

Sinking into the unthinkable: using extreme fiction to study future crises

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Design/methodology/approach - How can research help to understand a world that has become more unpredictable and dangerous? We assess the use of fiction as research material, and explore dramatized movie accounts of possible future accidents, crises, and disasters through 'extreme fiction' - a genre which has been underutilized. We assess the benefits and limitations of using extreme fiction as a research resource. An example of how extreme fiction can challenge assumptions and generate novel theoretical insights is presented.

Purpose - We aim to show how extreme fiction can be used to study possible future extreme events, allowing researchers to get 'up close' to potentially dangerous settings.

Findings - Extreme fiction can help us to anticipate, understand, and prepare for possible future crises. This medium can also prompt challenges to taken-for-granted assumptions, and trigger fresh theoretical insights.

Research limitations/implications - The use of extreme fiction as research material is limited by concerns of credibility, evidential boundaries, and selectivity. We suggest ways of responding to these challenges.

Practical implications - This approach gives researchers an additional lens through which to explore future accidents, crises, and disasters. Improved understanding improves our ability to anticipate, plan, and respond more effectively to such events.

Social implications - Exposure to fictional crises in movies and other media can increase resilience to actual events. Disaster movies can be seen as educational as well as entertaining.

Originality – Implausible, unrealistic, exaggerated, and sensationalized, fictional accounts of extreme events have been overlooked by research. But to develop understanding of future possibilities, and prompt fresh thinking, implausibility is a useful property of these accounts.

Keywords

Crisis management, disasters, extreme contexts, extreme events, extreme fiction

Introduction

‘Why does fiction matter? Story telling is one of the oldest human technologies we have. And what does fiction allow you to do? Utopias and dystopias are ways of testing out possible arrangements in society without actually having to do them.’

Margaret Atwood (2018)

A global pandemic, damaging weather events, major transport accidents, geopolitical shocks, conflicts; extreme and previously unthinkable events seem to be more common (Riggio & Newstead, 2023). This has attracted labels such as ‘predictable unpredictability’, ‘polycrisis’, ‘permacrisis’, and ‘normalized unprecedentedness’ (e.g. Atwater, 2021). Standage (2024) identifies ‘ten implausible scenarios for 2025’, including a solar storm, another pandemic, nuclear weapons in space, a major volcanic eruption, and detection of alien life. How can organization and management research help to understand the causes, nature, and consequences of events that have not yet happened? Data collection during a crisis is challenging (Sharma et al., 2023). Studying future crises adds another layer of difficulty.

One approach to the study of future crises involves the use of ‘extreme fiction’, defined here as radically imaginative accounts of possible future accidents, crises, and disasters.

Organization and management researchers have increasingly accepted fictional accounts as potentially useful research material. However, extreme fiction has been largely overlooked, probably as such accounts are seen as exaggerated, sensationalized, and unrealistic. To date, only a handful of researchers have exploited this resource (Reed & Penfold-Mounce, 2015; Fey et al., 2016; Hällgren & Buchanan, 2020).

Our aim is to demonstrate the value of extreme fiction as research material, as a research resource, particularly the use of movies. Extreme fictions encourage us to imagine the unimaginable, to think the unthinkable, to expect the unexpected. Gümüşay et al. (2022) make a compelling case for using imagination to theorize *desirable* futures. We are

concerned, in contrast, with using imagination to understand and be able to cope with *undesirable* future events. Our argument unfolds in five steps. First, we consider the case for using fiction in general as a resource in organization and management research. Second, we consider the properties of extreme fiction, arguing that implausibility and lack of realism make this genre a valuable research resource. Third, criteria for selecting movies for research are identified. Fourth, we use an example to show how extreme fiction can help us to challenge assumptions and generate novel theoretical insights. Finally, the benefits and limitations of extreme fiction are assessed.

We offer two contributions. First, we show how extreme fiction gives researchers an additional resource, a novel lens, through which to explore possible future accidents, crises, and disasters. Second, we show how implausible, unrealistic, exaggerated, and sensationalized fictional accounts can provoke novel ideas, to improve our theoretical understanding of and practical response to the unanticipated and the unthinkable.

The case for fiction

‘Once asked why real gangsters sounded so much like their movie counterparts, George Raft replied that it was because gangster movies (his in particular, he noted) taught gangsters how to talk’ (McCarty, 2004, p.241)

Interest in the use of fiction as a research resource has been growing steadily (Czarniawska & de Monthoux, 1994; Phillips, 1995; Phillips & Zyglidopoulos, 1999; Bowring, 2004; Penfold-Mounce et al., 2011; Panayiotou & Kafiris, 2011; Zundel et al., 2012; Griffin et al., 2018; Savage et al., 2018; Holstein and Rantakari, 2023; Dries et al., 2023; Munyon and Summers, 2023; Kalkman, 2024). Some researchers have created their own fictional accounts. Orhan et al. (2024), for example, construct a satirical, dystopian picture criticizing the current state of research in organization and management studies. Williams (2021) writes

a fictional biography ('ficto-feminism') highlighting historical female achievements which have been overlooked. However, from a research methods perspective, the use of fiction as a form of research evidence is still regarded as unconventional, and there is limited support for researchers thinking of adopting this approach.

There are good reasons for not using fiction as a research resource. In positivist, hypothetico-deductive epistemology, fiction of any kind (realist, speculative, extreme, fantasy) has little or no status. Fiction and reality are seen as opposites. Movies, television series, and novels are based on stories invented by authors (even when based on real events; Rhodes & Brown, 2005). Actions and outcomes in fiction have their origins not in motives, social forces, or generative mechanisms, but in the imagination of writers. Movies are often sensationalized, idiosyncratic, and unrepresentative. Single examples in social science are not seen as generalizable, although this constraint does not apply to analyses of fiction across the humanities, literature, and film studies.

Many management researchers thus regard the use of fiction with suspicion, as a risky approach that would be rejected by journal editors. Barley (2006, p.19) advises researchers not to break 'substantive, methodological, or theoretical rules', and to conform instead to 'genre constraints'. Davis (2015) argues that novelty in research methods serves no useful purpose, and distracts researchers from developing cumulative insights. However, novel sources are potentially useful, if they allow researchers to approach settings and topics that are difficult to study with conventional methods, if they encourage novel lines of questioning, if they stimulate fresh ideas and innovative theorizing, if they lead to more insightful, interesting published output, if they provoke and challenge assumptions, if they strengthen the impact of research on organization and management practice. Innovative research methods have been advocated by commentators who question the use of safe, traditional,

formulaic approaches (Alvesson & Gabriel, 2013; Alvesson & Sandberg, 2013; Corbett et al., 2014; Cornelissen & Durand, 2014; Harley, 2015; Buchanan & Bryman, 2018).

Research using fiction relies mainly on constructivist, interpretivist perspectives, which reject the traditional distinction between science and fiction, and between observer and observed. For example, Geertz (1973, p.15) argues that ethnographic works are fictions, as they are ‘something fashioned’. Savage et al. (2018, pp.977-8) note that fictions ‘hold real power over people in that they shape how people make sense of organizations and are thus very much the essence of organizations’. As the above quote from McCarty (2004) indicates, fiction informs and creates our understanding of social reality. Holt & Zundel (2018, p.48) also reject ‘the binary fiction and fact relationship between science and fiction’. They note that many stories begin as factual accounts, that authors of fiction often research their materials using social science methods, and that ‘writing reflects a commitment to empirical experience’ (p.46). Fiction is thus another way of exploring reality, another lens on social and organizational life, rather than a counterpoint to empirical truths.

Here we focus on fictional accounts on film and television, recognizing that fiction appears in other media and formats. Film can portray the antecedents, nature, and consequences of events in a wider context, capturing social, organizational, and individual dramas, relationships, and emotions. The observer is given an immersive experience, placed at the heart of the action, with the actors, with the sights and sounds, sometimes ‘in the room’, ‘up close and personal’, in a way that print media do not match. From a research perspective, ‘deep insight’ is challenging to obtain through conventional methods due to participants’ reluctance to disclose personal information, and to ethical concerns over lines of questioning and observation. This does not deny the value of traditional research methods such as participant observation, and archival studies, or of fiction in other formats, such as novels,

audio broadcasts, comic books, and live-action roleplays. Fictional accounts can also draw attention to factors that conventional methods may neglect: the role of chance, the impact of emotional responses, the significance of physical setting, temporal factors (timing, sequencing, and duration of events), the role of path dependence and path creation, and the combined influence of these factors.

Fiction thus has many research advantages - including the ability to explore possible futures. Fictional narratives can be defined as 'rich accounts of situations that portray the people, places, and artifacts involved in a structured manner with a beginning, middle, and an ending, and, through use of a plot, offer a particular point of view on a situation' (Garud, 2011, p.588). Stories typically present coherent, end-to-end accounts, in context, with characterization, exploring relationships and interactions, and displaying emotional and behavioural responses. Fictional narratives also portray the temporal structure (duration, sequencing, pacing) of events, although these features in turn depend on the decisions of authors, screenwriters, producers, and directors.

Fictional narratives are also often implicit theories, which explain how and why outcomes are achieved through a sequence of events that unfold over time in a given context (Czarniawska, 1998; Bell, 2008). In his analysis of Western movies, for example, Wright (1975, p.128) notes that: '[A] narrative is not just possibly an explanation; it is inevitably an explanation. It explains how a certain situation came about from a prior situation. To explain this change, the story presents all of the information necessary to understand the change'.

Czarniawska (2006, pp.250-51) argues that, 'In so far as [fiction] reflects actual practices, it provides field material on a par with traditional interviews and documents. In so far as it shapes actual practice, it may be priceless in understanding the formation of actual practices. In so far as it subverts actual practice, it can be a source of inspiration and a model to

imitate'. Building on her observation, we note that conventional research methods are limited in what they can reveal about, for example, what it is like to live in a particular place, or to work in a particular organization. Holt & Zundel (2018, p.60) conclude:

'By engaging with fiction, we can expand our understanding of organizations and those working within them in ways that go beyond the truncated formulas that tend to dominate scientific discourse. Fiction can illuminate phenomena that are hard to capture, measure, or relate to theoretical ideas. They can do so across the spectrum of human affairs, tying together emotions, hopes, fears, connecting spatio-temporally dispersed affairs, and do so without concern for the limits of specialist silos.'

From a methodological perspective, any material or information source that helps to answer the research question can be a useful resource: interviews, observations, documents, surveys, newspaper reports, cartoons, poems, movies, television programmes, extreme fictions. This is not an argument which says that 'anything goes'. The researcher has to work as historian and detective, assessing the relevance of available materials, weighing and interpreting the value of different clues. Parker (2009: 379), for example, in his study of the Mafia, cites the television series *The Sopranos*, noting that, 'I am extraordinarily careless with my sources, treating film dialogue, ghost written biography and a variety of historical accounts (based on sources of varying reliability) as if they were all the same'. But Parker's account shows that he is not careless with his interpretations of these sources, or with how these are combined to construct a compelling argument - that the Mafia is more like a conventional business organization that we would like to think.

Phillips (1995) similarly advocates the use of an array of fictional sources, including novels, short stories, plays, songs, poems, and films. These, he argues, are legitimate approaches to the study of organization and management because:

‘[F]ictional sources can provide insight into important aspects of organization in a way that no amount of theoretical discussion or empirical data can provide. Narrative fiction can examine organization as a way of life and explore the impact of various organizational dysfunctions on individuals. We do not have to find an actual occurrence of what we wish to talk about, we can instead draw on the library of situations already constructed by talented storytellers, or, if we are very brave, we can make up stories ourselves. In effect, we are lying to tell the truth; we are constructing (or using pre-constructed) situations that never actually happened, but that exemplify issues that occur in actual organizations’ (Phillips, 1995:636).

Hassard & Holliday (1998:1) also note that conventional theory offers a sanitized picture of organizational behaviour, observing that film (and television) ‘plays out sex, violence, emotion, power struggles, the personal consequences of success and failure, and *disorganization* upon its stage’. Savage et al. (2018:977) thus suggest that fiction is a valuable starting point for organizational analysis, ‘as it gives a much different and often more expansive view of organizational and institutional life than the prevailing scientific-professional manner of studying organizations’. For instance, in the armed forces ‘masculine norms might complicate the sharing of personal, emotional experiences of disidentification, since individual feelings are not supposed to be discussed or even experienced [. . .] fictional account[s] allow veterans to share these personal experiences with fewer constraints from organizational membership’ (Kalkman, 2023:5)

We currently lack a strong research tradition of in this area. Practice with regard to the use of fiction as research material is fragmented across the past three decades. To organize the use of fiction as a research resource, Table 1 highlights four ways in which fictional narratives have been used: thematic analysis, case study, process narrative, and proxy ethnography. We

later explore a fifth approach, concerning the development of *provoking theory* (Sandberg & Alvesson, 2021).

Table 1: Five approaches to the use of fiction as research evidence

Approach	Sources	Film and TV	Contributions
Thematic analysis	Wright (1975)	64 Westerns, 1930-1972	evolution of Western movie plots reflects development of social relationships, values, myths, and ideology
	Griffin et al. (2018)	56 Walt Disney feature length animations, 1937 to 2016	negative representations of management, employee relations, and the experience of work in Disney animations that can influence young audiences
Movie as case study	Foreman & Thatchenkery (1996)	<i>Rising Sun</i> (Kaufman, 1993)	clash of organization cultures - cross-cultural communication problems organizational power politics, and the role of blackmail
	Fey et al. (2016)	<i>Battlestar Galactica</i> (Larson, 1978-2009)	study of controversies concerning conflict, the use of nuclear weapons, and the erosion of 'the nuclear taboo'
Process narratives	Godfrey et al. (2012)	<i>Jarhead</i> (Mendes, 2005)	processes through which civilian become soldiers: discipline, symbolism displacement of civilian values with military values
	Buchanan & Huczynski (2004)	<i>Thirteen Days</i> (Donaldson, 2000)	process theory of strategic decision-making; outcomes shaped by contextual, temporal, social, emotional, political, and behavioral factors
Proxy ethnography	Penfold-Mounce et al. (2011)		individual decisions and actions shaped and constrained by social, political, and economic factors beyond individual control
	Zundel et al. (2013)	<i>The Wire</i> (Burns & Simon, 2002-2008)	dynamics of institutional work; how legal/illegal trade affects lives, impact of performance measures on behavior, survival of inefficient systems; unintended consequences of minor decisions
	Holt & Zundel (2014)		
Provoking theory	O'Doherty (2020)	<i>Leviathan</i> (Castaing-Taylor & Paravel, 2012)	ethnographic documentary film-based approach to stimulating creativity, imagination, new ways of thinking, new ways of managing, aesthetic knowing
	Hällgren & Buchanan (2020)	<i>The Walking Dead</i> (Kirkman et al. 2010-22)	dark, violent side of group and leader behavior in an extreme context, little collaboration; leadership positions violently contested, contextual drivers of such behaviour include consequences of existential threat, and group membership

The examples cited in Table 1 have used fiction as their sole source. However, fiction can also complement conventional methods, potentially leading to more innovative, interesting, impactful results. Parker's (2009) study of the Mafia is an example of how conventional and fictional sources can be combined. Reflecting McGrath's (1981:209) statement that 'Multiple methods not only serve the purposes of replication and convergence; they serve the further, crucial purpose of compensating for inherent limitations that any one method, strategy, or design would have if used alone', fiction can often be used effectively in concert with other sources of information.

Another feature of Table 1 is the relative absence of extreme fiction. One source explores the taboo surrounding nuclear weapons (Fey et al., 2016). Hällgren & Buchanan (2020) expose 'the dark side' of group and leader behaviour in a zombie apocalypse. Extreme fiction has been largely overlooked as a useful resource in organization and management research. We consider this to be an oversight.

Why go to extremes?

To study future possibilities, we can turn to strategic thinkers and scenario planners, whose forecasts extrapolate from current trends. But they rarely venture into the extreme or the unthinkable. More important, although they offer valuable glimpses of potential future conditions, the stories which they use rarely depict the unfolding human and organizational dramas or the causal sequences of events that explain how those futures may be shaped (Amer et al., 2013; Bowman 2016). To understand organizing in contexts that have not happened yet, we need rich, qualitative, contextualized fictional narratives that immerse us in the culture, emotions, untidiness, uncertainties, disagreements, humour, fears, anxieties, and diverse motives and responses of those involved. Such narratives can also provide processual accounts of crises that could unfold in future (Pentland, 1999; Langley et al., 2013; Langley,

2021). Imagined future events depicted in extreme fictions can thus complement traditional methods of researching crises.

Gephart (2021) notes several methods that have been used to study crises and disasters, *after* they have occurred: personal accounts, autoethnography, documentary evidence. But in order to build knowledge concerning *future* events, we currently refer to studies of previous events (e.g. Perrow, 2007; Bundy et al., 2017; Bavik et al., 2021). The danger is that future crises may be different, and lessons from the past may have limited relevance. Highlighting our lack of knowledge in this area, in a review of the extreme contexts literature, Hällgren et al. (2018) found no work exploring surprising (never happened before) future events.

What makes a fiction ‘extreme’? Hannah et al. (2009, p.898) define an extreme context as, ‘an environment where one or more extreme events are occurring or are likely to occur that may exceed the organization’s capacity to prevent and result in an extensive and intolerable magnitude of physical, psychological, or material consequences to - or in close physical or psycho-social proximity to - organization members’. The response to some crises, however, can be influenced by observers’ perceptions (Bundy et al., 2017; Phan & Wood, 2020). Note, for example, disputes over whether climate change, and the Covid-19 pandemic, are genuine crises, or hoaxes.

The film industry has reflected the current state of permacrisis by producing a significant body of extreme fiction from which to choose. Lepore (2017) identifies this as ‘a golden age for dystopian fiction’ and a ‘new literature of radical pessimism’. However, this is not a contemporary preoccupation. The magazine *Time* (1979) published an article about ‘The deluge of disastermania’, noting that ‘Armageddon is something of a growth industry’, evidenced by the proliferation of books and movies dealing with catastrophic and apocalyptic

events. By speculating about extreme events, and asking ‘what if?’, fictional accounts can be a valuable resource and stimulate innovative thinking.

Extreme fictional accounts which explore possible future events, even when implausible, have additional benefits. Compared to fiction in general, such accounts help us to anticipate extreme situations, identify vulnerabilities, and frame responses. Movies such as *The Day After Tomorrow* (Emmerich, 2004) raised public awareness of the threat of climate change (Lowe et al., 2005; Reusswig & Leiserowitz, 2005). As von Mossner (2012:100) notes, ‘cultural texts do not exist in a vacuum, and when filmmakers imagine environmental risk, they do so in culturally and historically specific ways’. There is evidence that exposure to extreme situations through fiction offers a form of ‘stress inoculation’, reducing surprise and strengthening resilience when faced with real life threats (Janis, 1989; Biehl, 2021; Scrivner et al., 2021; Seifert & Clayton, 2021). As a practical example of this effect, The United States Centers for Disease Control used a fictional zombie apocalypse to raise public awareness of the importance of emergency preparedness (Kruvand & Bryant, 2015).

Phillips (1995) observes that fictional narratives in films are often deliberately idiosyncratic and extreme, illustrating outlier cases and the extraordinary. Traditional methodology texts often advocate the use of representative samples and cases, assuming that there is little to be learned from extreme, maverick, unusual settings. For many research questions, that is sound guidance, but some commentators disagree with this as a universal rule. Eisenhardt (1989; 2021), Pettigrew (1990), Flyvbjerg (2006), Cunha et al. (2015), and from a positivist perspective Yin (2018), suggest that researchers should consider choosing extreme situations and cases, critical incidents, social dramas, and extreme types. Hällgren et al. (2018) demonstrate the significant contributions to organization studies made by research in extreme contexts. To pursue outliers is advice which, in our experience, many researchers regard as

risky. However, researchers who are concerned with the relevance and impact of their work may find that this is an area where improved understanding can be of considerable value. In extreme settings, the experience of the phenomena under investigation is often more intense and visible, and the opportunities for learning are potentially enhanced.

Buus (2009) notes that the national security community and policy-makers turned to fiction to explore future terrorist threats, following the ‘failure of imagination’ which contributed to the 9/11 attacks on the World Trade Center and the Pentagon (Salter, 2008). However, the use of commercial aircraft by terrorists had previously been imagined by a senior U.S. counter-terrorism adviser, Richard Clarke. Clarke was inspired, not by government intelligence sources, but by the novels of Tom Clancy (Weick, 2005). Buus (2009:401) thus concludes that ‘popular fiction may be better equipped to evoke [Donald] Rumsfeld’s ‘unknown unknowns’, flesh out possible actors and envision potential actions than other more traditional and recognized forms of disaster and crisis scenario planning’. The UK National Cyber Security Centre (NCSC) warns that ‘smart cities’ are attractive targets for terrorists and hostile states (Warrell & Fildes, 2021). Smart cities use electronic sensors to collect data and manage services such as traffic and transportation systems, power plants, utilities, and water supplies. Considering possible future attacks, an NCSC specialist cites the movie *The Italian Job* (Collinson, 1969), in which criminals use a computer expert to shut down the traffic control system in Turin, enabling them to escape with a load of gold bullion. A similar smart city gridlock today could have catastrophic consequences.

Movies and television series have also stimulated innovative thinking about future possible crises. As noted earlier, the movie *The Day After Tomorrow* triggered debate about vulnerabilities, interdependencies, and the need for action on climate change (Leiserowitz, 2004). Fey et al. (2016) use the ‘naturalistic science fiction’ television series *Battlestar*

Galactica (Larson, 1978-2009) to explore controversies concerning conflict. These include the use of torture, detainee policy, occupation practices, civil-military relations, religion, and nuclear weapons which are used routinely in this series. *Battlestar Galactica*, they argue, can be regarded as an allegory with regard to the post-9/11 'war on terror'. Fey et al. (2016) conclude that fiction can be used to reflect on and critique current mainstream conditions and policies, challenge taken-for-granted concepts and the status quo, and suggest alternative meanings and scenarios. To assess future threats from the use of biological and other novel weapons, by terrorists and state actors, Cordesman (2001) cites the 'Buffy Paradigm', based on the television series *Buffy The Vampire Slayer* (Whedon, 1997-2003). In her role as Slayer, Buffy has to deal with a variety of unlikely and unpredictable threats, from a range of sources (vampires, demons, other creatures), who have complex and shifting motives and goals. Cordesman argues that real-world threats involving biological weapons are more likely to mirror what Buffy has to deal with than the scenarios constructed by conventional security and intelligence analysts.

Considering an iconic extreme context, a zombie apocalypse, Reed et al. (2015) use *The Walking Dead* (Kirkman et al., 2010-2022) to examine aspects of consumerism, interpersonal cooperation and conflict, and gender and race relations. Locatelli (2016:3) interprets *The Walking Dead* as speculative fiction exploring leadership, conflict and war, arguing that the most intriguing aspect of the series concerns 'how the survivors shape their own relations, both individually and as a group'. The zombie apocalypse novel *World War Z* (Brooks, 2006) is used to teach strategic studies at the U.S. Military Academy West Point (Coker, 2013). That novel is now also a movie (*World War Z*; Forster, 2013).

How might extreme fiction have informed an analysis, from an organization and management perspective, of global, national, and individual responses to the Covid-19 pandemic? Few

governments, businesses, and societies had imagined such an event, or taken the possibility seriously. Consequently, most were surprised and unprepared when it happened. There are numerous extreme fiction accounts that could inform our understanding of such events: *The Plague* (Albert Camus, 1947); *Station Eleven* (Emily St John Mandel, 2014); *Cordon* (Joos & Mielants, 2014); *The Rain* (Kainz & Arthy, 2018), *Outbreak* (Gardner, 2021). The movie *Contagion* (Soderbergh, 2011) describes how a virus is spread by airline passengers, from a market in China to other countries (Beaumont, 2014). Daher-Nashif (2021) suggests using movies such as *Contagion* to teach medical students about the challenges facing doctors when fighting outbreaks. Fictional sources could inform understanding of and planning for future pandemics. Some political leaders and organizations were criticized for their ineffective handling of the Covid-19 pandemic. Indeed, *disorganization* and *mismanagement* are recurring themes in disaster movies. In *Greenland* (Waugh, 2021), a comet is about to strike earth and wipe out humanity. However, people with valuable skills and knowledge have been selected to be airlifted to a secure underground bunker in a secret location (*spoiler alert*: the bunker is in Greenland). What could possibly go wrong?

Selection criteria

How can we decide which extreme fictions are suitable research material? There are at least three sets of criteria, concerning plausibility, focus, and existing evidence.

Contextual plausibility

One selection criterion is plausibility: could such things happen, could events unfold in this way, would people behave like that? In his study of disaster movies from the 1970s, Quarantelli (1980) found that the action frequently departed from reality in various respects. For some research purposes, plausibility may be critical. For example, a study of the individual and organizational implications of autism spectrum disorder (ASD) could turn to

The Imitation Game (Tyldrum, 2014), or *The Accountant* (O'Connor, 2016). In these movies, Benedict Cumberbatch and Ben Affleck respectively offer credible portrayals of employees with high-functioning ASD.

However, *implausibility* may be more appropriate for a study of surprising and unanticipated future crises. In this century so far, we have seen several events that were considered to be impossible, rare, or highly unlikely: armed assault on the Capitol in Washington; war in Europe; wildfires in California, catastrophic floods in Europe. If we do consider such unimaginable, unthinkable, unexpected events, however, we will be less surprised and better prepared should they actually occur (Scrivner et al., 2021). Conventional research into surprising extreme events is rare (Hällgren et al., 2018). Extreme fiction invites us to explore a range of future (im)possibilities.

Case framing and conceptual focus

A second consideration is: 'what is this a case of?', in relation to research objectives (Tsoukas, 2009; Langley, 2021). *Thirteen Days*, (Donaldson, 2000), which dramatizes the 1962 Cuban Missile crisis, can be read as a case study of strategic decision-making. The disaster movie *Greenland* can be read as a case study of crisis *mis*management. There is a case of cyber attack in *The Undeclared War* (Kosminsky, 2022), and of a fungal plague pandemic in *The Last of Us* (Mazin & Druckmann, 2023).

There may be more than one answer to this question, as fictional narratives can be interpreted in different ways, by audiences and critics as well as by researchers. *Thirteen Days* is also a case of top team infighting. *Greenland* is a case of human resilience. Both of those movies could be useful sources of ideas with regard to the organizational themes which they address.

We should also consider whether issues are addressed in ways that offer novel and perhaps provocative perspectives and insights into a particular phenomenon. Is the study of the television series *The Walking Dead* by Hällgren & Buchanan (2020) about teamwork, or does it allude to ‘meanwork’ - group members are hostile and violent towards each other as well as to members of other groups; teamwork can be dangerous, rather than harmonious and collaborative as current theory assumes. In Eisenhardt’s (1989; 2021) template, defining the research question is step one, and selecting cases is step 2. This is a positivist approach to case research. But movie choice can also be driven by asking, ‘what research question does this fictional narrative allow us to answer?’ Convention is thus reversed, with evidence gathering preceding the framing of research objectives and questions.

Selecting cases for prior empirical evidence

Reinforcing the contribution of extreme fiction, Eisenhardt (2021:148) argues that case selection should focus on research questions for which there is little or no prior confirming empirical evidence. There is of course little or no evidence relating to events that have yet to happen, and evidence from past events may not be relevant. Case selection thus also relies on theoretical rather than random sampling, and on outliers or extreme types. This implies having a grounding in existing evidence, to be able to identify what is novel, challenging, or provocative in a fictional account.

The selection of a film-based fictional narrative has a subjective element. The decision cannot be captured conveniently in a clear set of rules. Different researchers may identify different opportunities in the same movie. However, this choice can be justified through considerations of (im)plausibility, focus, and evidence in relation to a research topic.

Provoking theory

How can fiction contribute to theory development? Most definitions of the term theory refer to an explanation of some kind. As we have seen, explanations are embedded in narrative fiction (Wright, 1975). Movies, therefore, are intrinsically theory-laden, offering explanations for the outcomes that are depicted. Sandberg & Alvesson (2021) identify five types of theory. *Explaining* theory explains phenomena through related variables. *Comprehending* theory is concerned with systems of meaning and interpretation. *Ordering* theory categorizes ambiguous phenomena. *Enacting* theory shows how phenomena are reproduced through processual logic. *Provoking* theory challenges phenomena through a reframing which stretches perceptions of reality. The purpose of provoking theory is 'to show alternative, often eye-opening and disruptive ways of seeing phenomena, to challenge established mind-sets and open up other modes of thinking' (Sandberg & Alvesson, 2021, p.504).

Extreme fiction may help to develop provoking theory by imagining radically innovative possible futures, the antecedents, nature, and consequences of which are not adequately captured by current perspectives. Fictional narratives may reveal insights and contribute to theory development in ways that conventional research methods cannot. In her review of the novels by the prize-winning Chinese author Liu Cixin, Campbell (2020) argues that fiction - in this case speculative, futuristic science fiction - can stretch human cognition and sense-making beyond conventional modes of reasoning. 'A radical shift of reason' (p.433) is required, rather than simply accumulating knowledge through experience. Some researchers have thus argued that, by highlighting previously unseen or overlooked connections, fiction can contribute to the development of innovative theoretical perspectives. Holt & Zundel (2014: 2018), for example, argue that fiction can lead to more creative and imaginative interpretations of organization and management phenomena. For the same reasons, O'Doherty (2020) analyses the ethnographic documentary *Leviathan* (Castaing-Taylor &

Paravel, 2012) which is about deep-sea trawler fishing. O'Doherty (2020:8) does not develop theory from *Leviathan*, but is interested in the *process* of using film to trigger creativity through 'aesthetic knowing'. Extreme fiction could be one approach to 'cocreating forward', defined by Sharma et al. (2022) as a way of anticipating and addressing future problems before they emerge.

Construct development: "leadershift" and "meanwork"

When using extreme fiction for research purposes, the baseline assumption is that the context and/or event (accident, crisis, disaster) models a possible future event, or sequence of events - however implausible. Hällgren & Buchanan (2020) develop a provoking theory of group behaviour from an analysis of the television series *The Walking Dead*, an account of a zombie apocalypse. Organization theory regards teamwork as benign, productive, desirable. This is not the perspective emerging from *The Walking Dead*. The researchers selected 52 'incidents of significant conflict', 26 involving conflict within survivor groups, and 26 involving conflict between groups. Using template analysis, they identified five categories of intra-group conflict, and five categories of inter-group conflict. Their main conclusion concerns the 'dark side' of group behaviour. Rather than collaborating in the face of a shared existential threat, there is considerable intra-group, and inter-group conflict, which often passes beyond disagreement to end in violence - and death. A second set of findings concerns the nature of leadership. There are no formal mechanisms for selecting leaders in this setting. Leaders who emerge are either pre-apocalypse authority figures (deputy sheriff), or ruthless, charismatic cult-like figures who promise safety in return for compliance. Leadership positions are precarious, and are routinely contested. The 'deselection' of leaders is often by death at the hands of a challenger. There are dark elements to leadership in this context, revealing behaviours that overlap with and go beyond 'the dark triad' of narcissism, psychopathy, and Machiavellianism (LeBreton et al., 2018).

Hällgren & Buchanan (2020) attribute the group and leadership violence, not to individual dispositions, but to features of the context. In this doomsday setting, there is no law and order, zombies are a constant threat, and shelter and resources are scarce. This leads to anxiety, insecurity, argument, and mistrust, which in turn generate intra-group conflict. The characteristics of survivor groups also contribute to tensions: groups of strangers, from different social backgrounds, untrained for the situation, isolated, competing, dealing with novel threats, competing with other groups for resources. Other survivors are as great a threat as zombies. (When the Covid-19 pandemic began in 2020, supermarket customers were filmed fighting over toilet rolls, which were not in short supply.) Understanding the behaviours that *might* be triggered in such a context gives us an opportunity to find ways to mitigate or avoid such behaviours should such a situation actually occur.

Exploring leadership and teamwork in this extreme context suggests fresh conceptualization, for example concerning *leadershift*, and (as mentioned earlier) *meanwork*. Leaders are shifted into and out of their roles brutally, often violently and fatally, in the absence of formal appointment procedures. Group members sometimes collaborate, but are also capable of using extreme violence against members of their own groups and others. Conventional leadership and group dynamics research has not documented the violence seen in this context. In discussing the purpose and value of provoking theory, Sandberg & Alvesson (2021) are less interested in the typical ‘contribution to theory’ that journal editors request. They are more concerned with attempts to disrupt current assumptions, to challenge established mindsets, to think differently, to reframe phenomena in novel and counterintuitive ways.

A crisis mismanagement ecosystem

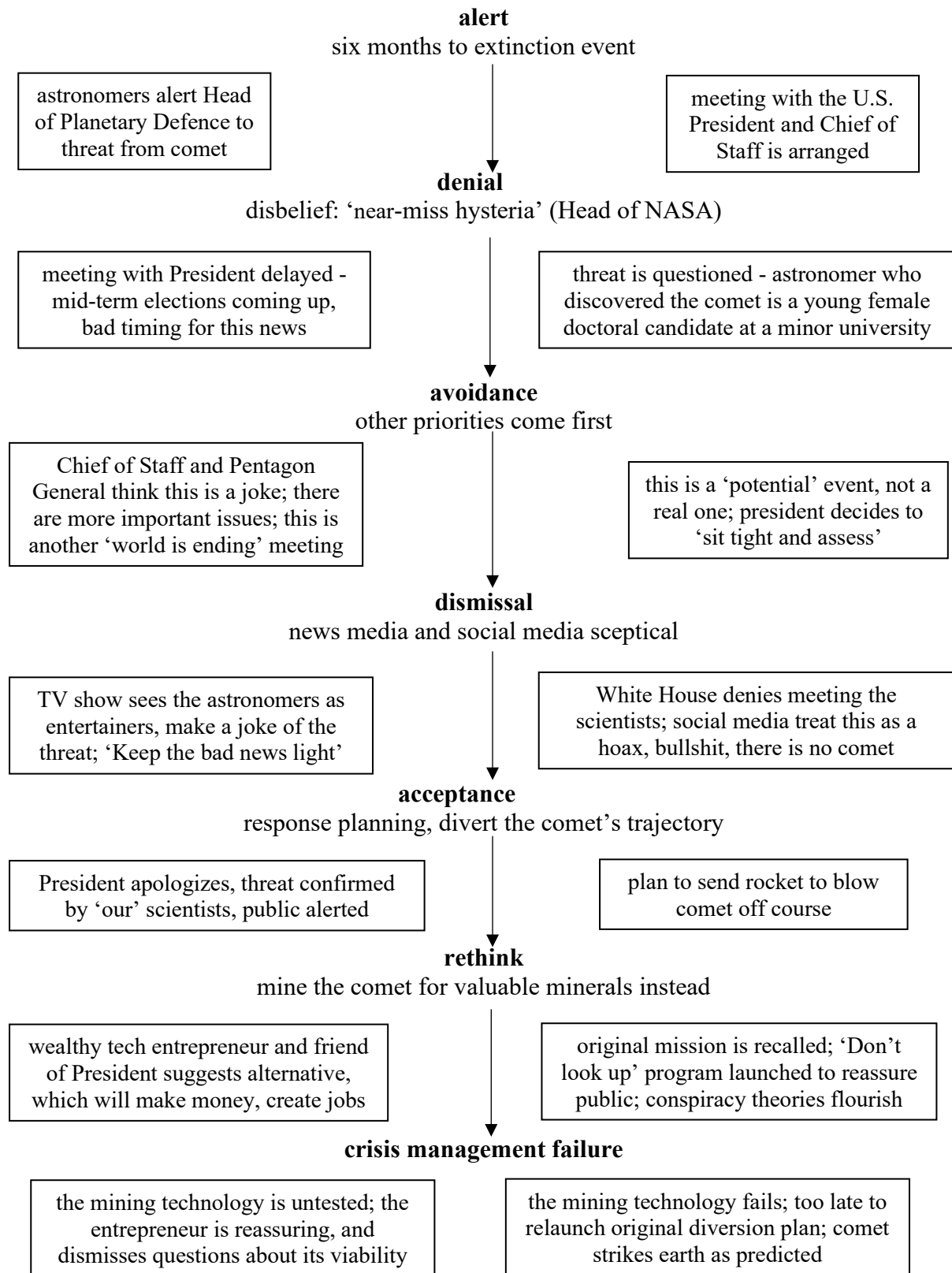
The movie *Don't Look Up* (McKay, 2021) suggests how extreme fiction can challenge taken-for-granted assumptions about crisis management. A junior astronomy researcher from a

minor university discovers a large comet which will strike earth in six months's time. She and her supervisor meet the U.S. President and her advisers to warn them of this extinction event. Their warning is dismissed; mid-term elections are due, and take priority, and why should they believe these scientists? A television news program picks up the story, but they are more interested in entertainment; 'Keep the bad news light'. Social media comments reinforce the idea that this is a joke. Eventually, other scientists confirm the comet's existence, and they plan to send a rocket with a bomb to change its trajectory. A wealthy and influential tech entrepreneur persuades the President that the comet can be mined for valuable minerals, and the rocket with the bomb is recalled. The entrepreneur's mining equipment fails, the comet continues on its trajectory, and earth is destroyed.

How well does this movie meet our selection criteria? *Plausibility*: An extinction event involving a large comet is highly unlikely, but is just possible (and this is not the only movie to deal with this theme). *What is this a case of?*: This can be interpreted as a case of crisis *mismanagement*, offering a complex processual explanation for the failure to respond to this event effectively. *Existing evidence*: We have no direct available evidence of how the world, or individual countries, would respond to such a crisis (other than through other disaster movies about dangerous comets, which are usually dealt with successfully.)

Considering this film as a case study in crisis mismanagement, we adopt Langley's (1999; 2009) process analysis method of 'temporal bracketing' or 'temporal decomposition'. This involves identifying the sequence of events, noting the relationships between the stages, and considering how they generate the outcome. The event sequence is shown in Figure 1. A more detailed analysis is beyond the scope and length constraints of this article, and would involve closer attention to the decisions of key actors, the influences on and consequences of those decisions, and the roles of path dependence and path creation in the event sequence.

Figure 1: The crisis mismanagement ecosystem in *Don't Look Up*



Don't Look Up challenges at least three sets of current crisis management assumptions.

1. *Current assumption*: crises commonly unfold in standard patterns, typically ending with rescue, recovery, and implementation of lessons. *Challenge*: this crisis follows an irrational and unpredictable path, ending with failure and disaster.

Crisis research uses phase models which describe how extreme events typically emerge, develop, and are managed (Pearson & Mitroff, 1993; Turner, 1976; Turner & Pidgeon, 1997; James and Wooten, 2005). From their summary of this literature, Buchanan & Denyer (2013) identify six phases: incubation, event, crisis management (rescue, recovery), investigation, organizational learning, and implementation of lessons. This is an 'ideal type' sequence, which does not represent a predictable set of steps, but structures a description of events from a processual perspective (Langley, 1999; 2009). However, as Figure 1 shows, the series of events in *Don't Look Up* follow a different trajectory: alert, denial, avoidance, dismissal, acceptance, rethink, and failure. In the first four phases of this sequence, and before the event has occurred, the crisis is not taken seriously. The crisis is only seen as real in the fifth phase, when an action plan is agreed. However, in the sixth phase, 'rethink', that action plan is rejected in favour of another approach - which fails. The last phase, therefore, is the event itself - destruction of the planet.

We thus need to rethink traditional phase models which assume that crises will be quickly and unambiguously recognized and managed as such. *Don't Look Up* suggests that a crisis management sequence can be complex, irrational, unpredictable, and inherently ineffective.

The path dependence (lock-in, self-reinforcement) in the first four phases is disrupted (Garud et al., 2010). But the path creation in phase six is dysfunctional.

2. *Current assumption*: effective crisis management depends on the characteristics and capabilities of the crisis leadership. *Challenge*: crisis management effectiveness is influenced by the ecosystem in which the crisis occurs.

Ecosystem: a community of interacting organisms and their physical environment. *Don't Look Up* prompts a rethink of traditional approaches to crisis leadership. In their review, Riggio and Newstead (2023) outline four theoretical perspectives. *Crisis management theory* argues that simple crises require centralized leadership, and that complex crises need wider involvement. *Cognitive resource theory* is based on leader intelligence and experience, and on the stressful nature of the circumstances; intelligent leaders perform better in nonstressful situations because they take time to think through their actions, but under stress, experienced leaders act quickly, relying on rehearsed strategies. *Charismatic leadership theory* notes that, in a crisis, we turn to those with exceptional qualities - vision, commitment, communication, trust, likeability, promise of salvation. *Complexity leadership theory* argues that, in an interconnected world, leaders must adapt creatively and rapidly, avoiding bureaucratic rules and procedures. This review identifies five crisis leadership capabilities: communicating, sensemaking, decision-making, coordinating teamwork, and facilitating learning.

These perspectives focus on the characteristics of leaders - their openness, intelligence, experience, adaptability, creativity. In other words, in a crisis, as long as we have the right leader, with the right capabilities, all will be well. *Don't Look Up* suggests that we focus our attention elsewhere - on the ecosystem in which those who are managing the crisis are embedded. The ecosystem in *Don't Look Up* concerns the political, social, cultural, and economic conditions. *Political*: mid-term elections are approaching, the President does not want to cause alarm that could lose votes, she denies meeting the scientists, and her advisers think the comet is a joke. *Social*: social media and the public treat the crisis as a hoax,

conspiracy theories flourish. *Cultural*: television news media are interested in the entertainment value of the ‘bad news’ and those who bear it. *Economic*: a wealthy entrepreneur persuades the President that the comet can be mined, creating jobs and wealth.

This ecosystem distorts decision-making, contributes to delays, constrains the available options, and promotes dysfunctional paths. Even the ‘right’ leaders in this context are likely to struggle to resolve such a crisis successfully.

3. *Current assumption*: collective sensemaking is disrupted by emotions - fear, anxiety.

Challenge: political, social, cultural, and economic conditions shape collective sensemaking.

The prevailing ecosystem also plays a role in collective sensemaking. The field of disaster sensemaking builds on the seminal work of Weick (e.g. 1998; 1993; 2010). Various studies note the fragility of collective sensemaking in extreme situations (e.g. Cornelissen et al., 2014; Lübcke, 2024; Dwyer et al., 2023). A recurring theme is the distracting role of emotions. In the case of *Don’t Look Up*, emotions play a minor role. The sensemaking of the President and her advisers is robust; they (and the media and public) initially laugh at the danger. When they accept that the danger is real, they agree to profit from mining the comet. When that fails, it is too late for further action.

The combination of political, social, cultural, and economic properties of the ecosystem in this movie is not remarkable. It may be commonplace. We may wish to consider whether, given a similar ecosystem profile, a broadly similar crisis would be similarly mismanaged.

Don’t Look Up presents a pessimistic picture of how future existential threats may be addressed. To be effective, all of the moving parts of a crisis management system must be effective; each phase is critical to overall success. But we know that things will go wrong. What are the chances of ‘getting it right’? Let us imagine that there is a 90 percent chance

that the scientific evidence is taken seriously; a 90 percent chance that other priorities are sidelined; a 90 percent chance that media and the public accept the urgency; a 90 percent chance of consensus on a viable plan; and a 90 percent chance that the plan works. The cumulative probability (0.9^5) of the success of this event sequence is only 60 percent. If the probability of success of each component is 50 per cent, the overall probability of success is only 3 percent (0.5^5). Similarly, if the system has a higher number of components (0.9^{10} or 0.5^{10}) the chances of success drop dramatically.

The movie *Don't Look Up* is a comedy, a fiction. But it invites us to challenge current assumptions, and suggests fresh conceptualization, perhaps as a basis for exploration and theory development through more conventional methods, in other contexts. How closely, for example, does the concept of a crisis mismanagement ecosystem describe current global responses to climate change? And can this conceptualization thus help - in the absence of changes to these responses - to predict the outcome?

Extreme fiction is not the only source of challenging, or provocative thinking. Nor is it the only approach to developing an understanding of the crises that we may face in future. But it does constitute a novel resource, an innovative lens, to complement other and more conventional perspectives, resources, and methods.

Limitations

Extreme fiction can contribute to management and organization research, particularly with regard to organizing in extreme and crisis settings for which there is no precedent. However, the use of fiction - and extreme fiction in particular - as a research resource has limitations, including those concerning credibility, boundaries, and the need for selectivity.

Scholarly credibility

Despite our argument for the use of implausibly extreme fictional narratives, many researchers remain to be convinced that fictional accounts are valid research materials. Most fictional films and television are made for entertainment, artistry, and/or profit, and while they involve research, they are not made for research audiences. What happens on screen depends on the imagination and preferences of screenwriters, directors, camera operators, and sound engineers, and less on the actions of real people. Extreme fiction, which typically depicts highly idiosyncratic settings, exacerbates the credibility problem. This scepticism is understandable, given pressures to publish, and the perception (in some cases well-grounded) that journal editors and reviewers will reject work based on movies or television instead of 'sound' empirical evidence. This is a significant consideration for early-career researchers, for those who study under-legitimized topics, or who have marginalized identities. Some editors encourage innovative approaches (Bryman & Buchanan, 2018), but that perspective may not be common. The other constituency at which organizational research findings are often directed - management - may be equally unimpressed by ideas based on entertainment products (but the use of fiction in management development settings is usually welcomed; Billsberry et al., 2012). Researchers may be advised to combine the use of fiction with conventional evidence, and to select with care the journals to which they submit their work. It may be judicious to omit the contribution of fiction for a particular submission or management briefing, and to report findings obtained through traditional routes.

Empirical boundaries

Researchers using fictional accounts have to accept that the boundaries in their materials have already been drawn. In an organizational setting, it is usually possible to interview more staff, to re-interview key informants, to request further documentation, to lengthen the period of observation. But not with a movie, the content of which is fixed. However, movies (and TV

programs) can be watched repeatedly, and interpreted from different perspectives. A second boundary limitation is that the only topics, issues, problems, and questions that researchers can study are those which screenwriters have decided to address (although that covers a broad spectrum). A third boundary limitation is that the screenwriter and director may not have addressed a particular issue in the manner, or the depth, or for the period of time, or from the perspective ideally required by the research question. One solution in these circumstances could involve observing directors, actors, and screenwriters being interviewed about their work at film festivals, in news articles, and on the promotions circuit. Close colleagues of film directors are also sometimes interviewed about their perspectives (Alvarez et al., 2005).

Choices concerning selectivity

As noted earlier, researchers looking for fresh ideas and inspiration will naturally find that not all movies are suitable for their purposes. Some may simply not resonate with the researcher's thinking or the topic. In our experience, a search to find 'the right movie' or television series is rarely successful; the right material has to find you, the researcher, often to the annoyance of anyone with whom you happen to be watching it with at the time.

These are not insurmountable problems. For example, Buchanan & Hällgren (2019) published an article about leadership configurations based on the 'cult' movie *Day of the Dead* (Romero, 1985). For that study, they considered *Dawn of the Dead* (Romero, 1978 - an anti-capitalist, anti-consumerism social satire), but it contains gratuitous violence, displays no credible leadership themes, and characters behave in a comic manner. That movie was considered unsuitable. Television offers numerous police and crime dramas, few of which have the ethnographic depth, or address the range of individual, social, and organizational issues depicted in the widely acclaimed series *The Wire* (Burns & Simon, 2002-2008).

We have approached the use of extreme fiction from a constructivist/interpretive perspective. There are, however, opportunities for other epistemological standpoints to be employed with regard to fiction. While beyond the scope of this article, positivists/empiricists may be encouraged to reconsider relationships between key variables as a result of watching movies like *Greenland*, or *Don't Look Up*, and could develop concepts and theory inspired by works of extreme fiction. Films and television series can also be viewed as social commentary. Blending film studies and management scholarship, we might study how, for example, fiction exoticizes what is happening in the global south to disadvantaged populations.

Conclusion

Our aim is to encourage organization and management researchers to consider the use of extreme fiction as a research resource, to stimulate imagination, to generate new ideas, and to develop fresh theoretical perspectives. Extreme fiction allows us to study future possibilities, to develop an understanding of crises, disasters, and other extreme events that have not happened yet, and to rehearse responses.

The use of fiction may have particular value at a time when research access is becoming more difficult to negotiate, when research funding has become more difficult to secure, and when there is a pressing need to understand the crises and other hazardous situations that individuals, society, and organizations might be facing.

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