EDITORIAL

Post-anthropocentric creativity

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the flesh that covers me is the flesh that covers the sun. (Thomas 1966[1956], 86)

1 Call

As described in the call for submissions, this special issue aimed to audit existing conceptions of creativity in the light of non-anthropocentric interpretations of agency, autonomy, subjectivity, social practices and technologies. A review and update of these conceptions is prudent in an age when human creativity is credited as the dominant, yet hugely destructive, influence on the planetary environment.

The conceptual componentry of creativity is in redesign on many shop floors, including those of new materialism (Barrett and Bolt 2013; Coole and Frost 2010), speculative realism and object-oriented philosophy (Bryant, Srnicek, and Harman 2011), posthumanism (Callus and Herbrechter 2012), ontological designing (Fry 2012), biology (Turner 2000), science and technology studies (Knorr-Cetina 1999), multispecies ethnography (Kirksey and Helmreich 2010), deep ecology (Sessions 1995), post-environmentalism (Shellenberger and Nordhaus 2011) and ecosystem approaches (Waltner-Toews, Kay, and Lister 2008), to name but a few.

In response, the editors proposed two lines of enquiry, aiming to engage and connect the Routledge

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The first line of enquiry considered the agents, recipients and processes of creativity. With current developments emphasising the interdependence between human and biophysical systems, nonhuman entities can be seen as creative agents. How do such agents differ from the recipients of their creativity? Posthumanism questioned understandings of humanity but largely continued the focus on human invention, human freedom and human selfconstruction through technology. Can matter, things, nonhuman organisms, technologies, tools and machines, biota or institutions be seen as creative? Turning from agents to relationships and processes; are the concepts of embodied or autonomous agency necessary for thinking about creativity? How can existing notions of creativity be extended or challenged through the developing understandings of complexity, emergence, supervenience, evolution and ecosystems?

With the notion of creative agency made more inclusive, the second line of enquiry would consider the *purpose*, *value*, *ethics and politics* of creativity. The concept of creativity implies production of desirable novelty. But is production of novelty always of value? In a finite world, the creation of the new often comes with the destruction of the old. Should creativity be judged by the equity of its goals

relevant work that already exists in a variety of disciplines:

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(cf. net-zero or regenerative creativity)? Can the ethics of creativity be defined through the characteristics of its processes (cf. slow creativity or resource recycling)? Should current power relationships be reshaped (e.g. from mastery over nature to deep listening and from creativity to stewardship)? Answers to these questions can challenge established worldviews by interrogating freedoms, rights, voices, subjectivities and the imaginations of all stakeholders, human or otherwise.

Returning to the remit of the journal, how can these lines of enquiry illuminate, benefit from, expand, reinterpret or challenge existing and forthcoming phenomena of computation or—in other words—of "digital creativity"?

The issue sought to produce an interdisciplinary conversation with contributions from art, design, computing, engineering, architecture, philosophy and science. The editors particularly encouraged submissions that included analytical explorations of existing practices through multispecies ethnographies, case reconstructions, actor following, process accounts or other research methods. Submissions could also extrapolate into critical appraisals of future possibilities using thought experiments, speculative designs, design fictions or imaginable use-case scenarios. In this context, possible and emerging practices, early prototypes or partial demonstrators could be appropriate and were especially welcome.

The editors encouraged innovative narrative or visual strategies that could express relevant scenarios better than standard forms of academic writing. Dialogues, conversations, plays, scripts, instruction sets, games or visual essays (for example) were invited as suitable alongside logical arguments or formulae.

2 Response

The call for the special issue on post-anthropocentric creativity generated substantial interest and attracted approximately 70 initial submissions. From this response, the editorial process selected five articles that, preceded by this editorial introduction, and an editorial article that follows, are included in this issue. The editors believe that these articles sample the theme in diverse and sustained ways. At the same time, it must be clear that such a small number of articles cannot hope to cover the available conceptual possibilities of the topic or survey all possible methods and ways of expression.

This special issue opens with an editorial article that aims to provide one, very particular sample of the theme and call into attention some of the issues that initiated the original call for submissions. To illustrate its points, this article relies on the discussion of chess and its relationship with computing. Given the advanced state of techno-social hybridity of this particular field, it is used as a model for possible future developments elsewhere.

This elaboration on the theme of the call is then continued at an entirely different scale by Benjamin's exploration of creativity at the level of whole civilisations. The history of human culture on Earth saw the emergence, growth and amalgamation of multiple civilisations, increasing in scale in parallel with the development of new technologies. Current human technologies increasingly operate across the whole planet. Benjamin's article considers how such processes operate at even larger scales and uses models developed to guide the search for extra-terrestrial life to reflect on the possible forms and traces of creative activities. Classifications of such activities can be universal rather than anthropocentric if they are made to depend on the commonalities in the physics and structure of the Universe rather than on specificities of human psychology and the familiar conditions on Earth. In the absence of experimental data, descriptions of such universal forms are limited by human logic but their very possibility is new to the discourse on creativity and raises interesting philosophical questions.

The "alien" theme continues with the article by Jørgensen and Wirman, who discuss a

practical project of designing digital games for orangutans. The article raises important questions in regard to designing for users whose lifeworlds, cognitive abilities and behaviour are different from that of designers and who cannot easily express their wishes. The article discusses a participatory design approach that uses play to support creative interspecies inquiries. The outcomes of this work are interesting in the context of design for animals but also have wider implications. By looking at animal play, the project highlights the difficulties arising when design is done on the basis of generalisations and simplifications. By utilising co-play as a process of co-creation, it also proposes a method that seeks to challenge the opposition between nature and culture and erode the human monopoly on technology.

From the focus on other animals, the issue moves to the consideration of technological artefacts as living others in Marenko and van Allen's discussion of animistic design. The article proposes a schema for deliberate resistance to the ideal of transparency that is characteristic as an ideal goal of many contemporary interfaces. Instead of promoting utilitarian transparency or cultivating addictiontwo common ways of relating to technology -the author's project seeks to consider a broader and more varied palette of possible practical and emotional relationships. While the fully developed, practical utilisation of this approach are yet to be seen, the idea is suggestive as a possible way to broaden the functionalist user-centeredness of more conventional approaches.

What if an outcome of such an animistic design approach did exist and could report on its experiences? Would it have an opinion on the design philosophy that led to its existence? How would it feel about it? These questions are playfully explored in the next article, by Vavarella, who responds to this special issue's invitation to experiment with alternative forms of writing by presenting a fictional interview with a drone—an embodied artificial intelligence device. The project uses a specifically developed method to construct a suggestion of the drone's personality, memory and language. The results, while fantastical, are evocative of the emotional and communicative possibilities of variously intelligent and autonomous artificial devices.

The themes of emotional awareness, ethical responsibility and place in society initiated by Vavarella are picked up by Phillips et al., whose article focuses on political messages, influences and impacts that find their way into automatically generated content. They demonstrate that the deployment of artificial labour to generate games results in subtle effects that deserve further scrutiny. The resulting phenomenon of distributed and unobvious authorship makes for ambiguous responsibilities over the embedded rhetoric or labour politics. Digital systems can be powerful at automatic production but require an oversight by the well-educated humans who can understand the complexities of the ensuing meanings and prevent the promotion of socially degrading images or attitudes.

The editors hope that this special issue will lead to new contacts, collaborations, research efforts and publications on what has turned out to be a broadly relevant but largely unexplored theme.

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