorities, views on climate change, and views about each other. Given these differences, we sought to understand the ways that the consultation process resulted in agreement between the participants over a final adaptation plan.

Our analysis shows that the production of ignorance comes about through the sharing of three narratives within the community—(i) emphasizing the uncertainty of climate change, (ii) producing fear within the community, and (iii) depicting property owners as victims (see Table 1). Each of these narratives drew on pre-existing and prominent framings of climate science, individual rights, and mistrust of government. When wielded through the alliance of business interests, residents, and the media, the use of these narratives “closed off” the ability to incorporate new information, such as the need for climate adaptation based on scientific assessments of future sea-level rise. These narratives reinforced existing power relations, shifting the focus of the community debate from the initial focus on adaptation to a defense of existing interests and a rejection of substantive change.

3.1 | Emphasizing uncertainty

The plans to implement climate adaptation measures in Lake Macquarie were developed in the context of a growing awareness of the impacts of climate change in Australia and globally. In 2007, a new Australian Labor government with an explicit policy of climate action came to power. Newly elected Prime Minister Kevin Rudd argued that climate change posed one of the greatest moral challenges facing humanity and, in one of his first initiatives, ratified the Kyoto protocol. In 2009, the New South Wales state Labor government instituted benchmarks for sea-level rise intended to guide local council planning based on projections from the IPCC. Lake Macquarie City Council's policy was set within these parameters. The pushback in the following years, however, was both organized and effective. When residents affected by the policy change were notified by the council in 2011, both the federal and state governments had since been voted out and their climate policies removed. This left the council open to skeptical critiques of their policy, and the charge that they were moving ahead of the evidence on climate change.

Opponents of the council's policies made use of the prominence of this existing climate denial rhetoric to suggest that the measures were not necessary and that the science on which the policy was based was flawed. To support their arguments, climate skeptics from across the country were engaged to speak at public meetings and featured in opinion pieces in the local newspaper. As one council employee noted:

We had a whole lot of kind of climate scepticism happening around the country. So, you know, [developer's name is] obviously reasonably well resourced and he collaborated with the coastal residents' group, ...down in the Central Coast... and brought up some of the kind of more—high profile climate sceptics. (Emily, council employee)

At these meetings, which were organized by conservative politicians and business leaders, residents were told that their property values were needlessly at risk. Opponents of the adaptation policy argued that climate science was not settled, that the council was using the wrong data, and that the council was going beyond its responsibilities in trying to manage an issue that was too complicated and distant to be understood.

The impact of this emphasis was evident in our interviews with residents when they discussed their views on climate change, as well as council employees who described the consultation process. It is important to note that most residents did not identify themselves as “sceptics”—rather, they would emphasize the limitations of climate data. Drawing on existing arguments about the level of human impact on climate change, residents emphasized the uncertainty of the science:

TABLE 1 Theme outlines

Theme	Key features	How	Examples from coding
Emphasize uncertainty	• Skepticism and denial of climate change • Lay v. expert knowledge • Council's actions are not needed • Based on flawed data • Climate skeptics • Developers • Conservative politicians • Actions are not yet needed: "wait and see" approach	Question the data Present alternative readings of the data	"We had a number of our members who had projects happening in those sorts of areas...A number of them were quite concerned at what they saw as less than rigorous numbers and measurements et cetera relative to the impact back onto housing" (Mark, planning consultant) "it was things like insurance and property prices and a lot of them are climate sceptics, they don't believe climate change is happening. So 'there's no problem, why do it now'? I mean one person said 'the only water I'm going to worry about is the water that floods over my gravestone because I won't be alive then' and 'I've lived here for 50 years I've never seen the Lake change.' So we had a large amount of climate sceptics." (Olivia, former council staff) "I went into the data about the traditional data and I said, look, of course, it is; if we say it's staying flat that's ridiculous but the whole thing is that, as far as I'm concerned, the hockey stick is a little bit of a worry when you start seeing it after you've got like a trendline." (Elizabeth, resident)
Production of fear	• Right to private property • Imposition on freedom/rights • Would not have happened if not for the actions of council • Conservative politicians • Real estate • Neighboring residents • Counter information regarding insurance and house prices	Media coverage showing inundation Politicians and real estate talking about falling house prices Residents discussing insurance costs	"This was seen as an issue that certain politicians could use to play to people in that area; very much a fear campaign: your property values will go down, your insurance costs will go up, this is all based on fallacy, there is no global warming, that kind of stuff." (Joseph, councilor) "Over the years I've attended hundreds or thousands of community meetings, where they're big ones in a club somewhere, someone up the back that's five schooner's deep will be the mouthpiece and it's easily hijacked. You can almost see the spread of fear sometimes, wash over the crowd that's there." (Noah, former councilor) "Not everyone wants to inform themselves because it frightens them. It frightens them I think because ... their lives are built up to having this holiday home when they retire and to have that foundation of the Australia that they knew in that baby boom time. To have that questioned kind of rocks who they are as a person." (Scott, consultant)

(Continues)

TABLE 1 (Continued)

Theme	Key features	How	Examples from coding
Victimizing property owners	• Mistrust in government • Limited remit of local councils • Council is power hungry • Media • Neighboring residents • Change of infrastructure priorities • Slowing of climate adaptation process	Council being defensive	"[It took] a lot of leg work, face to face engagement from staff to work with the local community to get to an outcome, and that was a defence strategy and so in the end, you know we had a local working group come here and present to our Council about the adaptation plan." (Emily, council staff)
		Claims of government failure	"...it really was ridiculous. I mean I think it was an extraordinary time in the Hunter's history. I mean the local government failed the people, the politicians failed the people." (Oliver, journalist)
		Individual stories of loss	"There is actually one example when the person was made bankrupt as a consequence of the huge impact on the property that he had bought and he wanted to subdivide it and he put his life savings into it and that was going to be his super [annuation] and he got caught with the Global Financial Crisis, which had an impact on our economy for sure, but he also got with this sea-level rise issue. ... So people were really angry, and I was one of them." (Kyle, community organization)

My philosophy is sea-level rise is real. Geological—go back only 10,000 years, the sea-level was 100 metres lower, Sydney Harbour didn't exist. You could walk from New Guinea to Tasmania. Let's not deny sea-level rise, it's going on. How much is being caused by humans I think is debatable. But we can debate that forever and a day and I don't think anybody really knows the right answer quite frankly. (Christian, community organisation)

Christian's comments suggest he is aware of the broader public debates about climate skepticism; he makes a point of noting that “sea-level rise is real,” thus avoiding the label of being a skeptic, yet goes on to emphasize the uncertainty of human impact. In this way he opens up a space in which to question the council's proposals—as he says, “*I don't think anybody really knows*”—and, potentially, delay these actions.

Within this space, a range of other possibilities and arguments about the potential impact of climate change were questioned. Opponents of the adaptation policy argued that it should be based on already-existing measurements and observations of the lake. Residents who were involved in the consultation process with the council discussed coming up with their own analysis of the data of the lake level rise. One resident confidently argued that their reading of the data were preferable:

I have all the data from the three measuring stations and I did it through an averaging of the lunar instead of the solar. So I've looked at the NASA charts and the rise actually is less... There's a level in a year, an average in the year, average it, graph it all. Very easy, you just put it all on Excel. If I can do it, anyone can do it. (Elizabeth, community organisation)

Similarly, it was argued that climate science was “just a theory” (Phil, property developer), and that rather than using the projections of the climate and flooding specialists, adaptation policy should be based on changes as they occurred—that is, that the climate modeling should be abandoned in favor of more immediate measurements.

Whether this skepticism came about as a result of the campaigns of others in the community, was pre-existing to this intervention, or, indeed, was a circumstance of economic interest in preventing policies that were seen to impact on property prices, it is clear that this emphasis on uncertainty was effective. In response, council representatives described shying away from discussions about climate change during the consultation process. This eventually led to the use of “trigger points”—rather than climate modeling—as a key element of the adaptation plan. As one interviewee put it—this decision was specifically based on uncertainty, and the argument that climate change “might not happen” (Amanda, former councilor).

3.2 | Producing fear within the community

Residents described that a primary motivation for their opposition to the Council's climate adaptation policies was that their property values would be harmed both directly and indirectly. Directly, the council had issued notations on those properties deemed at risk from sea-level rise. Known as section 149 certificates, the notations informed potential buyers of restrictions on the development of these properties. Indirectly, there was overall concern that discussion of the potential impacts of sea-level rise in the area was harming the market value of properties in the area. Despite the ongoing discussions among resident groups, media and business interests about the policies' impact on property value, councilors and council employees argued they could not find evidence to support this claim.

The potential impact of discussing climate adaptation on property prices was brought into the debate early on by the local newspaper and was reported on extensively throughout the consultation process, often explicitly linking the adaptation measures with a reduction in property values. As one former councilor argued:

[journalist name] wrote articles about how houses would be essentially similar to ones in The Netherlands where they were tethered to poles and would move on tides. That really sparked a lot of fear amongst the residents that, 'what the hell's going to happen to my home?' (Noah, former councillor)

For their part, the media representatives interviewed did not shy away from describing the kind of coverage they gave to the issue and the role they played in the debate:

Look, we've done some great front pages on sea level rises, absolutely. Yeah, as media tends to do, it tends to dial a lot of this stuff up to the max and that is part of the broader debate and part of the process of informing and influencing people's opinions ...call it a beat up if you like, but our coverage was just reflecting what some of the modelling was saying ...it's pretty tempting when you get these really dramatic maps. (Bryan, journalist)

Media coverage focussing on the most dramatic impacts contributed to residents' concerns that the policies were detrimental to their property values. As one council employee argued: "I think the residents were saying, 'why us?' I think the journalist was really just feeding off that mentality. So it was generating advertising revenue, would be my guess" (Eric, council employee).

Stories about residents impacted by the decline in property values were reported in the press (Cronshaw, 2011b, 2012d) and shared between residents, business leaders, and others in the community at public meetings:

As a result of the media coverage and activities of prominent landholders and businesspeople, concerns over the economic impact of the proposed planning changes quickly spread within the community. Residents emphasized difficulties in selling properties and insurance premium hikes:

They [the insurance companies] said, 'if you want flood insurance like you've had or like you want now, your premium is now going to go from \$1,200 to \$2,000 or \$3,000 or \$4,000' and ultimately some were \$12,000. It's going to be a big hit. (Kyle, community organisation)

Through these community discussions a clear focus on property became central, to the extent that protecting property prices was seen as the priority in the community consultation process.

Participants from within the council and some councillors argued that this fear, much like the skepticism discussed earlier, was deliberately promoted by vested interests. On the one hand, they argued, it was a political opportunity for conservative politicians to compete with the existing, largely progressive, councillors on the issue. On the other hand, real estate agents may have had an interest in trying to encourage residents to sell their properties sooner than they might have otherwise:

There were politicians who were going around saying that house prices are going to fall, that kind of stuff ...I think there were some real estate agents who were looking to, perhaps, try and—manipulate is the wrong word—but cash in on, perhaps, people wanting to sell. (Joseph, councillor)

This production of fear within the community benefitted certain groups of people.

The fear over property values was effective in having an impact on the consultation process. Crucially, a primary commitment within the plan was that residents would not be required to retreat from their properties—this was a commitment that one of the council employees said would not be sustainable across the region:

I think the downside of that is that people now have an expectation that defence will be the way that we will go for all of our applications and I'm not sure that we—or anybody—can afford the infrastructure that's required to defend all of those locations. (Emily, council employee)

The adaptation plan, as negotiated by the residents, then, put property ownership—rather than climate adaptation—at its center. That residents went into the negotiation process mobilized and concerned for their properties appears to have had a significant impact on the plan, and on the broader discussions around it. There were no further restrictions placed on development, and the media focus on the impacts of the policies eased once the revised plan was released.

3.3 | Victimizing property owners

The overall success of the residents in having the council retreat from discussion about climate change and withdraw further measures which may have restricted development, suggests it was an effective intervention on their part. Indeed, the mobilization of property interests, conservative politicians, and residents wielding economic power meant that the council went into the consultation process with appeasement as a central concern. As one expert put it, an early consideration was that the council was aware that it was under threat—"I think their future flashed before their eyes" (Dominic, consultant). For their part, residents, conservative politicians, some business leaders, and the media drew on existing narratives about government bureaucracies to argue that the council was ideological, insensitive, and overstepping its authority. The opponents mobilized the community by depicting the council as being a bureaucratic and dishonest organization which was unnecessarily imposing restrictions on hard working citizens. This narrative was further complicated by the fact that the neighboring region did not have the same restrictions. As one councillor commented:

I guess the other issue is this thing of 'Why is council telling me what to do? Why can't I just be left to my own devices? Why do I have to do this?' ...they turn around and say, 'well, that house down the road there, that doesn't have a 1.3 metre rule, so why are you imposing it on me?'. It's a perceived unfairness about the way rules or restrictions are applied. (Joseph, councillor)

In this perspective, the residents were law abiding, hard-working citizens whose property rights were unfairly threatened by an overzealous council; residents were viewed as victims. Indeed, one of the reporters who covered the issue at the time argued that their work was intended to frame the issue as such:

I'm proud of what I did. I gave the residents a voice. I gave the powerless some power. I gave the voiceless a voice, and I questioned them [the council], and I stood up to them. I gave it the attention it deserved because property rights are extremely important, and people's rights are important. (Josh, journalist)

Thus, the council was presented by the media and opponents as imposing climate risk on residents' properties and harming residents who were suffering unfairly for a problem beyond their control.

From the council staff's perspective, it was noted that the majority of the citizens involved in the debate and deliberation process were in positions of privilege. As one participant noted, the consultation group consisted mostly of retired ex-professionals, with high levels of education and valuable assets:

I think the people that had properties at the water levels freaked out because it becomes very individual because obviously waterfront properties normally cost a lot more. So, then you're saying these things, but that's a minority. I mean that's going to affect about nine per cent of Lake Macquarie properties. (Owen, former council employee)

To this end there was a strong argument that the characterization of victimized residents functioned as a means of increasing the power of those in the community who were already in a position of power. Through representing themselves as victims, key individuals were able to capture the policy development process for their own ends.

This proved to be an effective political strategy with the council's consultation process removing mention of climate change and focusing on measures through which waterfront residents could protect their homes and property values from flooding. This outcome highlights how the representation of residents as victims posed a threat to the council's political legitimacy, and that this had an impact on their actions. Such a move suggests that the interests of those who were concerned about climate change, those who did not own their properties but whose lives might be impacted by sea-level rise, and those who did not have the time resources to commit to consultation, were not represented by the resulting adaptation plan. In this way, the "opt-in" nature of the consultation process meant that the outcomes were heavily influenced by individuals who already had considerable power in the community. The consultation process thus became much more about trying to rebuild trust in government than about putting in place necessary measures to adapt to future climate change.

4 | DISCUSSION

Our study reveals several ways in which ignorance is produced within local debates about climate adaptation. By drawing on readily available, pre-existing discourses of climate skepticism, individual property rights, and a mistrust of government, the actions needed to adapt to climate change were effectively disrupted by the community. The reassertion of these discourses pushed climate change adaptation to the periphery of the discussion and the sharing of alternative narratives enabled the reinforcement of existing economic structures by socially constructing climate ignorance.

In terms of the implications for climate adaptation, our study highlights some of the challenges of small government and community initiatives in the absence of more ambitious, or even supportive policies (Castán Broto & Bulkeley, 2013). In this case, attempts to implement climate adaptation policies were immediately perceived by key interest groups as an economic threat, who then used climate skepticism as a key framing to oppose the measures. Skepticism of climate science thus became a central "strategic unknown" (McGoey, 2012a) around which opponents of the adaptation policy built their case. In this way, the case illustrates the risk that such initiatives will become what McGoey calls "'undone science'—areas of inquiry deliberately left unfunded, ignored or sidelined because the political implications of exploring them may be dangerous" (2012a, p. 558). While similar strategies have been observed in the broader debates about climate science via the interference of corporations in climate policy (Oreskes & Conway, 2010), we show the process through which these strategies are played out at a local level as a shared response from the community. We argue that climate skepticism was reflexively mobilized within the community as a means of diverting the discussion away from climate change.

Thus, even those within the community who were concerned about climate change became active in the broader construction of ignorance through a range of reflexive mechanisms. It is this process we focus on here, by showing how and why the council abandoned the implementation of their climate adaptation policies. The council staff were maneuvered into a position of compromise by those opposing the adaptation measures. The process became as much about managing the fear in the community and restoring trust in government as it did about climate change. The resulting agreement worked to appease economic concern and shift climate change to the periphery.

Unlike knowledge, to which there are always limitations, ignorance, Davies and McGoey (2012, p. 80) argue, "has no identifiable parameters"—the inaccessibility of people's motives, the "competing practical, tacit and inarticulable factors that induce individuals to act in particular ways" gives ignorance strength. In what follows we outline our contribution to these debates by describing the processes through which ignorance is able to manifest. We suggest this constitutes a process of *reflexive ignorance*, and while noting the multitude of adjectives already put in front of the noun ignorance (Gross, 2007, p. 744), we seek to overcome the previous gaps in such terms by clearly articulating the relational aspects of knowledge, ignorance, and uncertainty, and giving a clear empirical justification for its utility.

4.1 | Reflexive ignorance

In the conceptualization of reflexive ignorance, we argue that the mechanism evident in each of the narratives described above is reflexivity. Each of the movements toward ignorance draws on pre-existing values within the neo-liberal framework—individualism, rights to property, mistrust in government and “elites” (Harvey, 2005). When confronted with the potential of climate change, rather than invoking a rethink of these assumptions (as we might expect from the more ecological view of reflexivity), residents’ responses are to “double down” on them and engage in narratives which question the need for action. In this way, those already existing and dominant values serve as an anchor point for invoking a reflexive response to the threat of both climate change itself and attempts to adapt to it. For instance, the threat to existing property values initiates an alliance between real estate companies, developers and property owners to create a sub-political movement to push back against the council’s adaptation plans.

In incorporating the notion of “ignorance,” we seek to supplement the existing literature on “anti-reflexivity” by proposing the term *reflexive ignorance*—that is, by removing the “absence” of “anti,” we can follow the development, in this case, of a reflexivity of purpose—to turn away from responding to climate change, at least in the short term. We argue that the findings show a reflexive response to climate adaptation policy embedded in the recognition that climate change means a fundamental change to these particular values. Thus, rather than resulting in a “critical reflexivity” (Adkins, 2003, p. 21), those opposing the adaptation policies engage in a hermeneutic reflexivity whereby the available tools are put to use to defend their economic interests. Key to this is the mobilization of ignorance in relation to climate science.

In our study, the lack of trust in social institutions and science were employed to reroute the discussion away from the need to engage in climate adaptation—that is, to mobilize ignorance. Residents, developers, and the media came together to push back against limitations on future development and reassert the centrality of economic value to the policy debate. In turning to those pre-existing, shared values of the importance of property values, these new alliances can be seen as reflexivity operating as a means of supporting the status quo—an example of Beck’s “sub-politics,” but not perhaps how it was envisioned. The “habit” (Adkins, 2003) used here is the assumption of individual rights to ownership and profit. Just as Adkins shows how a reworking of gender can be drawn upon within reflexive processes, here we argue a reworking of property values as nostalgic and bound to place, offers a reflexive response to the threat of climate adaptation.

A particularly interesting aspect of this debate is the re-orientation of those with relative privilege as “victims.” While social movements are more often linked to notions of justice and fairness, in this example, the movement is built on an alliance with powerful forces. Reflexivity here is used not to respond to the issues of climate change and sea-level rise, but to produce ignorance; to reorient the focus of concern, reinforce economic power relations, and to double down on the importance of individualized property ownership.

5 | CONCLUSION

We do not seek to decouple or argue against the notion that late modernity has produced a need for more reflexivity—rather, we argue that this reflexivity will be invoked by different institutions and individuals in different ways. That is, we argue that reflexivity can produce ignorance just as easily as it produces actions seeking to adapt or mitigate problems such as climate change. We argue that the construction of ignorance as observed here is a reflexive response to climate change, in that it is invoked in order to manage the challenges of late modernity. As opposed to anti-reflexivity, what we observe is the mobilization of a range of reflexive practices in order to produce ignorance—individual skills, networks, and economic resources are drawn upon to respond to the threat of climate change and defend pre-existing ideas.

Thus, we suggest that from the perspective and priorities of the particular corporations and organizations involved in climate denial, the act of embedding doubt about climate science is also reflexive, yet whether this encompasses the broader conceptualization of reflexive ignorance is perhaps a little less clear. As Adkins (2003) notes, it is the very flexibility of late modernity that can often mean a re-orientation of existing norms and values as part of the struggle for legitimacy. Nothing challenges the hegemony of fossil fuels more than climate change (Wright & Nyberg, 2015)—if the process of reflexivity involves reflection of new information, interpretation and action, then the response of using this to defend the industry is exactly the kind of reflexive activity to be expected. This view of reflexivity can also go some way to explaining the proliferation of “fake news” or “alternative facts” which has drawn such intense interest (Jasanoff & Simmet, 2017). Indeed, it may be the ultimate outcome of reflexive modernization that ignorance is mobilized in such a way as to prevent—or at least delay—the fundamental changes to social and economic structures that a meaningful response to climate change requires.

ACKNOWLEDGMENTS

With thanks to Steven Threadgold for early discussions on these ideas, and the anonymous reviewers for their valuable feedback.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Vanessa Bowden  <https://orcid.org/0000-0002-6642-2826>

REFERENCES

- Adkins, L. (2003). Reflexivity: Freedom or habit of gender? *Theory, Culture and Society*, 20, 21–42.
- Archer, M. (2003). *Structure, agency and the internal conversation*. Cambridge University Press.
- Beck, U. (1994). The Reinvention of Politics: Towards a Theory of Reflexive Modernization. In U. Beck, A. Giddens, & S. Lash (Eds.), *Reflexive modernization. Politics, tradition and aesthetics in the modern social order*. Polity Press.
- Biesbroek, G. R., Klostermann, J. E. M., Termeer, C. J. A. M., & Kabat, P. (2013). On the nature of barriers to climate change adaptation. *Regional Environmental Change*, 13(5), 1119–1129.
- Boström, M., Lidskog, R., & Ugglä, Y. (2017). A reflexive look at reflexivity in environmental sociology. *Environmental Sociology*, 3(1), 6–16.
- Castán Broto, V., & Bulkeley, H. (2013). A survey of urban climate change experiments in 100 cities. *Global Environmental Change*, 23(1), 92–102.
- Cronshaw, D. (2011a, October 28). Turning up the heat: Climate class action. *Newcastle Herald*.
- Cronshaw, D. (2011b, October 14). Drowning in opinions. *Newcastle Herald*, p. 7.
- Cronshaw, D. (2012a, January 31). Climate policy costly: McCloy. *Newcastle Herald*, p. 5.
- Cronshaw, D. (2012b, March 6). Rate rise revolt. *Newcastle Herald*, p. 1.
- Cronshaw, D. (2012c, September 10). Sea level reforms. *Newcastle Herald*, p. 15.
- Cronshaw, D. (2012d, February 13). Sea level concerns for 20 dwellings. *Newcastle Herald*, p. 3.
- Dunlap, R. (2014). Clarifying anti-reflexivity: Conservative opposition to impact science and scientific evidence. *Environmental Research Letters*, 9(2), 1–4.
- Farrugia, D. (2013). The reflexive subject: Towards a theory of reflexivity as practical intelligibility. *Current Sociology*, 61(3), 283–300.
- Farrugia, D., & Woodman, D. (2015). Ultimate concerns in late modernity: Archer, Bourdieu and reflexivity. *British Journal of Sociology*, 66(4), 626–644.
- Giddens, A. (1994). Living in a post-traditional society. In U. Beck, A. Giddens, & S. Lash (Eds.), *Reflexive modernization. Politics, tradition and aesthetics in the modern social order*. Polity Press.

- Gross, M. (2007). The unknown in process: Dynamic connections of ignorance, non-knowledge and related concepts. *Current Sociology*, 55(5), 742–759.
- Harvey, D. (2005). *A brief history of neoliberalism*. Verso.
- Innes, M. (2020). Techniques of disinformation: Constructing and communicating "soft facts" after terrorism. *The British Journal of Sociology*, 71(2), 284–299.
- Intergovernmental Panel on Climate Change (IPCC). (2007). Climate Change 2007: Impacts, Adaptation and Vulnerability. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, & C. E. Hanson (Eds.), *Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.
- Jasanoff, S., & Simmet, H. R. (2017). No funeral bells: Public reason in a 'post-truth' age. *Social Studies of Science*, 47(5), 751–770.
- Lash, S. (1994). Reflexivity and its doubles: Structure, aesthetics, community. In U. Beck, A. Giddens, & S. Lash (Eds.), *Reflexive modernization. Politics, tradition and aesthetics in the modern social order*. Polity Press.
- Lynch, M. (2000). Against reflexivity as an academic virtue and source of privileged knowledge. *Theory, Culture & Society*, 17(3), 26–54.
- Mair, J., Kelly, A., & High, C. (2012). Introduction: Making ignorance an ethnographic object. In C. High, A. Kelly, & J. Mair (Eds.), *The anthropology of ignorance: An ethnographic approach*. Palgrave Macmillan.
- Mallard, G., & McGoey, L. (2018). Strategic ignorance and global governance: An ecumenical approach to epistemologies of global power. *The British Journal of Sociology*, 69(4), 884–909.
- McCright, A. M., & Dunlap, R. E. (2010). Anti-reflexivity: The American conservative movement's success in undermining climate science and policy. *Theory, Culture Society*, 27(2–3), 27–100.
- McGoey, L. (2012a). Strategic unknowns: Towards a sociology of ignorance. *Economy and Society*, 41(1), 1–16.
- McGoey, L. (2012b). The logic of strategic ignorance. *The British Journal of Sociology*, 63(3), 533–576.
- Mol, A. P. J. (1996). Ecological modernisation and institutional reflexivity: Environmental reform in the late modern age. *Environmental Politics*, 5(2), 302–323.
- Mol, A. P. J., & Spaargaren, G. (2000). Ecological modernisation theory in debate: A review. *Environmental Politics*, 9(1), 17–49.
- Oreskes, N., & Conway, E. M. (2010). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Press.
- Porter, J. J., Demeritt, D., & Dessai, S. (2015). The right stuff? informing adaptation to climate change in British Local Government. *Global Environmental Change*, 35, 411–422.
- Poushter, J., & Juang, C. (2019). *Climate change still seen as the top global threat, but cyber attacks a rising concern*.
- Sharp, M., & Threadgold, S. (2019). Defiance labour and reflexive complicity: Illusio and gendered marginalisation in DIY punk scenes. *The Sociological Review*, 68(3), 606–622.
- Souleles, D. (2019). The distribution of ignorance on financial markets. *Economy and Society*, 48(4), 510–531.
- Spash, C. L. (2016). This changes nothing: The Paris agreement to ignore reality. *Globalizations*, 13, 928–933.
- Stevens, H., Dufty, N., Waters, S., & Giles, G. (2012). Sea no evil, hear no evil—Community engagement on adaptation to sea level change. *21st NSW Coastal Conference*, Kiama, Australia.
- Stevens, H., Giles, G., Hower, A., & Pope, S. (2013). 0.9 metres is a long way to travel: The journey from hazard to home. *22nd NSW Coastal Conference*, Port Macquarie.
- Ungar, S. (2000). Knowledge, ignorance and the popular culture: Climate change versus the ozone hole. *Public Understanding of Science*, 9, 297–312.
- Ungar, S. (2008). Ignorance as an under-identified social problem. *British Journal of Sociology*, 59(2), 301–326.
- van Renssen, S. (2018). The inconvenient truth of failed climate policies. *Nature Climate Change*, 8(5), 355–358.
- Whitmarsh, L. (2011). Scepticism and uncertainty about climate change: Dimensions, determinants and change over time. *Global Environmental Change*, 21, 690–700.
- Wright, C., & Nyberg, D. (2015). *Climate change, capitalism, and corporations*. Cambridge University Press.
- Young, N., & Coutinho, A. (2013). Government, anti-reflexivity, and the construction of public ignorance about climate change: Australia and Canada compared. *Global Environmental Politics*, 13, 89–108.

How to cite this article: Bowden V, Nyberg D, Wright C. "I don't think anybody really knows": Constructing reflexive ignorance in climate change adaptation. *Br J Sociol*. 2021;00:1–15. <https://doi.org/10.1111/1468-4446.12818>