



Contents lists available at ScienceDirect

Technological Forecasting & Social Change



Literary praxiphorical analysis: Using science fiction and fantasy to shape organizational futures

John F. Keane^{a,1}, Gary Graham^{a,2}, Bernard Burnes^{b,3}

^a Leeds University Business School, Woodhouse Lane, Leeds, West Yorkshire LS2 9JT, UK

^b University of Stirling Management School, Stirling FK9 4LA, UK

ARTICLE INFO

Article history:

Received 13 November 2012

Received in revised form 12 October 2013

Accepted 16 October 2013

Available online xxxx

Keywords:

Prigogine

Order-through-fluctuations

Autopoiesis

Maturana

Varela

Science fiction

Speculative literature

Fantasy

Organizations

Change

Management

ABSTRACT

In the last two decades, organization theorists have sought to apply complexity theories developed in the natural sciences to the study of organizations. This article develops a fictional approach for critically interrogating two important complexity concepts – order-through-fluctuations and autopoiesis. Using these concepts in a metaphorical sense, this paper explores how science fiction and fantasy (SFF) can be used to prepare for and shape organizational analysis. Exploring the consequences of scientific innovation is a key purpose of SFF. The speculative nature of the genre makes it a fertile metaphorical ground for testing new management concepts. This article, therefore, uses two classic SFF novels to explore the metaphorical use of complexity concepts for organizational analysis: i. William Golding's *Lord of the Flies* is used to explore the dissipative structures model, a theory devised by Ilya Prigogine; and ii. Arthur C. Clarke's *The City and the Stars* is used to explore autopoiesis, a theory devised by Humberto Maturana and Francisco Varela. The article outlines the theoretical modeling possibilities from embedding fictional constructs into critical organizational analysis. It concludes by summarizing the methodological guidelines and business contexts for implementing literary praxiphorical analysis.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

Broekstra [12] claims that systemic theories derived from the natural sciences can illuminate organizational research. However, Burnes [14] warns that it is necessary to be clear as to whether such theories are being used as metaphorical devices to provide a means of gaining new insights into organizations or as a way of mathematically discovering how and why organizations operate as they do. In this article, we are using complexity theories developed in the natural sciences in a metaphorical manner. The use of metaphors to explore organizations is not new [2,17,53,54]. However, the approach adopted in this article, instead of applying a given metaphor to an existing organization

to 'test' its validity, seeks to apply metaphors to fictional literary settings. In essence, we adopt a 'literary praxiphorical' analysis in order to 'test' a metaphor's explanatory value in a fictional context. Of course, applying metaphors to real-world organizations is also praxiphorical analysis in the strictest sense, in that it involves the 'testing' of metaphor in a practical context, but we aim to interrogate organizational theory through creative fictional analysis. The advantage of this approach is that it embeds fictional creativity into model construction.

The term 'complexity theories' serves as an umbrella label for a number of theories, ideas and research programs that are derived from scientific disciplines such as meteorology, biology, physics, chemistry and mathematics ([70,57]). As Burnes [14] argues, there is not one theory, but a number of theories developed by different scientific disciplines, which gather under the general heading of complexity research. Consequently, it has to be recognized that any particular definition of complexity is colored by the perspective of the original discipline. To emphasize the diversity of viewpoints

E-mail addresses: j_f_keane@hotmail.com (J.F. Keane),

g.graham@lubs.leeds.ac.uk (G. Graham), bernard.burnes@stir.ac.uk

(B. Burnes).

¹ Tel.: +44 798 386 1426.

² Tel.: +44 113 343 8557.

³ Tel.: +44 1786 467366.

0040-1625/\$ – see front matter © 2013 Elsevier Inc. All rights reserved.

<http://dx.doi.org/10.1016/j.techfore.2013.10.025>

Please cite this article as: J.F. Keane, et al., Literary praxiphorical analysis: Using science fiction and fantasy to shape organizational futures, Technol. Forecast. Soc. Change (2013), <http://dx.doi.org/10.1016/j.techfore.2013.10.025>

among complexity researchers, this paper follows Black's [8] lead and uses the term complexity theories rather than theory.

Complexity theories are increasingly being seen by academics and practitioners as a way of understanding organizations and promoting organizational change [8,9,15,16,48,56]. In the natural sciences, their proponents use complexity theories to argue that disequilibrium (chaos) is a necessary condition for the growth of dynamic systems. Typically, these proponents claim that such systems are prevented from tearing themselves apart by the presence of simple order-generating rules [29,55]. Those seeking to apply complexity theories to organizations argue that organizations, like complex systems in nature, are dynamic non-linear systems and that the outcomes of their actions are unpredictable but, like turbulence in gases and liquids, are governed by a set of simple order-generating rules [13,58,68]. If organizations are too stable, nothing changes and the system dies; if too chaotic, the system will be overwhelmed by change. In both situations, an organization can only survive and prosper if a new, more appropriate, set of order-generating rules is established [49]). We will look at two prominent complexity theories – the dissipative structures model and autopoiesis. These will be applied praxiphorally to William Golding's *Lord of the Flies* and Arthur C. Clarke's *The City and the Stars*.

For the most part, applying metaphors to real-world organizations should provide better strategic insights and outcomes than applying metaphors to organizations in fictional settings. However, applying them to the works of SFF, which are designed to speculate about future imaginings of products, organizations and even societies can open up fruitful avenues for speculating on the future states of organizations and how these might be achieved. The fact that SFF texts need to maintain internal consistency, or 'the willing suspension of disbelief', reinforces this claim. At its best, SFF can create a cogent 'environment' where new perspectives and concepts emerge. Golding's and Clarke's novels were selected for praxiphorical analysis because the social organizations presented in each novel have sufficient internal consistency to test the metaphorical concepts. One important pre-condition for effective testing is a cogent fictional setting replete with a consistent social environment.

The article begins by showing how SFF presents an ideal testing ground for the use of organizational metaphors. It then goes on to describe and then apply complexity theories, as metaphors, to Golding and Clark's novels. This is followed by a discussion and evaluation of this approach for studying organizations and organizational change. The article concludes by summarizing the methodological guidelines and business contexts for implementing literary praxiphorical analysis.

2. SFF as a testing ground for organizational metaphors

Interviews with eminent SFF authors support the proposition that SFF writings can provide an optimal testing ground for organizational metaphors [35]. Many writers in this genre are actually scientists or engineers whose voices have traditionally been excluded from mainstream cultural life [6]. SFF is by definition a speculative fiction, creating a huge number of hypothetical social conditions that far surpasses the social realism of contemporary literature [5].

As early as the 1960s, popular SFF fiction explored, for example, the social impact of genetic manipulation. The Star Trek episode introducing the genetically-enhanced superhuman Khan Noonien Singh (*The Space Seed*) is of considerable interest in this regard. Of course, a number of SFF authorities have also explored this issue, not least Philip K. Dick and Ridley Scott in *Blade Runner* [24] and Robert Heinlein in *Methuselah's Children* [36]. Is it possible that the current debate about the moral implications of genetic enhancement of plants, animals and humans could learn much from such narratives? The refusal of these fictional super humans to accept the limitations of democratic government furnishes us with valid warnings about the dangers of 'improving' people. In sum, the value of praxiphorical analysis lies in its capacity to transcend mere abstract discussion of scientific and social developments by presenting cogent metaphors of its various social applications.

A number of writers have suggested that the speculative context of SFF permits frank discussion of controversial subjects literary fiction tends to avoid [35]. SFF fiction under communism in the Soviet Union is a good example of this. Soviet SFF writers could explore social and economic issues that more conventional Soviet authors dared not touch [33]. Even in the Anglo-American context, the genre has always been at the cutting edge of social commentary. This tradition started with H.G. Well's *The Time Machine*, the first great science fiction novel in the Anglophone world.

If we are trying to link organizational analysis with the natural and social sciences, SFF fiction provides a metaphorical environment to simulate their practical operation. In addition, SFF writers are often trained scientists (both Arthur C Clarke and William Golding studied the sciences, for example). This means that they are familiar with expressing abstract scientific concepts and, moreover, to understand them. Although praxiphorical analysis should accommodate non-scientific management concepts, it is especially well-suited to testing scientific concepts for the reasons discussed. Therefore the organizational theories researched here are derived from the natural sciences.

SFF fiction has a long and ongoing tradition of metaphorical exposition. Frank Herbert's *Dune*, for example, still serves as a valid satirical exploration of the West's over-reliance on Middle-Eastern oil reserves [38]. It has to be recognized though, that such texts are at best only an approximate truth. For example, one of the working texts used here, *The Lord of the Flies*, fails to reflect the true reality of life on a desert island. For instance, the green-colored clays the boys use to camouflage themselves are rarely found in nature. Wild pigs are large and probably too ferocious for children to hunt. Further, all the major characters symbolize specific social types. The Samneric twins represent the likeable but fickle working classes, Ralph represents democratic leadership, Piggy symbolizes academic intellectualism and Simon the spiritual way of life. Jack and Roger, the two most malefic boys on the island, represent authoritarianism.

Given that complexity theories are concerned with the emergence of order in dynamic nonlinear systems operating at the edge of chaos, we can see why they can be applied fruitfully to the works of Clarke and Golding. In so doing, we will show that praxiphorical analysis can be used to help organizations to envisage and bring about a desired future state. This is especially the case for organizations that are still

Download English Version:

<https://daneshyari.com/en/article/7257330>

Download Persian Version:

<https://daneshyari.com/article/7257330>

[Daneshyari.com](https://daneshyari.com)