Meeting the research(er) and the researched halfway

Hugo Letiche [a,b], Ivo De Loo [c,*], Alan Lowe [d], David Yates [e]

[a] *Institut Mines: TBS Evry/Paris, France*
[b] *Nyenrode Business University, The Netherlands*
[c] *Nyenrode Business University, Center for Accounting, Auditing & Control, Straatweg 25, 3621 BG Breukelen, The Netherlands*
[d] *RMIT Melbourne, Australia*
[e] *The University of Sheffield, UK*

A B S T R A C T

How can we investigate something so indeterminate, unpredictable and enormous, as the current Covid-19 pandemic? We apply Karen Barad's relational ontology to illuminate some current dilemmas in research, where different forces, concepts and theories conflict with one another in multiple and complex ways. Barad's views, we argue, may help to address potential dilemmas of accountability, for instance of accounting research(ers) as they research the Covid-19 pandemic. In what Barad calls 'intra-action', the research apparatus, the researched phenomena, and the research results, constitute a complex system of relatedness. In 'intra-action' these elements never fully melt into one another, but rather, retain their ontological individuality. The research apparatus creates 'real' effects, but these can only be partially observed and disentangled. Which elements intra-act as the research progresses is the product of so-called 'agential cuts'. We have researched the Covid-19 pandemic via what Barad would call a (small-scale) 'experiment'. We have focused on air travel and more specifically on American Airlines: a hyperobject or social-economic object so complex and powerful that it cannot be captured in any single definition or analysis. Among others, we take guidance from Albert Camus' *The Plague* in our analysis, concluding that AA (as a hyperobject) cannot really meet the research(ers) halfway, as Barad would call for. This is because the mutuality of 'intra-action', that is demanded is foreclosed. Consequently, while we believe that Barad's views hold great merit for accounting research in the current crisis, we suggest that they raise deeply troubling dilemmas as well.

1. Introduction

> *How to believe to each being's suffering, including those who have died and those not yet born? How to disrupt patterns of thinking that see the past as finished and the future as not ours or only ours? How to understand the matter of mattering, the nature of matter, space, and time?* (Barad, 2007, p. x).

As we write this paper, we are experiencing (the continuing and possibly waning stages of) the first global pandemic since the 1918 H1N1 virus (see: Spinney, 2017), which renders questions such as those listed in the quote above of great importance. Many have contracted the Covid-19 virus and died; while some survivors have been mortally threatened and have suffered long term health effects. Many businesses (for instance, airlines) and their entourages (such as accountants, flight crew, mechanics, customers,

engineers, and consultants) have been affected in different ways (and, from a different perspective, infected) by the virus. How accountability in the Covid-19 pandemic should be framed and where it leads to, needs to be contested: is the pandemic a result of globalizing hyper-capitalism's political and business negligence? Has economic prosperity and the maintenance of economic growth been prioritized at the expense of the health of the populace? Does a strong government seem to be the solution or an anathema when fighting the pandemic? As accounting researchers, we desire to explore how we bear responsibility for the accounts we produce in the context of the Covid-19 pandemic. We believe that given the contested circumstances of the pandemic, research needs to be conscious of the approach it takes in order to frame researcher/researched relatedness, which we interpret as a manifestation of research(er) accountability (as will be explained later). We acknowledge that any effort to observe or assess research(er) accountability involves reflexive engagement (Alvesson & Sköldberg, 2017; Collins, 2004; De Loo & Lowe, 2017; Loevgaard & Strand, 2014).

There have been efforts to break down the barriers between disciplines such as sociology and economics and to champion interdisciplinary research (Jackson & Carter, 1991), which may be assumed to impact how reflexivity is framed. However, these attempts assume that there are already existing disciplines that researchers can 'mix and match'. But what if no discipline fits particular events; and there is too little certainty to be able to draw any conclusion about these? We believe that the Covid-19 pandemic constitutes such a disrupting, indefinite and all-encompassing phenomenon. It creates and is implicated in many health, cultural, economic, political and ethical issues and events that demand to be questioned. Which approach to accountability and research(er) reflexivity during the pandemic is valid, why so, and how so? Of course, theories may be constructed later of what the pandemic 'meant'; but we address issues of research now, in the midst of the fray.

We believe that attention to Covid-19 and its effects demands a (re-)examination of researcher/researched relatedness, and of commonly adhered to concepts of researcher reflexivity (see also: Dambrin & Lambert, 2012; Johnson & Duberley, 2003). As stated, the pandemic is a multifaceted phenomenon and due to its global nature, one that has affected the majority of individuals, organizations and institutions (either directly or indirectly). The extent to which attention is given to one factor or another engages us (as researchers) in making radical choices. But how do we as researchers make these choices, and are they solely or primarily for the researcher to make? This is not merely a question of research techniques or methodology; it is a question of the ontological assumptions of research. We are required to frame the pandemic in order to study its effects; but what is to be included and excluded as the research progresses? This is a matter of precarious, uncertain and somewhat indefinite choices.

We discuss the researcher/researched relationship using Karen Barad's (2003, 2007) post-humanist onto-epistemological framework that is based on relational ontology. Barad (2007) explicitly focuses on research(er) choice-making in her book *Meeting the Universe Halfway*. Her argument is constructed by comparing the ontological assumptions in physics experiments conducted by Einstein, Heisenberg and Bohr, focusing on the 'how and what' of their methods and practices. She argues that only one set of ontological assumptions (those set forth by Bohr) lead to genuine accountability and successful 'agential literacy' in research (Barad, 2000). Bohr's ontology, as interpreted by Barad (2007), requires that the researcher and the researched meet one another halfway.[1]

According to Barad (2003, 2007), research requires conceptual and physical apparatus. Research is partially a product of the researchers' choices and research design. Researchers thus must be held responsible for the effects that research apparatuses invoke, even when these are far beyond anything they may have forseen. Researchers are also considered to be part and parcel of the research apparatus, helping to frame the researched in one way rather than another.

In this paper, we apply Barad's ideas to frame a 'mini-experiment' focusing on research(er) accountability and to what extent it differs from research(er) reflexivity as it is commonly defined in the accounting literature. As with Barad, we have not collected primary data for our mini-experiment, but have (re-)examined extant research designs and processes. In doing so, we conceive the Covid-19 pandemic as a contemporary 'plague' – i.e. a *plaga* (L) or a pestilence and affliction; which is a blow to humanity and a scourge or calamity that must be lamented because of what it destroys. By calling Covid-19 a 'plague', we purposefully evoke Albert Camus' (1948) classic reflection on existence when faced by life-threatening physical and social circumstances (i.e. his novel *The Plague*). Camus's text discusses the advent and (what might be) the aftermath of a plague, and how one has responsibility for one's actions and the accounts one provides. Inspired by Barad (2007), we will make use of the plague descriptor as depicted by Camus in our analysis; as we will see, this will help us to get to terms with Barad's views on research(er) accountability.

Covid-19 has many epidemiological, existential and economic facets. We have chosen to focus on the accountability of the research object American Airlines (AA). The choice of an airline was made because air travel spread the Covid-19 virus and airlines have been (one of) the hardest hit sectors during the pandemic. Furthermore, airlines have (rather controversially) been bailed-out by public (government) funding after the pandemic spread. Issues of accountability are involved here, not only in regard to public funding, but also in terms of public health. In what way can Barad's relational ontology move us along in the Covid-19 conundrum? We will explore Barad's (2003, 2007) relevance by examining AA's accountability, our reflections on research(er) accountability, and by highlighting how the two are intertwined.

While we agree with some significant aspects of Barad's onto-epistemology; we think that socio-economic business objects such as AA pose issues different from those of the atoms and particle physics that Barad draws on (see also: Bunge, 2003; Dillard, 1991). Corporate objects are institutions operating at different aggregation levels than particles. A virus such as Covid-19 is not alive; though it is a human social artefact while it is also a material object. We believe that human intentionality differs from material causality, and that research(er) accountability therefore must be approached and discussed accordingly.

In Section 2, we will elaborate on Karen Barad's onto-epistemology in what she has termed 'agential realism'. We will illustrate how

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[1] Bohr's position can be viewed as being radically relational and thereby post-humanist (i.e. his position is not solely or chiefly dependent on human action and their consciousness).

her views can be applied to discussions of business and business organizations. In Section 3, we provide information on AA and discuss the way in which our analysis of AA's accountability illustrates issues that should be explored. In so doing, we focus specifically on research(er) accountability. Section 4 seeks to relate our own experiences in trying to operationalize Barad's ideas while also offering a brief summary of the views reached concerning AA's accountability or lack of it. We also return to our conception of AA as a 'plague' in this section. Section 5 provides our conclusion, setting out the implications of the use of Barad's intra-disciplinarity for the study of research(er) accountability and reflexivity, indicating the advantages and drawbacks that its application involves.

2. Barad's approach

2.1. Agential realism

In this section we describe Barad's (2003, 2007) relational ontology and its epistemological consequences for social science studies, including accounting. We then discuss 'agential realism', the particular combination of ontology and epistemology Barad adheres to. Barad's conceptualizations are based on insights that she draws from Quantum Field Theory (QFT) as supported by her re-interpretation of well-known physics experiments from the early 20th century. This will be linked to a discussion of research(er) accountability, leading to what we will term 'diffractive considerations' for empirical research (and hence, research methodology), as inferred from Barad (2007); which we will subsequently apply in Section 3.

2.1.1. Relational ontology

'Knowing the object' is methodologically challenging in both the natural and social sciences (Hacking, 1983; Knorr-Cetina, 1999; Latour, 1987, 2005). The Newtonian object, suspended in time and space and divorced from the knower has undergone wave after wave of theoretical problematization: from Einstein's relativity, Heisenberg's interpretivism and Bohr's quantum mechanics, to Kuhn's paradigms, and Gadamer's hermeneutics, Latour's Actor Network Theory, and social constructivism's epistemology (Gullion, 2018; Hacking, 1983; Jackson & Mazzei, 2013; Lee & Lings, 2008).

A research object is neither simply 'objectively' definable, nor self-evidently a social convention; at least, if we take contemporary philosophy of science into account (Barad, 2007; Harman, 2016). The same holds for knowledge or knowing: they are not merely the product, either of positivism or solely of social agreement (Hacking, 1983; Knorr-Cetina, 1999; Latour, 1987, 2005; Pickering, 1984). Thus, what does our stance on the 'being' of research objects look like? Barad's (2003, 2007) relational ontology allows for the exploration of possible answers.

There has been significant interest in relational ontology in organizational studies (Carlile et al., 2013; Dale & Latham, 2015; Hassard and Wolfram Cox, 2013; Hultin & Mähring, 2017; Knights, 2015), information systems (Scott & Orlikowski, 2014; Orlikowski & Scott, 2008; Wagner, Moll & Newell, 2011; Weber, 2020), and accounting (Brackley et al., 2021; Kornberger et al., 2017; Robson & Bottausci, 2018; Vosselman, 2014, 2022). Studies adopting relational ontology focus on the 'entanglement' of 'material-discursive practices', wherein observation and materiality come together (Barad, 2007; Shotter, 2013). Barad (2003, p. 822) asserts that material-discursive practices are constituted both by meanings and materiality that cannot be disentangled. When giving a presentation, for example, there are slides, the layout of the room (or the online presentation platform), projection screens, illustrations, figures, style requirements, presenters, utterances, concepts, theories, etcetera; all of which are intertwined as the presentation unfolds. Barad believes that the slides cannot be meaningfully separated from the tables that they contain, the projection screens in the lecture hall, the illustrations, human voices, ideation, etcetera, without making changes to the material-discursive practice (i.e. presenting) at hand. As Barad (2007, p. xi) explains:

> To be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence. Existence is not an individual affair. Individuals do not pre-exist their interactions; rather, individuals emerge through and as part of their entangled intra-relating.

Barad (2003, 2007) posits that matter and meanings are mutually constituted and that change is intertwining. She claims that social science studies have (over-)emphasized human behaviour and expression, at the cost of materiality. Her desire is to make matter 'matter' in social science research (Barad, 2003). She argues that philosophers such as Butler, Foucault and Deleuze and Guattari never provided a fully compelling theory of materiality, as they tended to (ultimately) focus on human subjects in their writings, even when they addressed materiality in one way or another. Even though Latour (1987, 2005) attributed greater influence to objects in how the world unfolds, these were chiefly defined in terms of the effects they created in networks, which Barad (2007) finds too limited a viewpoint on the nature of objects as well (see also: Harman, 2016). She further asserts that many philosophers have failed to give an adequate account of the complex relationship between meaning and matter(ing) (Barad, 2003; see also: Lemke, 2015, 2021). Processes of mattering are entangled with practices that are both material and discursive at the same time. Material-discursive practices occur in the 'flow of time' (Hernes, 2014) or the 'flow of agency' (Barad, 2007), jointly unfolding in relational ontology (Jackson & Mazzei, 2013). What is researched, when and how, is time and situation bound. Agency thus becomes multifaceted and cannot be easily localized. Relational ontology denies that there is ontological polarity between things, their representations, and research results. 'Intra-action' between material-discursive practices is what needs to be focused on; and it is assumed to be continuous and all encompassing (Barad, 2007; see also: Deleuze & Guattari, 1993, Jackson & Mazzei, 2013). In the 'flows' of intra-relationships, research(ers) focus (self-consciously or not) on how they can "stabilize, bend or deflect" motility (Hernes, 2014, p. 4). When research, understood as a material-discursive practice meets the world, patterns of difference emerge. Greater and/or different bends or disturbances, in the flow of agency and time, occur (Hernes, 2014; Jackson & Mazzei, 2013). Barad (2007) calls these processes or patterns of difference, 'diffraction'. Objects come into view through

processes of diffraction, and as such are ontologically 'open' to the flow of agency and time (Barad, 2014, 2007; Introna, 2013).

Barad has grounded her relational ontology in her investigation of Bohr's, Heisenberg's and Einstein's physics experiments from the early 20th century (Barad, 2007; Loevgaard & Strand, 2014). The ontologies of Einstein, Heisenberg and Bohr differed, which led them to different views on research and experimentation; and to different results and views on accountability and research(er) reflexivity. Einstein's ontology was based on the premise that the structure of mathematic rationality parallels the structure of ultimate truth. The 'real' is what it is, and the task of the research(ers) is to (re-)produce the 'real' as knowledge. Reality is assumed to be characterized by laws and/or structures of absolute order. Heisenberg's ontology was much more interpretivist; there is always uncertainty and therefore choices that must be made as the research progresses, which need to be reflected upon. Science is a human historical creation; its accountability is ultimately situational. For Bohr, whose position Barad (2007) embraces, science does gain some sort of privileged access to the 'real'; though the 'real' always remains unpredictable, strange and beyond what is accepted or known rationally (see also: Jackson & Mazzei, 2013). The 'real' is beyond the order or assumptions of the 'mind', making subject/object and object/mind distinctions indeterminate. For Barad (2007), there is no such thing as the 'real object of research'; the 'object' is always entwined in a machinery of representation, production and experimentation. Research, thus, is a process of 'intra-action', through which objects are (temporarily) framed in specific ways rather than in others (see also: Jackson & Mazzei, 2013).

We choose, with Barad, to follow Bohr's (1958) ontology of entangled intra-relationship. Einstein's ontology is closest to the representation of knowledge in most social science and related disciplines, including accounting (Chua, 1986, 2019). Heisenberg's ontology, within which human observation makes a determinative difference in the real, dominates social constructivism and a significant portion of qualitative research, including that in accounting (Ahrens, 2008; Chua, 1986, 2019; Parker, 2012; see also Hacking, 1983). Bohr's ontology, according to Barad (2007), however, requires that the researcher and the researched meet one another 'halfway'. This stance is characteristic of social complexity theory, but it remains the least commonly adopted position in social science studies (Letiche et al., 2011; Greenstein, 2019). All three ontologies imply particular research methodologies: Einstein's requires one to remain loyal to the truth of the rational order; Heisenberg's to acknowledge and understand how research and researchers generate results together; and Bohr's to cultivate a radical intra-relational openness to researcher self-awareness and phenomenal occurrence. Relational intra-relatedness of research objects and researchers, using Barad's lens, is not typically adhered to in accounting studies and hence is different from what is commonly thought to constitute accountability and research(er) reflexivity (De Loo & Lowe, 2017; see also: Brackley et al., 2021). It is, however, commonly associated with QFT related approaches to social science studies (Barad, 2007). Hence, these approaches will be discussed next.

2.1.2. Quantum field theory and research methodology

The ontological position favoured by Barad (2007) is to be identified with QFT, of which Bohr was one of the founding fathers (Greenstein, 2019). QFT can be viewed as a mathematical conceptualization of the physics of the elementary constituents of matter, wherein particles are situated in fields with (near) infinite degrees of freedom. Particles can materialize in a myriad of ways and have innumerable ways of behaving. Furthermore, the 'field' is not a singular place, plane, or space. Particles are spread in a space–time continuum and react and (temporarily) emerge in different places, possibly at great distance from one another, and potentially as attached, linked, or synchronized. Consequently, for QFT, the stability of an object is methodologically problematic; Newtonian assumptions of the separability or specificity of objects and of metaphysical individualism, whereby each 'object' possesses its own Being, are rejected. Nor does QFT subscribe to subjective perspectivism, whose dualism prioritizes consciousness above objecthood. QFT is not 'correlationist' – i.e. the 'real' is not assumed to just be so many elements of consciousness where all that 'is', is what is in the mind (Loevgaard & Strand, 2014; Soerensen & Strand, 2014). Perhaps one of the most challenging elements of QFT is that it surmises that there are no 'hidden variables' – that is, key qualities or underlying causes to objects, determining their behaviour (Greenstein, 2019). Ahead of time, one cannot know which object(s) will synchronize with which other object(s), or how they will do so. QFT asserts an indefiniteness of causality where there may be both too few and too many reasons for any occurrence.

Barad (2000, 2003, 2007) claims that scientific research must acknowledge quantum logic, all the way down and up. She insists that this is not an avenue to anarchy but leads to 'responsibility' (response-ability) and the ethical awareness of researchers (Barad, 2007, 2017). Hekman (2010, p. 73), summarizing Barad (1996), argues that her definition of 'agential realism' is intended to reveal a view of the world, paralleling quantum logic:

> First, it [agential realism] grounds and situates knowledge claims in local experiences. Thus objectivity is literally embodied. Second, agential realism privileges neither the material nor the cultural; rather, production is material/cultural. Third, agential realism entails the interrogation of boundaries and cultural reflexivity. Drawing boundaries has different ontological implications. Fourth, agential realism underlines the necessity of an ethic of knowing; our constructed knowledge has real, material consequences.

Agential realism assumes that measurement and description have effects on the manifestations of the objects measured or described. Measurement and description produce separations in the entangled world. Barad (2007, 2014) calls this 'cutting together-apart', with the associated cuts being termed 'agential cuts'. Agential cuts produced in the flow of agency and time, are not necessarily or primarily human-made, and they are temporary. Cuts create effects and bends in the flow of agency and time, which could have been different if other separations had been posited, occurred or had been observed. Research, Barad (2003, 2007) assumes, requires agential cuts, whereby some objects or definitions are made visible, and others remain hidden. Such separations, she purports, warrant discussion and demand justification. Any research object (whatever it may be) is a product of agential cuts. It is not 'just' 'out there' waiting to be cognized, as one would typically assume in Heisenberg's analysis. In the research process, the research apparatus (comprising, for instance, laboratory paraphernalia or social science theories) is organized to make (and/or refute) truth claims. As noted, the research apparatus encompasses the researcher; access to the 'goings on' of the researched always entail decisions (which

extend beyond the researchers) about what to focus on or what is to be left aside (Gullion, 2018; see also: Ahrens & Chapman, 2007).

Consequently, Barad (2007) claims that ontology and epistemology cannot be meaningfully separated (see also: Guba, 1990; Lee & Lings, 2008). There are no predetermined fixed objects waiting to be researched by researchers, just relationships between what she refers to as 'bodies',[2] which are brought into view through intra-actions characterized by agential cuts and diffractions. Objects of research are thereby eventually made visible, but always only partially (Barad, 2014). Barad calls this definitional process 'spacetimemattering'; which is multi-faceted and intra-actional. What is chosen, why, and how, as object of research, has to be attended to; i.e., choices (whether they have been made by the researchers or not) are unavoidably entangled throughout the research process.

Our focus in this paper is on Barad's onto-epistemology and its resulting research methodology and not on Barad's (2007) specific (largely feminist) ethics, which has been analyzed extensively elsewhere (Braunmühl, 2018; Hollin et al., 2017; Jackson & Mazzei, 2013). Two important things to keep in mind in the remainder of this paper when it comes to Barad's ethics is, firstly, that she would like researchers to give attention to what is obscured in the course of research through processes of diffraction and associated agential cuts. Secondly, Barad argues that researchers are the ones who ultimately determine which agential cuts require further attention and discussion, as the research progresses. More on this follows in Section 2.2. Thus, Barad (2007) claims that she is able to bridge science and ethics; a bridge that is formed by (discussing) research(er) accountability. Ethics are disclosed through processes of diffraction as the world unfolds; and this demands researcher reflection. Research invokes and affects processes of diffraction, some of which lead to marks on bodies (through agential cuts) that come to matter (rather than others). All of this makes research an ethico-onto-epistemological act (see also: Hultin; 2019; Hultin & Introna, 2019; Introna, 2013).

Barad (2003, 2007) has developed a highly processal philosophy of knowledge or knowing. Research requires the determining of largely temporary norms and patterns that are made manifest through repeated intra-actions in entangled and continuously changing contexts:

> [in using] … the term intra-action, the traditional way of understanding causality is not only expanded to include the other-than-human, it is fundamentally rethought as a relational agential dynamic … **Instead of measuring how an individual action (cause), so to speak, affects (effect) another, Barad emphasizes, that no singular event or action or actor pre-exists intra-actions, and thus she questions how we are able to think of causality (and agency) from this perspective.**
> (Loevgaard & Strand, 2014, p. 255, emphasis added)

Consequently, research findings or deliverables constitute just one set of possible outcomes; they are not necessarily the only ones, the 'best' ones, or the most appealing ones. Researchers may claim that they see the results of their experiments, but seeing or apprehending objects of research remains an unstable intra-act.

Unfortunately, Barad offers no concrete insights on how to operationalize her views in the context of specific social science research projects.[3] Hence, when her philosophical views are applied in a concrete setting, re-interpretations of her claims are inevitable. How this is to be realized is left to the researcher(s), since, as noted, they are part and parcel of the apparatus of research, co-producing the object of research (Visser & Davies, 2021).

In Barad's own analysis, first there is the experiment itself, as interpreted by the researcher(s)-as-experimenter(s); and then, secondly as re-interpreted by the physics community (see also Latour, 1987). Barad repeatedly claims that this, second level of interpretation, about what research has revealed, has not functioned very successfully in the social sciences. She feels that a third level of signification is needed, to unpick what the research is thought to have revealed and what significance is to be claimed for it. Hereby issues of accountability are raised: to whom and to what (see for example: Bovens, 2005) are social science truth claims accountable, and how should this accountability be expressed? It is not just a matter of (total) experimental transparency, which Barad has claimed to be impossible. Thus, what would be an appropriate way to assess research(er) accountability in line with Barad's views? This question will be explored in the following section.

2.2. Research(er) accountability

Barad's views on agential realism have the potential to unsettle commonly held beliefs that there are valid reasons underlying research procedures, whereby responsibility and accountability can easily be ascribed (Chua, 1986, 2019; see also: Hassard & Wolfram Cox, 2013). Barad (2000) calls upon researchers to strive for 'agential literacy': researchers need to become aware of the agential cuts they participate in and are affected by, which may not be human-made, and that they may or may not be able to influence. Stated differently: researchers need to acknowledge the role of intra-action in the material-discursive practices surrounding their work.

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[2] Barad asserts that 'bodies' are (re)shaped through intra-action as 'marks' are left on them. Bodies with marks can eventually be called 'objects'. This can, for instance, happen through research.

[3] Barad (2007) spends a lot of time discussing how views among physicists developed, about whether light should be treated as a wave or particle. Bohr (1958) insisted that it could be both at the same time (while he still firmly stuck to realism and the separation between ontology and epistemology – which, as we have discussed, are rejected by Barad). We purport that the (rejection of these) distinctions parallel the wave/particle discussion; and like Barad and Bohr, we assume them to be relational and unresolvable. Only agential cuts can separate the two, which make them *appear to be* distinct. Soerensen and Strand (2014, p. 310) state this as follows: "a phenomenon which is related to the 'wave-particle duality paradox' of quantum theory … tells us that light can manifest with both wave and particle behavior, and matter (particles) can manifest with wave behavior – in all cases due to specific experimental circumstances, … the ontological indeterminacy … always only gets solved locally through an agential cutting together and apart of the onto-semantically enacted phenomenon. To that exten[t] time is super positioned". This explains the status attributed to the flow of time and flow of agency in Barad's thinking (see also: Hernes, 2014).

Although partially similar insights have been raised before in the social sciences literature (e.g., Collins, 2004; Hacking & Hacking, 1999; Flyvbjerg, 2001; Latour & Woolgar, 1979; Knorr-Cetina, 1999), the way in which Barad frames her ideas are firmly her own, grounded in the onto-epistemological position she reasons from, which is different from the position that the aforementioned authors are reasoning from, where human activity, intentionality and power, as the research progresses, reign supreme.

2.2.1. Accountability and diffraction

Many traditional notions of accountability focus on someone being held accountable (Mulgan, 2000), which may be defined as answerability to oneself and to others for appropriate conduct, and for expected results or outcomes (Roberts, 1991, 2001b; see also: Roberts & Scapens, 1985). Often, when other individuals are involved, the person(s) holding someone else accountable is (are) in a position of authority or power (Mulgan, 2000). Alternative notions of accountability have implied accountability enactments between subjects of similar hierarchical status (Roberts 1991, 1996), or alternatively, to a notion of ethical behavior on the part of the subject (Dillard, 2007, Roberts 2001a, 2012; Yates & Difrancesco 2022). Barad's take on research(er) accountability would entail questioning such power issues; but she also provides a different outlook on accountability that goes beyond the aforementioned definition. Research is assumed to involve leaving marks on objects (i.e. bodies) through intra-action, imposing *differences that matter,* which makes the research possible. This makes research(er) reflexivity and self-conscious accountability crucial for the research. The ethical awareness Barad wants to instill in researchers is much more extensive than usually required in social sciences studies, including in accounting (Jackson & Mazzei, 2013; see also: De Loo & Lowe, 2017). As researchers produce research and associated accounts that depend on the apparatus of research, which encompasses the researchers, accountability not only pertains to researchers and what they (do not) do, but to the entire research apparatus, which affects the researcher and the researched in their becoming. Holding research and researchers accountable consequently turns into a matter of questioning the being of their assumptions.

Research always produces 'diffraction', which put simply – refers to how the research 'object' gets to be viewed in different ways, changing what the research sees or constructs of the object look like. Seeing is diffracted by the researched as well as by the researcher; diffraction produces changes of direction in the line(s) of sight; all of which needs to be accounted for. Research(er) accountability, in Barad's view, goes much further than talking about the appropriateness of particular research(er) actions, choices or outcomes; or considering if particular inferences or insights have been problematic, or whether assessment procedures employed by the researcher were reasonable and acceptable, all of which is what research(er) reflexivity typically focuses on (Cálas & Smirchich, 1999; Dambrin & Lambert, 2012; Johnson & Duberley, 2003). Instead, researchers are called upon to be:

> … *attentive to the iterative production of boundaries, the material-discursive nature of boundary-drawing practices, the constitutive exclusions that are enacted, and questions of accountability and responsibility for the reconfigurings of which we are a part. That is, the diffractive methodology that I use in thinking insights from different disciplines (and interdisciplinary approaches) through one another … does not take the boundaries of any of the objects or subjects of these studies for granted but rather investigates the material-discursive boundary-making practices that produce "objects" and "subjects" and other differences out of, and in terms of, a changing relationality.*
> (Barad, 2007, p. 93)

Barad's take on accountability means that what becomes intra-related needs to be examined with care as the diffractions, agential cuts, and associated boundaries that bring 'objects' and 'subjects' into view in particular ways, could always have been different (Soerensen & Strand, 2014; Jackson & Mazzei, 2013). What is researched comes into view through diffractions carried out through agential cuts, which are constituted by and co-constitute intra-acting material-discursive practices, whereby research objects and subjects are framed, all of which potentially is well beyond what the researcher may be able to see, realize, or be able to examine, but which does warrant reflection:

> *We co-constitute the phenomenon (the object) we may think we merely describe, and in that same round, we are part of co-constituting us as 'the describing subject'.*
> (Soerensen and Strand, 2014, p. 279)

Intra-relatedness is mutual: the researcher does something to the object(s) of research, while the (emerging) object(s) of research do something to the assumptions, observations and knowledge of the research and the researcher; all of which happens continuously as an investigation progresses.

Visser and Davies (2021, p. 17) assert that Barad's approach to accountability:

> … *solves the scapegoating that seems to pervade organizations when something 'goes wrong', where simplistic calls are made for someone to blame, rather than addressing larger, intraconnected, systemic issues … [I]t just widens the scope of where we look to assign responsibility [i.e. beyond humans] and, in doing so, brings us closer to a fairer approach to attributions of blame and/or praise.*

However, what specific accountability criteria of adequacy the social sciences should meet is not answered by Barad's onto-epistemological assertions. Logically, her own research or theorization could always have looked different, if different diffractive patterns and agential cuts had materialized or had been made. The widening of the scope when assigning responsibility that Visser and Davies (2021) mention in the quote above, grounded in practices of diffraction and intra-action, is thus problematic and requires further specification (see also: Gullion, 2018). One, for instance, needs to be able to address how objects, such as aeroplanes, IT systems, mussel beds, or key fobs, relate to chosen ways of seeing the social world, via the researchers' own agential cuts. Even if one assumes that all research objects are implicated in definitional processes of 'cutting together-apart', it is a stretch to claim that they are (all) reflexive, have responsibility, or can be (held) accountable and will respond responsibly.

Barad's onto-epistemology champions the responsibilization (i.e. response-abilization) of research(ers); in our example in Section 3, accounting involves ideology, concepts, techniques, institutions and social arrangements (Dillard, 1991); all of which need to be

considered as involving and evoking diffractions and intra-actions that warrant reflection. Barad (2007) manages the potential lack of clarity that attention to the nearly limitless possibilities of intra-actions, via her concept of diffraction; research(er) questioning sheds light on the object of research, which bounces back to the researcher in one and not another way. The researcher determines which bounces demand further consideration and when no further agential cuts are to be taken into account (see also: Latour 1987, 2005). As noted, the researcher must also reflect on the diffractions deemed relevant and how they could have looked differently (Visser & Davies, 2021). Focus on apparatuses and experimental design (in physics experiments) forces one to attend to the limits to the research process. Research apparatus and research objects co-constitute the research; and both, therefore, warrant careful consideration.

2.2.2. Understandings of research, research objects and agential literacy

Researchers need to reflect on the role that research objects have played and how these objects (and themselves) have been (re) shaped in the flow of agency and time. Barad (2007) does this when she examines Einstein's, Heisenberg's and Bohr's agential cuts, but she does not examine the 'agency' of the waves and particles the physicists analyzed, even though she implies that the waves and particles have (had) agency, and could influence the world beyond the physics experiments. Ultimately, Barad focuses on researchers when assessing accountability despite her claim to adhere to a post-humanist view of the world, wherein research is not just or primarily a matter of researcher consciousness. Norms for research methodology, in the relationship to all sorts of bodies and objects that are in flux and can appear very differently across different diffractions in the flow of agency and time, need clarification and, this clarification needs to be provided by the researcher (Visser & Davies, 2021).

Assumptions, practices and methods of research entail agential cuts that we believe *we* (also) have to make when operationalizing Barad's views. Barad (2000) demands that agential literacy has to move beyond humans and their interactions, to include the technical set-up and the research techniques applied, as well as the effects that emerge from the research. Hence her attention to diffractive processes and agential cuts. But, where does one stop when reflecting on agential cuts, insofar as cuts may have not been human-made or made consciously? We appreciate that there is a risk here of infinite regress, as Barad assumes that one agential cut leads to the next one. Thus, which agential cuts are significant in the 'experiment' (research) under consideration, is an important question to answer in order to avoid infinite regress. What intra-actions are meaningful to the research and why so? How are the intra-actions looked upon with hindsight by interested parties? Answers to these questions, which are very important in Barad's thinking, depend on the outcomes of analysis by humans, even if her reasoning extends beyond the role that humans play in bending the flows of agency and time (Visser & Davies, 2021).[4]

We acknowledge that researcher ontology may fall back into Heisenberg's position when the aforementioned issues are addressed. It may be that questioning research methodology will drive us back into an interpretivist or correlationist mode in which researcher reflexivity tumbles all over itself and only focuses on (technical) issues of how the research could have been 'improved'. Nonetheless, Barad's relational ontology (2007) is essentially incompatible with interpretivist or correlationalist approaches. Her views are not correlationist because she asserts that research objects have agency and are not just 'out there' to be examined. Interpretivism does not typically assume that research objects are literally made through the research, although meanings or opinions about these objects might be. Interpretivism and correlationalism also do not lead to Barad's radical relatedness between the researcher and the researched; they provide much more limited viewpoints hereon. As stated, Barad's research methodology is literally out to meet the universe halfway (i.e. the title of her 2007 book). However, 'meeting the universe halfway' is paradoxical, as ultimately research is an instance of ideation or of thought. But as critical philosophy has informed us, we have to expect an *aporia* (or an unthought primary assumption) to almost any ideation (Derrida, 1993).

Our view is that Barad's (2007) onto-epistemology defines a research concept that is of significant theoretical and practical value; and we seek to illustrate this in the 'mini-experiment'[5] that follows in Section 3. In so doing, we subscribe to her materialist agency or the equality of the human and non-human in the initiation of agency; wherein the critical examination of research methodology entails human judgement and reactions to agency. Objects do not conduct scientific experiments. For research to occur there has, at least to be a researcher and an Other. This can be an object on which marks are left, possibly a colleague, maybe (at a very minimum) an internalized partner in dialogue with itself. Our interest, as inspired by Barad, is specifically to explore the onto-epistemology of accounting research in complex circumstances such as the current Covid-19 pandemic that may require a totally different outlook on such research.

In Section 3, we will apply the insights gathered so far in relation to a particular object of research – that of American Airlines in the Covid-19 pandemic, seen as a 'plague'.

2.2.3. Summary: Approaching research(er) accountability

We believe that Barad (2007) allows us to ask questions about the complementarity of the researcher and the researched (which are both assumed to be in their becoming), which can serve as 'diffractive considerations' to further research(er) accountability (cf. Fox & Alldred, 2015; Gullion, 2018; Jackson & Mazzei, 2013). This is the main responsibility that she bestows upon researchers: researchers need to account for how practices come to matter (Barad, 2007, p. 90/220), which is assumed to happen through diffraction and associated agential cuts. Considerations inviting researchers to reflect on (partially, their own) agential cuts as the research progresses,

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[4] We believe that this may explain why Barad is using feminist ethics to set out a view on research(er) accountability that is grounded in a post-humanist onto-epistemology.

[5] We call what we present a 'mini-experiment' taking our cue from Barad's (2007) assumption that research is to be seen as an experiment. However, as noted, a single research project is a scaled down version of what Barad refers to as an 'experiment' – hence the addition 'mini'.

include:

- Which relationalities between material-discursive practices are brought together as (meanings about) the objects researched?
- Which capacities to produce bends or curves in the flow of agency and context could/do the material-discursive practices possess?
- How are these practices, research objects, and/or manifestations of research objects, produced?
- Which relationalities have turned out to be particularly powerful (with hindsight)?
- What if the dynamics had been different?

According to Gullion (2018), questions such as these reveal potential diffractive patterns of inclusion and exclusion; processes that characterize research and that may be overlooked in traditional human-centric views of research(er) accountability.

Barad's (2007) diffractive approach demands that we address the role of researchers as: *"co-constituents [and] … as intra-active diffractionists"* (Soerensen & Strand, 2014, p. 281). Jackson and Mazzei (2013) have asserted that Barad's considerations ought to be integrally 'plugged into' the research apparatus, and should not be reduced to some sort of 'tick-the-box' format. The analysis of research ought to generate an account that is infused with awareness of diffractive considerations that needed to be reflected upon. The goal is to better understand research both as a social *and* as a material practice. Researcher(s), entangled with their research apparatus, seek to tell a particular story, rather than another one (Knights, 2015; Shotter, 2013). Multiple realities exist; there are many different ways of knowing and presenting the objects of research (Barad, 2014). Any research account describes material-discursive practices sedimented in one way, rather than in another. Outcomes of intra-actions between material-discursive practices are presented by researchers, who are aiming to make knowledge claims, and who have also been affected by intra-actions in ways that they may never fully know, but which affect and continue to affect the world in its becoming. Researchers can (however partially) reflect on all of this, making use of their diffractive awareness and highlighting their agential literacy (Barad, 2000) and research(er) reflexivity.

3. A 'mini-experiment' within the Covid-19 pandemic

Our research 'object' is an ostensibly private sector organization afflicted by Covid-19 in more or less direct ways. It is an airline: American Airlines (AA). As McNeill (1976) has made clear, ever since modes of travel have been developed, allowing people to move from one population centre to another; there have been pandemics (see also: Brownstein et al., 2006). The potential for large scale passenger air travel to act in the spread of a pandemic is apparent. Without mass air travel, Covid-19 could probably never have spread as quickly, nor resulted in the global pandemic that it ultimately became (Gebrekidan et al., 2020; see also: Brownstein et al., 2006). This is despite the fact that the number of people using air travel was radically reduced as (the fear of) Covid-19 took effect. Many airlines were grounded by the pandemic and personnel were laid off or furloughed (Gilles, 2020). This resulted in proposed and subsequently enacted government bailouts for airlines such as AA - which prompted us to focus on AA as the research object in our 'mini-experiment'.

We have examined and experimented with how we are able to perceive AA and its accountability during the Covid-19 pandemic, while applying Barad's (2007) onto-epistemology, as we attempted to explicate and discuss research(er) accountability. Our examination of AA is inspired by the way Barad devotes attention to diffraction, agential cuts, the flow of agency and time and the entanglement of research. The diffractive considerations set out in Section 2.2.3 helped us to frame research(er) accountability and to see how the research and our assessment of AA and its accountability could have looked differently if other agential cuts had been made. We offer several reflections on the development of the research and researcher reflexivity throughout Sections 3 and 4.

3.1. Agential cuts and diffractive considerations

A fairly standard managerial agential cut (either from a research or practice orientation) would regard AA as a publicly owned company, listed on the New York stock exchange. For several decades, it has been one of the biggest passenger carriers in the world. It has handled approximately 200 million passengers per year (Kennedy & Maxon, 2018); operating (in 2019) 7,000 flights per day to nearly 350 destinations in more than 50 countries. But how do we perceive AA, its accountability, and its intra-actions in the context of such a wide-ranging and disruptive phenomenon as the Covid-19 pandemic? Applying Barad's (2007) onto-epistemology, we have addressed our questions to the data available, which mainly stemmed from business (press) sources, but also from a management book written on AA. The sources mentioned below all assume, which is typical of this literature, that AA is a business, which is or should be able to turn a profit. This agential cut is taken for granted in the literature, and we follow it here as well, although we will deviate from it later in the analysis for reasons indicated there. Consequently, there is relatively little concern, for example, for issues related to civil aviation safety or to the well-being of passengers. Such agential cuts have scarcely been made in the literature in question; one of the exceptions being Hochschild's (1983) study on the well-being of flight attendants (who were not employed by AA but by its partner airline British Airways).

As noted, Barad (2007) examines comparative entanglements by analyzing multiple experiments, their apparatuses and theories, in order to convey the nature and complexity of agential realism and its potential impact on researchers' understandings. Our 'mini-experiment' entails a radically scaled-down effort as compared to Barad (see also: Hultin, 2019; Hultin & Introna, 2019; Hultin & Mähring, 2017; Loevgaard & Strand, 2014). Therefore, we are only able to point to some of the possible outcomes that a larger scale experiment might enable.

Below, we will first explore AA's financial accountability. We begin our analysis taking cues from Kennedy and Maxon's (2018) memoir of AA's 'rise and fall' over the 2001–2012 period (this is the management book mentioned earlier). Three themes in particular,

appear and re-appear in the descriptions and analysis of AA's financial behaviour presented in the book, which we believe are common to many management and business books focusing on large businesses. They are:

  (i) Economic position (profits and share price, management compensation and potential labour force exploitation)
  (ii) Asset management (the air fleet [including lease contracts], share buybacks and government bailouts)
 (iii) Profiteering, power and political influence.

The three themes and their intra-relations were diffracted back to us as we analyzed the literature, informing our agential cuts and partially defining our research apparatus; resulting in a particular framing of AA as pertaining to AA's financial accountability in the Covid-19 pandemic. Our analysis starts with the time of the pandemic, but subsequently moves backward and forward in time as AA is framed.

Economic position – AA has been reported to be in and out of financial distress for many years (Gilles, 2020; Kennedy & Maxon, 2018). Hence, its financial state as Covid-19 hit was not that surprising: the company was already experiencing serious fiscal trouble. However, AA's compensation plan seemed to paint a very different story of its business performance. Massive payouts had been made to senior management in amounts of millions of US dollars since 2006 (Kennedy & Maxon, 2018; see also: Reed, 2019). Compensation was largely based on AA's share price. The company, post-9/11 and the dotcom crisis, started recording profits in 2006 and saw share prices increase from $1.41 in March 2003 to $40.66 in January 2007 (Kennedy & Maxon, 2018). The payouts did not go down very well with the airline's staff (especially AA's pilots) and labor unions, when set against the layoffs made by AA after 2001.

Despite its increasing share price, AA did not have adequate reserves to weather the economic crisis of 2008. Continuing extremely low reserves resulted in AA's parent company filing for bankruptcy protection in 2011. Between 2008 and 2011, AA lost $6.1 billion dollars, which is close to $4 million dollars per day (Kennedy & Maxon, 2018). AA has consistently reacted to economic pressures by laying off personnel in attempts to reduce labor costs, while also seeking to influence US government policy by lobbying for (greater) economic support.

Asset management – In the crisis spurred on by Covid-19, the airline industry secured a bailout from the US government to the tune of $58 billion in March 2020. US airlines ultimately received $25 billion, partially in the form of loans. AA received $5.8 billion in the form of $4.1 billion in direct grants and $1.7 billion in low-interest rate loans. Though between 2015 and 2019 AA pursued an extremely high-risk policy in terms of capital expenditure, spending over 100% of its free cash flows on capital expenditures, the bailout was not conditional or deemed deeply controversial by the US government (Kochkodin, 2020). AA's large share buybacks, in addition to its capital expenditures, had also artificially increased share prices, generating greater returns to shareholders including management.

Share buybacks, which are common in the airline industry (Alsin, 2017, 2020; Reed, 2019), reduce the number of shares outstanding, potentially lowering financial commitments as an alternative to paying dividends. Companies often argue that they engage in buybacks to increase their return of capital to shareholders and to help to concentrate control and reduce the long-term cost of finance (Maremont & Ng, 2006). However, Dhanani (2016) views share buybacks mainly as a form of share price manipulation. She notes that especially private investors, given their limited financial knowledge, may fail to understand the effects of buybacks on company performance. Griffin and Zhu (2010) assert, based on an extensive empirical analysis, that share buybacks occur most frequently when stock options are used as part of senior managers' compensation packages. When it (eventually) becomes clear that a company has been underinvesting while buying back its shares, significant falls in share price ensue. Maremont and Ng (2006) have therefore called buybacks an 'accounting loophole', even though they are legal. AA's behavior and the bailout sums it received, did not sit very well with commentators who pointed to the excessive share buybacks that had occurred in previous years (Alsin, 2020; Kochkodin, 2020), which they believed had maintained artificially high share prices and increased compensation payouts, and had not contributed to operational benefits.

Profiteering - Why was an airline such as AA being protected by the government despite dubious management behavior and its involvement in the spread of Covid-19 (Gebrekidan et al., 2020)? Perhaps because AA has long cultivated social-political influence: through its effects on the prosperity of cities that it chooses to serve/or not, or the well-being (or not) of its passengers and staff, or directly through politics (for instance, AA donated generously to Donald Trump's 2016 campaign[6]). Why did AA file for bankruptcy in 2011? Perhaps because some of its managers knew that there was little risk to themselves or the company, given that it opened a way to lay claim to government loans and grants? Kennedy and Maxon (2018) imply that other airlines filed for bankruptcy for this reason. Why were no passenger health checks or controls instituted by AA in February and March 2020? Perhaps because denial of responsibility was crucial to AA's (and possibly many other airlines') existence. Why did most of AA's senior management continue to accept very large bonuses? It may be because they would otherwise have left the company (cf. Kennedy & Maxon, 2018). Why does AA's business model appear so unstable (and unsustainable), and why do 'good' and 'bad' results appear and disappear again so quickly? Conceivably because this is the most advantageous option for the most privileged stakeholders, or because airline companies have simply come to run their affairs this way. All of these questions are unanswerable with the information that the business and management studies we accessed have put into the public domain, but they are implied by the diffractive considerations mentioned in

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[6] AA has a political donation organ (PAC), which, in 2016, gave large sums of money to Donald Trump's campaign and not to Hillary Clinton's; and overall contributed 75% to 25% to Republican versus Democratic presidential candidates (details can be found here: https://www.opensecrets.org/pres16/contributors?cycle=2016&id=N00023864&src=c&type=f). We could ask in what way has this impacted the bailout package that was on the table in March 2020? But this is a question we cannot really answer.

Section 2.2.3. We argue that the resulting undecidability forms a plague that requires attention.

The picture we can draw of AA (so far) is one of self-enrichment guised in a veil of managerial prowess, coupled to a degree of exploitation of personnel and especially the environment. Emergency bailouts, bankruptcy filings, and mergers have all typified AA. Our own choice-making of what to address and what not to address, and where and when to start and stop both our analysis and questioning, influenced the framing of the research apparatus, but also of AA and its accountability. The choices also reflect what we bring to the field from prior experience and research projects, and what our sources had mobilized/contained; as well as, in this case, our interpretation of Barad (2007).

Our analysis has been based entirely on secondary sources, which Barad (2007) does as well. Agential cuts were present in our choice of sources, how they were analyzed and synthesized, and what we do with and take away from them. The framing of AA in the literature has influenced our framing of AA – a framing which needs questioning.

Thus far, our 'mini-experiment' has revealed an ever-increasing web of intra-relations that exhibited and demonstrated AA's neglect of financial accountability during the Covid-19 pandemic, as well as before; to shareholders, in terms of what might be deemed the cynical manipulation of share prices leading to increased senior management remuneration; and to society by the lobbying the US government for bailouts. But more can be said about AA and its accountability.

3.2. Additional agential cuts

Our examination of AA produces different results if we pursue further the themes of information availability, transparency and power, as we were confronted by them in research(er) intra-action with the object of research, as presented in Section 3.1. The diffraction of questions asked and the research object's (non–)response (which effects whether we can really say that there are diffractive marks left on us by AA) is crucial here. Possible agential cuts would, for instance, include passenger experience, organization and governance, and hyper-liberal social and cultural viewpoints. As indicated, we believe that AA's behavior, just like the behavior of many of its competitors, is something that ought to be lamented and discouraged.

In Section 1, we suggested that the complexities of and implied by the Covid-19 pandemic demand researchers to look beyond disciplinary boundaries when studying the effects of the pandemic. This idea, which is supported Barad (2007) brings us now to juxtapose a very different agential cut to our 'mini-experiment'; that of the metaphor of the 'plague' (see also: Jackson & Mazzei, 2013). We believe this is appropriate because the 'plague' of AA's financial issues and dubious management priorities have persisted for at least twenty years (Gilles, 2020; Kennedy & Maxon, 2018). Therefore, this 'plague' did not necessarily start with Covid-19, even though it can be argued that Covid-19 seriously complicated AA's circumstances and prospects (Gilles, 2020). In addition, we can, to some extent, also call Covid-19, the 'airline plague'; both in terms of causes and effects. Hence, the 'plague' metaphor works at various levels and across time, in line with Barad (2007). Airlines transported the Covid-19 virus, making the pandemic a reality; and at the same time, airlines have faced grave difficulties economically due to Covid-19. In addition, it may be claimed that governments have been 'plagued' by airlines as they have been pressured into pumping a great deal of money in what basically has been a no-change strategy, particularly in the US. We see the enormity of AA's financial issues and share buybacks as factors in a social-economic plague, i.e. a metaphorical pandemic of political and environmental proportions. AA and Covid-19 have thus come together again. Our term or agential cut for this link is, as we have indicated, the 'plague'.

To transgress disciplinary boundaries, we turn to Camus (1948), who, in his novel called *The Plague*, demonstrates how accountability evolves along with what it invokes and involves in a pandemic, which is one of the ways in which the 'plague' as an agential cut may be operationalized. That is, in effect, what we have attempted by invoking the metaphor when looking at AA. Camus' book was informed by a cholera outbreak in Algeria around 1850 and inspired by his resistance to fascism. It is set in the city of Oran in the 1940s, with rats suddenly beginning to die in the streets. Government authorities, although claiming at first that there was not much to worry about, later ordered all remaining rats to be exterminated, but the virus had already started to spread. Slowly, some members of the populace realized that they were witnessing a collective disaster and decided to collaborate to combat and resist it. Others did not worry as much, and mainly tried to benefit as much as they could from what was happening. After several months, 'success' seemed close at hand, as sufficient amounts of antidote were found and administered to ever greater numbers of people. Life gradually seemed to return to 'normal' as the virus started to vanish. The reader does not know who is narrating the story of *The Plague* until the final sentences, when it turns out that it is the doctor who had realized that there was a virus spreading before the authorities did. He sensed that his own struggle with plagues may be far from over, even though the plague at hand seems to have been eradicated. The reason why his identity is not revealed earlier in the book, has to do with wanting the readers of *The Plague* to think they have an 'neutral' account of what had happened, told by a distant and detached observer; something that Camus realized is impossible and wanted the reader to understand. The same may be said to hold for research (Barad, 2007; see also De Loo & Lowe, 2017). As noted, Camus' theme throughout *The Plague* is accountability: the spokesperson is always relationally involved and describes what he sees and does, as well as what others do, and how he reflects thereon, even when what is witnessed is beyond his sphere of influence, reach or imagination. It may be surmised, however, that some of the characters in *The Plague* would have provided very different accounts from those of the doctor.

The 'plague' metaphor, seen through Camus' eyes, views social-economic and also corporate responsibility and the well-being of the populace, as the major issues affecting life. When applied to AA, the metaphor helps us to see that AA has so many aspects, dimensions and significances that it cannot be conceptually understood as any one particular thing (or as a single 'body' in Barad's terms). AA is a multiple object beyond human control, which is plaguing society. This, we assert, may be seen as a key agential cut when dealing with AA, which comes to the fore by applying Camus' insights to AA, its accountability and the Covid-19 pandemic (see also: Morton, 2010, 2013).

Our pursuit of such intra-actions thus brings us to conceptualize AA as a 'hyperobject': AA defies our normal research apparatus of measurement and assessment. Morton (2010, 2013) purports that 'hyperobjects' cannot be localized in time and space and transcend normal 'scientific' knowability. He has attributed three dimensions to a 'hyperobject'; it has to be: (i) viscous; (ii) nonlocal; and involve (iii) temporal undulation (Morton, 2013). To be viscous means that there is no escape from the 'hyperobject'. AA may be regarded a prototype of economic oligarchy; its economic and political power appears to be unavoidable. AA is also nonlocal: it is everywhere, and often at the same time. As a worldwide airline, it facilitates globalization, whereby places lose their unicity and control over their own existence. Finally, AA does not exist in a clear form in humanly perceivable time and space; its scale of power and influence overwhelms the onlooker, as is illustrated here. From this perspective, the traditional principles of business and management research fail us, as AA is too amorphous to be held accountable. Consequentialism falls by the wayside because hyperobjects defy causal analysis (Morton, 2010, 2013). We must jettison deontology since we have no fixed actants to which we can address questions of morality or ethics. Qua utilitarianism: we doubt if AA's top management, its banks or shareholders, Wall Street or the politicians it supports, ever had the good of the greatest number of persons in mind by bailing out AA (in 2020) during the Covid-19 pandemic. Our agential cuts, via Camus (1948) and Morton (2010, 2013), thus, raise more rather than less questions on how we have come to frame and examine AA.

Camus' (1948) assertion of the existential 'rottenness' that adheres to the 'plague', entangled with Morton's (2010, 2013) view on hyperobjects, may bring the phrase "too big to fail" or perhaps "too politically important to fail" to mind. Returning to the business literature, Delaney (1992, 1994) has asserted that large organizations may be better at financial manipulation than smaller ones, given the extensive networks they are connected to. When they fail (which can often be a deliberate move), they re-emerge later in a different form. Such a view seems to be applicable to AA as revealed by the agential cuts brought here to the fore. What all this implies for research(er) accountability will be explored in the following section.

4. Discussion: Agential realism, our 'mini-experiment' and the research object

Barad (2007) challenges us to closely examine how the framing of AA, as Covid-19 and air travel intra-acted, came about, and what this tells us about ourselves as researchers, the researched, and about the research. A fragile balance must be maintained in the interplay between the researcher and the researched, and in the contextual and circumstantial intra-actions of doing (the) research. Relational ontology demands continuous reflection on diffractions and agential cuts.

Our handling of the 'mini-experiment' involving AA may suggest that we are against hyper-capitalism, pollution, big enterprises, management greed, or the poor treatment of airline personnel and customers. It could also be claimed that we are 'simply' interested in QFT, accountability, responsibility, experimentation, and research methodology. We did not know when we started out, how our analysis would play out; the discovery of AA as a 'hyperobject' and an existential 'plague' was not decided upfront. Other ontologies, epistemologies or more general approaches to research could have led us to conclude that AA can be viewed as a 'hyperobject' and/or 'plague' as well; but they would not have produced attention to agential cuts and diffractive considerations that Barad (2007) demands we should look at. This is one of the additions we believe Barad offers to the extant literature on accountability.

The 'AA plague' or the call for corporate accountability, produces a much less well-defined focus from what commonly prevails in the physical sciences. Agential realism demands that we situate our object of research, as well as ourselves, in a field of entanglement (Barad, 2007). When we look at the intra-actions we have identified in the literature and what we have singled out as important themes informing our research, we see that AA has walked on financial and possibly also legal, thin ice for many years; and that this has continued in the Covid-19 pandemic. But it is as a 'hyperobject' that we see AA as an object that is out of control and that can de facto do whatever it wants, irrespective of governments, markets or morality (Morton, 2010, 2013).

4.1. Agential cutting and intra-action

We can criticize AA but we must acknowledge that our intra-actions have very little or no agency. Bohr's atoms responded to what he was doing in his experiments (or so it is generally believed); but this is not possible with AA. Our intra-actions with AA are severely limited, which is not in line with how Barad (2007) conceives of social science studies, in which continuous intra-action between the researcher and the researched is assumed. However, in the social sciences it is not uncommon that intra-actions with the object of research are restricted: full-blown access to organizations, for instance, is not often granted. We realize that AA can be seen a reification for an enormous organization and literally thousands of people, whose agency may well not be consistent. Just as the Covid-19 pandemic is not one thing, but includes innumerable practices, stories and actions; AA is multiple and complex. To research the 'plague', whether social, medical or corporate; we were required to make agential cuts such as the ones presented in Section 3.2. The conceptual aggregation level of the pandemic and/or the airline demanded acknowledgement of the 'hyperobject'. An intimist study of Covid-19 in a single family or of the relationships in the Board of Directors of AA during the pandemic would entail very different agential cuts. By focusing on the Covid-19 pandemic and its intra-actions with air travel, and on Covid-19 in relationship to AA in particular, we chose for a research object at a higher abstraction level than studying family or board room interactions and/or incidents. Barad (2000, 2003, 2007) demands that we (as researchers) be accountable for this; that is, understand and be responsible for our choices and the effects hereof.

Among others, the plague descriptor for AA could have diffracted as:

(i) Spreader - the Covid-19 virus left China and swept across the world (via Austria; in October 2020 via Spain; and in December 2020 via the UK and South Africa) thanks to air travel;

   (ii) Risk taker – AA flew passengers in unsafe environments;
  (iii) Victim - AA's commercial model has collapsed and it was grounded for an extended period of time;
  (iv) Globalizer – AA contributes to an out-of-control economic order of hyper-competition;
   (v) Parasite – AA shifts economic risks to the state (asking for bailouts) while reaping pay-outs for shareholders and senior management;
  (vi) Catalyst – AA promotes a culture in which tourism and leisure are perceived to be crucial freedoms;
 (vii) Political disrupter - health concerns are presented as in conflict with the battle to 'keep the economy open';
(viii) Environmental damage-er – AA contributes to (environmental) pollution, climate change and carbon emissions;
  (ix) Negator – AA seems to refuse to change how it functions … or to adapt its economic model;
   (x) Opportunist – AA has eliminated much of its competition (often through mergers).

    All of these are potential agential cuts framing the research object AA. They result in different diffractions; illustrating that there is not just one set of research outcomes possible when AA's accountability is assessed. This obviously is the case for other types of research as well, but it tends not to be that explicitly acknowledged in the social sciences. Assessing AA's accountability, also for us, is seriously problematic; in part because AA is neither clearly definable nor 'waiting' for us to research or represent it. Furthermore, Barad's take on accountability is very different from what the accounting literature typically adheres to (as argued in Section 2.2). Both AA and our perceptions of AA's accountability changed as agential cutting proceeded (cf. Barad, 2007). How we see accountability also reflects on our accountability, as the two are entangled. The fact that the number of agential cuts that can be made is essentially endless further complicates the matter.

    In the 'mini-experiment', when the object of research de facto 'refused' all significant contact with the researchers, was there still 'research' being conducted in Barad's view (see also: Weber, 2020)? As noted, (accountability) researchers are not always, and perhaps not even very often, allowed unfettered access to the objects they aim to study. Barad (1996, 2003, 2007) purports that research needs to acknowledge that it co-constitutes the object of research as well as (the identity of) the researcher. Research entails inclusionary and exclusionary material-discursive practices leading to particular agential cuts rather than to others. The researcher and the researched should therefore not be confined by conventional or artificial boundaries. The relevant boundaries are always in flux. Hence, one can never fully understand the object(s) of research: they are *made (to appear) through* the research in certain ways rather than in others. On top of this, inclusions and exclusions are made continuously as the research progresses; i.e. through diffractions that can turn out to have significant (societal) effects, which demand attention.

    It is not just researcher interference that makes research objects appear in the way they do (Visser & Davies, 2021). The entire apparatus of research (encompassing the researcher) is involved, which moves us beyond commonly adhered to assumptions of positivist, interpretive and critical research methodology (Chua, 1986, 2019); all of which remain firmly anthropocentric whilst assuming the existence of objects and subjects with (largely) fixed properties from the outset of the research (Barad, 2000, 2007; Walsham, 1995, 2006). Barad (2003, 2007) puts forward the view that objects can appear in many shapes and forms across space and time, which can happen in ways the researcher did not foresee, cannot influence or determine. In our 'mini-experiment', for example, AA could have appeared as a 'hyperobject' as it now has, but it could alternatively have appeared as an object composed of social strife, environmental emissions or aeronautic engineering (to name just a few examples). This ambiguity is unavoidable when treating research as an experiment in line with Barad (2007). Intra-disciplinarity (i.e. the idea to move beyond commonly assumed boundaries of what [not] to include in research) led us to invoke Camus (1948), which saved us from ethical mutism or having to define AA as it is to be found in most of the business and management literature. From Camus (1948), the step to Morton (2010, 2013) and contemporary critique of large organizations, was one that was easy to take.

4.2. Barad and research(er) accountability

    Traditional 'quality criteria' of research that are typically promoted in the research methods and methodology literature, such as replicability, transferability, validation, reliability and generalizability (e.g., see Ryan et al., 2002; Silverman, 2011), need to be critically (re-)assessed when Barad's views are taken seriously. There is simply no way to guarantee any of them if research objects are always in becoming, and the research always could have looked differently. The only thing we can know for sure, when following Barad (2003, 2007), is that agential cuts have potentially far-reaching consequences for both the researcher and the researched. Awareness and examination of agential cuts and the diffractions they come with in the research process is the main 'quality criterium' that Barad emphasizes. This is also what diffractive considerations like the ones stipulated in Section 2.2.3 demand of us (see also: Visser & Davies, 2021).[7] All of this implies that Barad asks for a reconceptualization of research and research conduct, as well as the

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   [7] We assumed that researchers ultimately (wittingly or unwittingly) decide when to stop examining agential cuts, foregoing infinite regress. We have done the same in our assessment of AA's accountability. This ceased at some point in the analysis reported in Section 4. We have included a partial explanation of our associated concerns in the main text. Our concerns are partial due to space; since they are a response to reviewer and editorial comments; and partially also for other reasons that we were not able to identify, or that we felt impossible to pinpoint. There is cut-off point that researchers somehow settle for whilst researching (which can be seen as an agential cut, but one which is never reflected upon) that they do not look beyond (as this would involve more agential cuts). At the very least, Barad (2007; see also Latour, 2005) calls for greater awareness of the existence of potential cut-off points that could have been chosen. This is what we have tried to emphasize in Section 3.2 and 4.1, and this is also one of the main lessons that we believe follow from adopting Baradian ideas.

coming about of research, and the inferences that follow from the research, making all of the ensuing practices and outcomes highly ethical. This is different from what the majority of social science researchers, including accounting researchers, adhere to. Her questioning of the research act goes well beyond what is normally meant by researcher reflection and reflexivity (Dambrin & Lambert, 2012; Johnson & Duberley, 2003), and certainly offers something distinctive given the extremity of her viewpoint (see also: Haraway, 1987; Müller, 2015). Anything can happen as research meets the world in its becoming. The world is not waiting to be explored in one way or another. Research therefore does not (merely) represent the world in some (incomplete and/or imperfect) form, as is commonly assumed in social science studies. It (mainly) *affects* the world it claims it studies in often unpredictable ways - ways that demand attention (Jackson & Mazzei, 2013). Hence, research and the universe need to meet one another halfway, and this involves and frames the researcher and the researched. However, based on our 'mini-experiment', we believe that Barad (2007) also brings us a 'devil's dilemma', as the desire to meet the universe halfway sounds appealing, but cannot be assured; and in fact, may be next to impossible in accounting, business and management studies. This does not help her case. Barad's writings do not help us to see how her views can be accommodated in the agential cuts of a typical accounting or management studies research project (see also: Visser & Davies, 2021). Nonetheless, we subscribe to her onto-epistemology, whereby research responsibility demands that agential cuts are accounted for in intra-action with the object(s) of research. Barad (2007) demands that we justify which 'experiment' is chosen, why the research is done in a particular way, and how we reflect on the world that thus unfolds.

We are accountable for using the 'plague' as a key sensitizing concept, which was a choice made in order to thematize moral and relational sensitivity, as well as AA's seemingly reckless behavior, under Covid-19 in Section 3. In *The Plague,* Camus (1948) is horrified by the evil humans can do to one another; and by the lack of accountability in consequence. Nothing, Camus believed, could justify the societal and environmental harm that the 'plague' (as portrayed in his book) did, even though such harm may not be completely avoided when a plague occurs. This is also the way we have come to look at AA.

We have grappled with our research(er) accountability as we went. We see that the Covid-19 pandemic has brought about increased mistrust of science and institutions, reducing their perceived legitimacy. Are we successfully critical of these developments or have we been persuaded and influenced by them? Are we like the doctor in Camus' novel, professing trust in insight, awareness and analysis; but who also can be seen as a victim of violence, anxiety and mistrust? Barad (2007) takes a post-humanist perspective to account-ability, whereby responsibility includes "more-than-humans" (e.g., viruses and the environment). But she refrains from stipulating how one should address these. How are we to be held accountable? How are we to report on our performance? For instance, several researchers have worked on this paper, and they have among others been influenced by reviewer and editorial comments and journal guidelines, and AA as found in business and management publications. How was responsibility shared? Who brought in which ideas, how, and why? There are few simple answers to these questions; nor do they crystalize into a 'how to' guide for conducting or reflecting on research. Attention should be given to what has been significantly intra-related in the research and what could potentially have been important, but has been obscured as agential cuts were made and diffractions occurred.

Barad (2007) would lead us to consider why we are so negative about AA, or why after examining the business and management literature, we turned to Camus and Morton. This has to some degree been addressed in previous sections. Our research interest in accountability makes us sensitive to what accounts ought to be given, how they are constructed, and what implicit values they contain. AA and its accountability could have been cast in another light as different diffractions would have materialized, but probably not by us. We did not start out to berate AA; but we did know that there was critique of the bailout of US airlines. The definition of the research object is complexly contextually bound. Barad reveals that radical relatedness, in the defining and the development of research, is inevitable. This is also stressed by Visser and Davies (2021), who note their grappling with similar dilemmas as described here. They argue that Barad would insist that researchers must try to reflect on why and how they have acted. The diffractive considerations we put forward in Section 2.2.3 have been formulated in a tentative and not extremely specific fashion – but they do suggest what could be worth looking into as the research progresses. What all this tells us, is that social science research is profoundly opaque in terms of the researcher/researched relationship; but also in terms of the research and writing processes. We may write about accountability; but we do not typically question openly our own work processes, specifying what has come to matter in the research that is beyond our reach, or what influences us (although this may also in part be due to existing journal publication standards and guidelines, which usually leave little space for doubt). When, inspired by Barad, we faced the Covid-19 pandemic in terms of business responsibility; we were confronted by our own responsibilization.

4.3. The value of Baradian ideas

We believe that Barad (2007) is making a valid point: most research is a reflection of the researchers' commitments and ambitions in interaction with the research object's diffractions. The researcher and the researched are entangled in each and every 'experiment', which is to be viewed as a 'world-making' practice (see also: Haraway, 1987). Responsible research(er) accountability and hence responsible research methodology, is only possible when the researcher and researched, and the research object and the diffractions involved in their intra-actions, meet halfway. But in contemporary business research, to quote Shakespeare, there is all too often "a plague on both your houses." Justice is neither done to the researchers and their considerations, nor to the objects of research and their characteristics. Not only do the researcher and the researched often not 'meet one another halfway', they even may not seem to meet one another at all. As in our engagement with AA, the research relationship is at best strained, with the research object remaining sufficiently opaque and avoiding critical examination. As in the plague, as Camus (1948) situated it; a logic of denial, avoidance and escapism prevails. Most actants in Camus' book did not really want to know what the plague engendered. The plague of the AA 'hyperobject' in our 'mini-experiment' is a worse-case scenario that nullifies discussion of accountability, leaving us stranded in a relational vacuum. The essential limiting factor in our analysis was ontological, defining the 'hyperobject' as the 'being' of a

contemporary business. As Barad claims, without diffraction and reflection, there can be no rigorous research(er) accountability. Only if the research object responds and talks back, can 'rigor' be found in the researcher/researched relationship. Otherwise, agential cuts are purely constructs of the researcher, dooming us to some form of constructivism or correlationism. Ultimately, Barad (2007) asserts, that the researcher/research object relationship has to be understood ethically, and there is no single way to enact such ethicality.

While the one researcher (in this case Barad) claims feminist ethics as her baseline to effectuate accountability; somebody else (e.g., Bruno Latour) looks to environmental ethics for his justification (Latour, 2018). For Latour, contemporary relations are a matter of power, and of the ability of the one object to impose its will on the other (see also: Harman, 2016). AA as we have come to understand it, seems to fit such a pattern. In fact, ultimately, we could say that AA has imposed a 'plague' on all of us. Research depends on the operations of diffraction. Very little light comes back from AA; the contemporary hyper-business operates as a virtually impenetrable 'black box'.

According to Barad (2000, 2003, 2007), the research apparatus defines important agential cuts underpinning the research, which impacts the form the research object takes. In researchers' intra-action they are never methodologically or materially isomorphic with the objects they study. The methodological burden on researchers goes much further than a mere reflection on what could have been done differently to'improve' the research, as commonly suffices in both interpretive and correlationalist research analyses (Chua, 1986, 2019; see also: Silverman, 2011). Barad's onto-epistemology asserts that *the very being* of the research object, depends on agential cuts that come to matter. Researcher discovery and review of agential cuts is seen by Barad as the main responsibility bestowed on us as researchers, but doing so will always have its limitations as the researcher and the researched are both encapsulated and framed by the research, and only exist thereby as researcher and researched.

5. Concluding remarks

We began this paper by asking ourselves how to assess research(er) accountability following Barad's (2007) relational ontology. Our context was the unpredictability and pervasiveness of the Covid-19 pandemic and an airline's (i.e. AA's) accountability. Barad situates research(er) accountability in terms of how agential cuts are made and justified; calling for agential literacy of researchers (Barad, 2000). In the case of accountability to which we have applied Barad's views; we have discovered that our research object was bedevilled by both a lack of diffraction and of transparency. Our goal in writing this paper was to explore what form research(er) accountability could be seen to take. Accountability requires critical reflection as revealed to researchers by their research apparatus (that they are part and parcel of) and the agential cuts made in the research process. Accountability is to be understood in terms of what matters and what is excluded from mattering as research progresses, with diffractive patterns and agential cuts being crucial (cf. Barad, 2007, p. 184).

At a surface level, one may be inclined to think that Barad offers little or nothing that is new. The need for researchers to think through their research and address a variety of accountability issues seems self-evident. Of course, we need to see and reflect on what has happened in the research and what could have been done differently; and to define what other results could have ensued. We need to know how our own thoughts, views and experiences have influenced the determining of the research object, in line with commonly held views on researcher reflexivity (Alvesson & Sköldberg, 2017; Calás & Smirchich, 1999; Dambrin & Lambert, 2012; Johnson & Duberley, 2003). However, Barad (2007) would find such a summary too static, human-centered, perhaps self-flagellating, and infused by the suggestion that the researcher(s) and the object(s) of their research can all too easily be separated and have fixed properties right from the start of the research (see also: Dambrin & Lambert, 2012; Weber, 2020). Barad demands that we look at the consequences of our actions as researchers and how these are relayed back to us through diffraction and how this leads to different framings of the researcher and the researched, rather than just questioning the technicalities involved in the research (see also: Jackson & Mazzei, 2013).

Barad (2007) insists on the ontological inevitability of intra-action and the resulting imperative that we provide accountability for agential cuts and the diffractions that come to matter, even for those we have not been directly involved in. The intra-relatedness of the 'plague' metaphor, used here to frame AA's accountability, denies, frustrates, represses, and threatens to undermine the very possibility of research(er) responsibility. Barad makes it all too clear what is at stake in research methodology; but she also leaves us facing serious dilemmas when we try to confront, in our case, the hyperobjects of globalized business – dilemmas that we revealed and discussed earlier, when we assessed AA's accountability in the Covid-19 pandemic.

Barad (2003, 2007) assumes that research affects the world in its becoming. Literally everything is intra-actively determined through agential cuts and diffraction. Both the researcher and the researched come into view, in one way rather than in another, through processes of spacetimemattering (Barad, 2014; see also: Soerensen & Strand, 2014). This is a major departure from what is commonly assumed in social science studies, including in accounting. The world would have appeared in a certain way without the research being done, but the way in which it appears now is presumed to be different due to the conduct of research. In our case, this implies that there is no easily identifiable issue (or research object) such as 'AA' or 'AA's accountability' that can be assessed and discussed. As both the assessor (we) and the assessed (AA) are constituted through the research, AA's accountability is constituted through the research, as it develops, and intra-acts with the world in its becoming. In order for this to be discussed constructively (response-ably), the assessor and the assessed need to meet one another halfway, or so Barad claims, in order to forego infinite regress. This, she purports, is the only way in which research(er) accountability can viably be discussed. We showed that a (proverbial) meeting halfway may be difficult (but not totally impossible) to safeguard in social science studies, and that Barad therefore holds merit for the response-abilization of research(ers) who adopt relational ontology.

By recognizing researchers as part and parcel of the research apparatus and seeing research as an experiment affecting the world in its becoming, research becomes entirely an ethical affair - as has been asserted here. And this is much more than any other approach to

social science studies or accounting research that we know of has claimed. Vosselman (2022) indicates that when adopting relational ontology, ethics reveal themselves in the disclosure of diffractions that come to matter and the agential cuts that these diffractions relate to. Researchers are therefore responsible for the unfolding of the world, through the shaping of the researched and the way analysis takes place. The diffractive considerations offered in Section 2.2.3 provide some guidance as to how this may inspire future accounting studies.

We believe that Barad's ideas regarding the necessity to frame research(er) accountability hold merit for management and accounting studies, as they encourage greater awareness of the intra-relations of those in and/or affected by research;[8] thereby moving beyond what it typically seen as researcher reflexivity (Calás and Smircich, 1999; Dambrin & Lambert, 2012; Johnson & Duberley, 2003; Mauthner & Doucet, 2003). The principle of diffraction exemplifies how such awareness could be brought into reach. Insight into intra-action can be enabling and as in our mini-experiment, open the way to innovative thematization; but increased pressure is hereby put on research(er) accountability, as noted above. Barad radicalizes research ethics to no longer just ensure that no one is unjustly harmed, but to realize that the creation of a research object is an epistemo-ontological act that will return to affect the researcher, demanding explanation and justification.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

References

Ahrens, T. (2008). Overcoming the subjective–objective divide in interpretive management accounting research. *Accounting, Organizations and Society, 33*(2–3), 292–297.

Ahrens, T., & Chapman, C. S. (2007). Management accounting as practice. *Accounting, Organizations and Society, 32*(1–2), 1–27.

Alsin, A. (2017). The Ugly Truth Behind Share buybacks. *Forbes*. Retrieved from: https://www.forbes.com/sites/aalsin/2017/02/28/shareholders-should-be-required-to-vote-on-stock-buybacks/?sh=20bd8b526b1e.

Alsin, A. (2020) Share buybacks Made Corporations Vulnerable. Then The Coronavirus Struck. *Forbes*. Retrieved from: https://www.forbes.com/sites/aalsin/2020/04/24/stock-buybacks-made-corporations-vulnerable-then-the-coronavirus-struck/?sh=393b63d8aa88.

Alvesson, M., & Sköldberg, K. (2017). *Reflexive methodology: New vistas for qualitative research*. London: Sage.

Barad, K. (1996). Meeting the universe halfway: Realism and social constructivism without contradiction. In L. H. Nelson, & J. Nelson (Eds.), *Feminism, science, and the philosophy of science* (pp. 161–194). Amsterdam: Kluwer Academic Publishers.

Barad, K. (2000). Reconceiving scientific literacy as agential literacy. In R. Reid, & S. Traweek (Eds.), *Doing Science + Culture* (pp. 221–258). New York: Routledge.

Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society, 28*(3), 801–831.

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham NC: Duke University Press.

Barad, K. (2014). Diffracting diffraction: Cutting together-apart. *Parallax, 20*(3), 168–187.

Barad, K. (2017). Troubling time/s and ecologies of nothingness: Re-turning, re-membering, and facing the incalculable. *New Formations: A Journal of Culture/Theory/Politics, 92*, 56–86.

Bohr, N. (1958). *Atomic physics and human knowledge*. New York: John Wiley & Sons.

Bovens, M. (2005). Public Accountability. In E. Ferlie, L. Lynne, & C. Pollitt (Eds.), *The Oxford Handbook of Public Management* (pp. 182–208). Oxford: Oxford University Press.

Brackley, J., Tuck, P., & Exworthy, M. (2021). Public health interventions in English local authorities: Constructing the facts, (re)imagining the future. *Accounting, Auditing & Accountability Journal, 34*(7), 1664–1691.

Braunmühl, C. (2018). Beyond hierarchical oppositions: A feminist critique of Karen Barad's agential realism. *Feminist Theory, 19*(3), 223–240.

Brownstein, J. S., Wolfe, C. J., & Mandl, K. D. (2006). Empirical evidence for the effect of airline travel on inter-regional influenza spread in the United States. *PLoS Med, 3*(10), 1826–1835.

Bunge, M. A. (2003). Quantons are quaint but basic and real, and the quantum theory explains much but not everything: reply to my commentators. *Science & Education*, 12(5), 587-597.Butler, J. (1993). *Bodies that matter: on the discursive limits of "sex"*. New York: Routledge.

Calás, M. B., & Smircich, L. (1999). Past postmodernism? Reflections and tentative directions. *Academy of Management Review, 24*(4), 649–671.

Camus, A. (1948). *The Plague*. New York: The Modern Library.

Carlile, P. R., Nicolini, D., Langley, A., & Tsoukas, H. (Eds.). (2013). *How matter matters: objects, artifacts, and materiality in organization studies*. Oxford: Oxford University Press.

Chua, W. F. (1986). Radical developments in accounting thought. *Accounting Review, 61*(4), 601–632.

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[8] It is possible to supplant 'research' in Barad's writings by 'accounting'. This would lead to accounting being viewed very differently from what is common in accounting studies, as its intra-active role in the unfolding of the world would need to be explicitly addressed, among others by discussing the diffractive processes it is involved in and gets to be (re)shaped by, and what this implies for those who are affected by accounting (see also: Vosselman, 2022).

Chua, W. F. (2019). Radical developments in accounting thought? Reflections on positivism, the impact of rankings and research diversity. *Behavioral Research in Accounting, 31*(1), 3–20.

Collins, P. H. (2004). Learning from the outsider within: The sociological significance of Black feminist thought. In S. Harding (Ed.), *The feminist standpoint theory reader: Intellectual & political controversies* (pp. 103–126). New York: Routledge.

Dale, K., & Latham, Y. (2015). Ethics and entangled embodiment: Bodies–materialities–organization. *Organization, 22*(2), 166–182.

Dambrin, C., & Lambert, C. (2012). Who is she and who are we? A reflexive journey in research into the rarity of women in the highest ranks of accountancy. *Critical Perspectives on Accounting, 23*(1), 1–16.

De Loo, I., & Lowe, A. (2017). "[T]here are known knowns… things we know that we know": Some reflections on the nature and practice of interpretive accounting research. *Accounting, Auditing & Accountability Journal, 30*(8), 1796–1819.

Delaney, K. J. (1992). *Strategic bankruptcy*. Oxford: University of California Press.

Delaney, K. J. (1994). The organizational construction of the "bottom line". *Social Problems, 41*(4), 497–551.

Deleuze, G., & Guattari, F. (1993). *A thousand plateaus*. Minneapolis: University of Minnesota Press.

Derrida, J. (1993). *Aporias*. Stanford, CA: Stanford University Press.

Dhanani, A. (2016). Corporate share repurchases in the UK: Perceptions and practices of corporate managers and investors. *Journal of Applied Accounting Research, 17*(3), 331–355.

Dillard, J. F. (1991). Accounting as a critical social science. *Accounting, Auditing & Accountability Journal, 4*(1), 8–25.

Dillard, J. F. (2007). Legitimating the Social Accounting Project: An ethic of accountability. In J. Unerman, J. Bebbington, & B. O'Dwyer (Eds.), *Sustainability Accounting and Accountability* (pp. 37–53). London: Routledge.

Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*. Cambridge: Cambridge University Press.

Fox, N., & Alldred, P. (2015). New materialist social inquiry: Designs, methods and the research-assemblage. *International Journal of Social Research Methodology, 18*(4), 399–414.

Gebrekidan, S. Bennhold, K. Appuzo, M. & Kirkpatrick, D. D. (2020). Ski, Party, Seed a Pandemic: the travel rules that let COVID-19 take flight. *The New York Times*. Retrieved from: https://www.nytimes.com/2020/09/30/world/europe/ski-party-pandemic-travel-coronavirus.htmlhttps://www.nytimes.com/2020/09/30/world/europe/ski-party-pandemic-travel-coronavirus.html?action=click&module=Top%20Stories&pgtype=Homepage&action=click&module=RelatedLinks&pgtype=Article.

Gilles, D. (2020). Inside American Airlines' scramble as virus grounds jets by hundreds. Retrieved from: *The New York Times*. https://www.nytimes.com/2020/03/25/business/coronavirus-american-airlines.html?smid=em-share.

Greenstein, G. (2019). *Quantum strangeness: Wrestling with Bell's Theorem and the ultimate nature of reality*. Cambridge: MIT Press.

Griffin, P. A., & Zhu, N. (2010). Accounting rules? Share buybacks and stock options: Additional evidence. *Journal of Contemporary Accounting & Economics, 6*(1), 1–17.

Guba, E. G. (1990). *The Paradigm Dialog*. Newbury Park CA: Sage.

Gullion, J. S. (2018). *Diffractive ethnography: Social sciences and the ontological turn*. London: Routledge.

Hacking, I. (1983). Nineteenth century cracks in the concept of determinism. *Journal of the History of Ideas, 44*(3), 455–475.

Hacking, I., & Hacking, J. (1999). *The social construction of what?* Cambridge MA: Harvard University Press.

Haraway, D. (1987). A manifesto for Cyborgs: Science, technology, and socialist feminism in the 1980s. *Australian Feminist Studies, 2*(4), 1–42.

Harman, G. (2016). *Immaterialism: Objects and social theory*. Cambridge: Polity Press.

Hassard, J., & Wolfram Cox, J. (2013). Can sociological paradigms still inform organizational analysis? A paradigm model for post-paradigm times. *Organization Studies, 34*(11), 1701–1728.

Hekman, S. (2010). *The material of knowledge: Feminist discourses*. Bloomington: Indiana University Press.

Hernes, T. (2014). *A process theory of organization*. Oxford: Oxford University Press.

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.

Hollin, G., Forsyth, I., Giraud, E., & Potts, T. (2017). (Dis)entangling Barad: Materialisms and ethics. *Social Studies of Science, 47*(6), 918–941.

Hultin, L. (2019). On becoming a sociomaterial researcher: Exploring epistemological practices grounded in a relational, performative ontology. *Information and Organization, 29*(2), 91–104.

Hultin, L., & Introna, L. (2019). On receiving asylum seekers: Identity working as a process of material-discursive interpellation. *Organization Studies, 40*(9), 1361–1386.

Hultin, L., & Mähring, M. (2017). How practice makes sense in healthcare operations: Studying sensemaking as performative, material-discursive practice. *Human Relations, 70*(5), 566–593.

Introna, L.D. (2013). Epilogue: performativity and the becoming of sociomaterial assemblages. In: F-X. de Vaujany., & N. Mitev (Eds.), *Materiality and space: organizations, artefacts and practices,* London: Palgrave Macmillan, 330-342.

Jackson, A. Y., & Mazzei, L. A. (2013). *Thinking with theory in qualitative research: Viewing data across multiple perspectives*. London: Routledge.

Jackson, N., & Carter, P. (1991). In defence of paradigm incommensurability. *Organization Studies, 12*(1), 109–127.

Johnson, P., & Duberley, J. (2003). Reflexivity in management research. *Journal of Management Studies, 40*(5), 1279–1303.

Knights, D. (2015). Binaries need to shatter for bodies to matter: Do disembodied masculinities undermine organizational ethics? *Organization, 22*(2), 200–216.

Kennedy, S., & Maxon, T. (2018). *Twelve years of turbulence: The inside story of American Airlines' battle for survival*. Brentwoord TN: Permuted Press.

Knorr-Cetina, K. (1999). *Epistemic cultures: How the sciences make knowledge*. Cambridge: Harvard University Press.

Kochkodin, B. (2020). U.S. Airlines spent 96% of free cash flow on buybacks. *Bloomberg*. Retrieved from: https://www.bloomberg.com/news/articles/2020-03-16/u-s-airlines-spent-96-of-free-cash-flow-on-buybacks-chart.

Kornberger, M., Plueger, D., & Mouritsen, J. (2017). Evaluative infrastructures: Accounting for platform organization. *Accounting, Organizations and Society, 60*(1), 79–95.

Latour, B. (1987). *Science in Action: How to follow scientists and engineers through society*. Boston: Harvard University Press.

Latour, B. (2005). *Reassembling the social*. Oxford: Oxford University Press.

Latour, B. (2018). *Down to Earth: Politics in the New Climatic Regime*. London: John Wiley & Sons.

Latour, B., & Woolgar, S. (1979). *Laboratory life: The social construction of scientific facts*. Los Angeles, CA: Sage.

Lee, N., & Lings, I. (2008). *Doing business research: A guide to theory and practice*. London: Sage.

Lemke, T. (2015). New materialisms: Foucault and the 'government of things'. *Theory, Culture & Society, 32*(4), 3–25.

Lemke, T. (2021). *The government of things. Foucault and the new materialisms*. New York: New York University Press.

Letiche, H., Lissack, M., & Schultz, R. (2011). *Coherence in the midst of*. Complexity London: Macmillan.

Loevgaard, K., & Strand, A. M. (2014). Quantum objectivity: Object(act)ivity as an ontosemantic doing. In D. Boje, & T. Henderson (Eds.), *Being quantum: Ontological storytelling in the age of antenarrative* (pp. 249–278). Cambridge: Cambridge Scholars.

Mauthner, N. S., & Doucet, A. (2003). Reflexive accounts and accounts of reflexivity in qualitative data analysis. *Sociology, 37*(3), 413–431.

McNeill, W. H. (1976). *Plagues and peoples*. Garden City, NY: Anchor.

Maremont, M. & Ng, S. (2006). Share buyback now may spur a big bill later. *The Wall Street Journal*, January 31, 2006, C1.

Morton, T. (2010). *The ecological thought*. Boston MA: Harvard University Press.

Morton, T. (2013). *Hyperobjects: Philosophy and ecology after the end of the world*. Minneapolis: University of Minnesota Press.

Mulgan, R. (2000). 'Accountability': An ever-expanding concept? *Public Administration, 78*(3), 555–573.

Müller, M. (2015). Assemblages and actor-networks: Rethinking socio-material power, politics and space. *Geographical Compass, 9*(1), 27–41.

Orlikowski, W. J., & Scott, S. V. (2008). Sociomateriality: Challenging the separation of technology, work and organization. *The Academy of Management Annals, 2*(1), 433–474.

Parker, L. D. (2012). Qualitative management accounting research: Assessing deliverables and relevance. *Critical Perspectives on Accounting, 23*(1), 54–70.

Pickering, A. (1984). *Constructing quarks: A sociological history of particle physics*. Chicago: University of Chicago Press.

Reed, T. (2019). Pilots call American Airlines bonuses "stunning". Airline says they are routine. *Forbes*. Retrieved from: https://www.forbes.com/sites/tedreed/2019/04/26/american-airlines-provides-management-bonus-data-during-earnings-call-pilots-object/#685fb84bf9f3.

Roberts, J. (1991). The possibilities of accountability. *Accounting, Organizations and Society, 16*(4), 355–368.

Roberts, J. (1996). From discipline to dialogue: Individualizing and socializing forms of accountability. In R. Munro, & J. Mouritsen (Eds.), *Accountability: Power, Ethos and the Technologies of Managing* (pp. 40–61). London: International Thomson Business Press.

Roberts, J. (2001a). Corporate Governance and the Ethics of Narcissus. *Business Ethics Quarterly, 11*(1), 109–127.

Roberts, J. (2001b). Trust and control in Anglo-American systems of corporate governance: The individualizing and socializing effects of processes of accountability. *Human relations, 54*(12), 1547–1572.

Roberts, J. (2012). Agency without agents: Exploring the relationship between identity and ethics. In P. Case, H. Höpfl, & H. Letiche (Eds.), *Belief and Organization* (pp. 144–162). Basingstoke: Palgrave Macmillan.

Roberts, J., & Scapens, R. (1985). Accounting systems and systems of accountability—understanding accounting practices in their organisational contexts. *Accounting, Organizations and Society, 10*(4), 443–456.

Robson, K., & Bottausci, C. (2018). The sociology of translation and accounting inscriptions: Reflections on Latour and accounting research. *Critical Perspectives on Accounting, 54*(1), 60–75.

Ryan, B., Scapens, R., & Theobald, M. (2002). *Research methods and methodology in finance and accounting*. London: Thomson.

Scott, S. V., & Orlikowski, W. J. (2014). Entanglements in practice. *MIS Quarterly, 38*(3), 873–894.

Shotter, J. (2013). Reflections on sociomateriality and dialogicality in organization studies: From 'inter-to intra-thinking'. In P. R. Carlie, D. Nicolini, A. Langley, & H. Tsoukas (Eds.), *How matter matters: Objects, artifacts, and materiality in organization studies* (pp. 32–57). Oxford: Oxford University Press.

Silverman, D. (2011). *Interpreting qualitative data: Methods for analysing talk, text and interaction*. London: Sage.

Soerensen, M. F., & Strand, A. M. C. (2014). News as (re)new(al)s: Becoming as/through spacetime(d)matter manifolds. In D. Boje, & T. Henderson (Eds.), *Being quantum: Ontological storytelling in the age of antenarrative* (pp. 232–248). Cambridge: Cambridge Scholars.

Spinney, L. (2017). *Pale Rider: The Spanish flu of 1918 and how it changed the world*. New York, NY: Public Affairs.

Visser, L. M., & Davies, O. E. (2021). The becoming of online healthcare through entangled power and performativity: A posthumanist agential realist perspective. *Organization Studies, 42*(12), 1817–1837.

Vosselman, E. (2014). The 'performativity thesis' and its critics: Towards a relational ontology of management accounting. *Accounting and Business Research, 44*(2), 181–203.

Vosselman, E. (2022). The performativity of accounting: Advancing a posthumanist understanding. *Qualitative Research in Accounting & Management, 19*(forthcoming).

Wagner, E. L., Moll, J., & Newell, S. (2011). Accounting logics, reconfiguration of ERP systems and the emergence of new accounting practices: A sociomaterial perspective. *Management Accounting Research, 22*(3), 181–197.

Walsham, G. (1995). Interpretive case studies in IS research: Nature and method. *European Journal of Information Systems., 4*(2), 74–81.

Walsham, G. (2006). Doing interpretive research. *European Journal of Information Systems, 15*(3), 320–330.

Weber, R. (2020). Taking the ontological and materialist turns: Agential realism, representation theory, and accounting information systems. *International Journal of Accounting Information Systems, 39*, Article 100485.

Yates, D., & Difrancesco, R. M. (2022). The view from the front line: Shifting beneficiary accountability and interrelatedness in the time of a global pandemic. *Accounting, Auditing & Accountability Journal, 35*(1), 85–96.