

NEW YORK CITY IN THE ANTHROPOCENE: LEARNING FROM FICTION

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ABSTRACT

This essay presents research based on the intuition that a work of fiction (in this case, *Odds Against Tomorrow*, by Nathaniel Rich) can enrich the theoretical perspective on climate change in management sciences. We propose the relevance of apocalyptic fiction to decipher the reactions of different social groups to the events of the Anthropocene, and the modalities of collective action that result from them. We challenge, with the help of a qualitative coding methodology, the text of the post-apocalyptic fictional book with Hoffman and Devereaux-Jennings' (2018) Anthropocene archetypes. This ongoing research is based on an original methodology and produces creative writing; its results enrich the theory of archetypes of the Anthropocene and reinforce its performativity.

RESEARCH IN A NEW GEOLOGICAL ERA

Environmental conditions on Earth continue to deteriorate, as shown by various official reports (IPCC, International Panel for Climate Change, for example) which scientists use to try to alert the populations and their governance. These new conditions are now labelled as the Anthropocene. The word was first used by the Physics Nobel Prize winner Josep Crutzen, who defines it as an age where human dominance of biological, chemical and geological processes on Earth is an undeniable reality. The term is currently being debated by the International Society for Stratigraphy, which has not yet decided if Anthropocene will replace the label of Holocene, the current geological area which began around the end of the last glacial period. Anthropocene thus defines Earth's most recent geologic time period as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, and other earth system processes are altered by humans.

For researchers in management sciences, taking an interest in the notion of the Anthropocene and its consequences on institutions and companies can foster new approaches to the issue, notably because our economic systems are closely related to climate change and resources extinction. In the research presented here, we cross-reference a founding academic production on the "Archetypes of the Anthropocene" (Hoffman and Devereaux-Jennings, 2018) with a work of fiction, Nathaniel Rich's post-apocalyptic novel *Odds Against Tomorrow*. This book appeared to us to be a powerful tool for amplifying and resonating the work of Hoffman and Devereaux-Jennings (2018), who propose a political-institutional vision of the Anthropocene society. Rich's dystopian, fictional work – imagining

the submersion of New York City – can be qualified as climate-fiction and allows us to shake up theoretical archetypes by contrasting them with a catastrophic event.

ODDS AGAINST TOMORROW

The term climate-fiction, abbreviated as "Cli-Fi", first entered into the vernacular in April 2013 on National Public Radio (Washington D.C.) during a segment defining novels and movies that deal with human-induced climate change. Over recent years, there have been a number of literary works dealing with climate change; some were located in New York City (NYC), a popular backdrop for Cli-Fi. The central position of the Big Apple in fiction in general (from films like *Breakfast at Tiffany's* to *Godzilla*, *Night in the Museum* and so many others, for example) may be due to the symbolic power of the city, often considered the centre of the occidental world and a symbol of the American dream. The increasing amount of Cli-Fi fiction set in Manhattan also, however, likely reveals the city's very high vulnerability. The New York City Panel of Climate Change (2017) thus identifies a variety of risks. Among them are three highly likely risks that could lead to a global submersion: rising sea levels, increased flooding, and more frequent and intense storm events. Moreover, NYC is now structurally vulnerable to flooding: sea levels in its port have increased by nearly half a meter, hurricanes in the area have a one out of five probability of reaching the city (a figure that was 1 out of 100 at the beginning of the twentieth century), and soils artificialization and destruction of wetlands through lands reclaimed from the sea (Hoboken, for example) encourage runoff. Finally, despite increasing awareness on the part of authorities and the implementation of adaptation efforts, NYC's infrastructure (as regards sewage disposal, in particular) is ageing.

It is not surprising, therefore, that America's writers and imagemakers have pictured New York's annihilation in a stunning range of ways. "No city has been more often destroyed on paper, film, or canvas; and no city's destruction has been more often watched and read about than New York's," wrote Max Page in his 2008 book *The City's End* "and destruction of the environment is one of the most persistent of themes." Several novels (for example New-York 2140 from Kim Stanley Robinson, 2017) have explored the ways climate change could drastically damage the city's landscape. We chose to work with *Odds Against Tomorrow* (Rich, 2018) because, while reading it, we discovered that it matches perfectly with one of the main works from organizational science on the Anthropocene, namely the archetypes of the Anthropocene from Hoffman and Devereaux-Jennings (2018).

THE ARCHETYPES OF THE ANTHROPOCENE

Several papers from Hoffman and Devereaux-Jennings, rooted in institutional theory and organizational studies, explore the emergence of a new social reality, the Anthropocene society (Hoffman and Devereaux-Jennings, 2011, 2015). One of their main publications, from 2018, proposes a political and institutional vision of the Anthropocene society focusing on human (social, economic, political...) systems. Together, these systems constitute the past and present causes of the earth's deterioration and its consequences, and may themselves give rise to their own adaptation/mitigation (Seidl *et al.*, 2013). Hoffman and Devereaux-Jennings (2018) thus envision the Anthropocene society as characterised by the existence of four archetypes: collapsed systems, market rules, technology-fix and cultural re-enlightenment providing a relevant reading of the different normative frameworks, and logics of action and political dynamics at work in the Anthropocene society. Collapsed systems define people or organizations who think that nothing can be done and thus prefer to resign themselves or rush into overconsumption. Market rules and technology-fix can be described as hybrid positions with a moderate consciousness of the Anthropocene. In these two archetypes, people and organizations want to preserve the current lifestyle - either by relying on the market (green growth) or on technology (geoengineering initiatives) - deeply believing

that corporate innovation and technology can save the world and the capitalistic way of life. While these three narratives somehow defend the pursuit of existing economic mechanisms, the final archetype, cultural re-enlightenment, explicitly challenges these assumptions. It supports the design of a new world, profoundly changing the human way of life towards more reflection and spirituality, in redefined systems characterized by economic sobriety or de-growth.

BRINGING THEORY AND FICTION INTO DIALOGUE

Our methodology developed an exploratory coding grid based on Hoffman and Devereaux-Jennings' archetypes, including the main variables they identified. We have isolated 10 criteria: awareness of environmental issues, dominant behaviours, justification of the logics at work, regulation, risks, dominant organizations, counter-powers, faith in science and technology, man-nature relationship, and vision of the future. This grid – the result of deductive reasoning – was completed during the coding, with two categories emerging from the fictional work: victims and symbolic objects. As we coded, we also found elements of text that revealed interfaces between the archetypes. In total, we coded the 306 pages of the book using these 13 criteria, in an abductive loop. This work of crossing between the fictional text and the theoretical production gave rise to two types of results. On the one hand, we told four different versions of the novel in the form of short stories (see below), each of which is representative of one of the archetypes in terms of the characters involved and their vision of events.

Excerpt from short story no. 2

Illustration of the "business as usual" archetype

Finally, it's raining. The newspaper displays photographs of ecstatic New Yorkers, actors from Broadway musicals dancing in Times Square, traders twirling in the rain, the markets rise nearly six points thanks to a massive surge in agribusiness. Clients are calling, Charnoble says, they want meetings, and meetings mean more money. An obscene sneer slides across his face like a water stain. This may be our first live disaster, we'll never get another chance like this.

On the other hand, the research resulted in a number of contributions to the work on the archetypes of the Anthropocene.

Firstly, fiction embodies the studied theoretical contributions. We compare Hoffman and Devereaux-Jennings' archetypes (2018) with extreme events, which requires significant work in filtering and interpreting the various normative frameworks and logics of action at work, acting as cultural anomalies (Hoffman and Devereaux-Jennings, 2011). Our work recomposes and contrasts worlds appearing either as an exacerbation of the Capitalocene society¹ (Moore, 2016), aiming to regulate the ecosystems' dysfunctions via market rules or disruptive technological innovation, or as heterogeneous, complex collectives where the relationships between self, between individuals, and between self and territory are new. In a second step, our work moves beyond simply embodying the archetypes and also aims to interface them. While Hoffman and Devereaux-Jennings (2018) present the four archetypes as a typology, the fictional material allows us to highlight the interfaces between the different types. Our work thus renders the archetypes sensitive and complex, features both men and women navigating the heart of the archetypes, and suggests that if the Anthropocene is systemic, men's response can be just as systemic, traversing and connecting several archetypes depending on events, encounters, and phases of awareness. Finally, the

¹ Some authors prefer to name the Anthropocene the 'Capitalocene' in order to highlight the fact that the earth's degradation has not been caused by all of humanity, but more precisely by its capitalistic activities (cf. Moore 2016).

research hierarchizes the archetypes by confirming the inanity of the collapsed vision and reinforcing the prevalence of the paradigms that dominate current society, i.e., the postures based on the simple reduction of negative externalities and the provision of solutions by the market or technology. In the hierarchical reading proposed by the fictional work, the archetype of cultural enlightenment is naturally valued. In a more interesting way, Rich's novel also shows its risks and possible drifts.

Our work thus follows in the footsteps of Volkmann (2001), who demonstrates that fictionalization gives the theory a performative character. Our approach claims that apocalyptic fiction has relevance to deciphering the reactions of different social groups to the events of the Anthropocene and the resulting modalities of collective action. Following the example of de Cock et al. (2021) or Mackay (2021), we argue that in order to face planetary challenges, and climatic ones in particular, we must use the realm of imagination to broaden our reflections on human and societal organization of the future.

EMOTIONAL IMPACT OF POSSIBLE FUTURES

In showing the existence of heterogeneous archetypes, their respective strength and their possible coexistence, we are more able to break with a linear and univocal reading of our future and pose possible futures, which may be useful in the present. Combining academic constructs and fictional reading seems likely to increase the scope of the theory, in particular through the use of emotions.

Our work certainly creates stories and gives life to characters, in turn provoking affect for the reader. The representation of all our options - from the most frugal to the most techno-optimistic – allows our readers here the means to project themselves into possible futures that can frighten or delight. Several researchers have empirically demonstrated that both positive emotions such as hope, as well as negative ones, such as fear (Meijnders *et al.* 2001, Filho *et al.*, 2017), are effective in motivating people to adopt pro-environmental behaviours (Nabi *et al.*, 2018). The converging point in the literature that addresses climate change and emotions is that emotions of any kind matter (Morris *et al.*, 2019). Several studies have examined how these two conflicting types of emotions can coexist and be effective: from feelings of responsibility and guilt to pride and anger. Furthermore, the purely scientific register used in the proliferation of reports (IPCC or IPBES², among others) on the rapid deterioration of natural ecosystems does not really 'speak' to individuals; narratives, on the other hand, which are structured as stories, may facilitate experiential processing, increasing affective engagement and emotional arousal, which is known to serve as an impetus for action (Morris *et al.*, 2019). Whether building on positive or negative emotions, they seem to represent a real point of leverage, capable of activating dynamics of change and individual and collective action.

TO BE CONTINUED?

As mentioned before, the research that we quickly sum up here serves as a complement to the theoretical work of Hoffman and Devereaux-Jennings (2018), embodying, interfacing, and prioritizing the archetypes of the Anthropocene and helping to emphasize the importance of emotions for climate change awareness. However, this creative work with Rich's fiction also afforded us the opportunity to develop a playful methodology for imagining alternatives, avoiding the linearity common to theorizations and representations of utopian and dystopian futures (Kallis and March, 2015). In this way, we hope that this type of production can

² The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems Services.

encourage individual - and even collective – action. We can imagine two ways to continue that kind of work.

First of all, fiction could be used in workshops with firms' managers or policy makers to figure out the possible future of cities. ONU states that in 2050, 70% of the worldwide population will live in an urban environment. Mobilising the theatre of the city and its possible dystopian futures to raise awareness of the climate transition may thus be a good intuition.

For their part, cities around the world are building their resilience by opting for ambitious transition programs. Stockholm, for example, started its transition very early on, becoming the first European city to be granted the Green Capital Award in 2010. The city implemented urban tolls to encourage the use of public transport, introduced a carbon tax on greenhouse gas emissions that has been in place since 1991 and never been contested; public transport uses biofuels such as ethanol, biodiesel, HVO - from oils - or biogas; the latter are local and produced on site using the capital's wastewater. On the other side of the world, the so-called "Model City of Latin America", Curitiba (Brazil) has been committed to an environmental policy since the 1980s. It sorts 70% of its waste, thanks to an ingenious exchange system: waste for baskets of vegetables, and the city has planted more than one million trees along its highways. The designed future of green cities can thus also provide us with positive visions, and engage us beyond the dystopian horizon of apocalyptic fictions. We would be close here to the *Solarpunk* movement, which wishes to reinject positive affects into our imaginations in order to re-enchant the future of our threatened world and its vulnerable cities. In concrete terms, the use of fiction could be developed within the framework of the Global Network of Learning Cities³, which promotes the practice of lifelong learning, particularly in the context of the sustainable development objectives.

Using fiction to awaken to climate change and to shape possible paths to a better world could obviously be done through teaching. Experiences of that kind are flourishing. In France for example, ESCP Business School has developed a 30-hour design-fiction course. Here fictions of the possible futures are not only used but created by the students themselves. The course, focusing on a special theme each year (for example, the fate of the oceans) is structured in three phases. The first phase is about exploration and leads to frame the prospective question that the students will work with. The second phase deals with the formulation of the challenges to address, the definition of scenarios and possible 'worlds' to incorporate in scenario-building. The third and final phase consists of prototyping and creating fictional artefacts (Carbone et al., 2021). These kind of tools - either using existing fictions or elaborating fictional material – could be deployed in the particular context of lifelong learning education as the role of continuing education in raising awareness of sustainable development has long been debated (Blewitt 2004, Kearney and Zuber-Skerrit, 2012).

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³ A learning city is defined by UNESCO as a city which effectively mobilises its resources across all sectors to maximise the opportunities for lifelong learning for all its citizens.

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