



Gaming conservation: Nature 2.0 confronts nature-deficit disorder



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ABSTRACT

This article explores the role of digital (video and computer) games in the rise of what Büscher (2014) calls “nature 2.0”: new web-related media that allow users to move beyond passive voyeurism to actively “co-create” or “prosume” the images and processes promoted by organizations committed to biodiversity conservation. Environmentalists have long expressed concern that increasing mediation of human–nonhuman interactions by electronic technology is contributing to a growing “nature-deficit disorder” (NDD) and thereby diminishing support for conservation. This concern would seem to implicate the electronic media comprising nature 2.0 as well, yet digital games are increasingly promoted by environmental organizations precisely for their potential to overcome this very problem. In this paper, I explore to what extent this aspiration is warranted by analyzing digital games devoted to issues of tropical rainforest conservation. In support of proponents’ aspirations and contra the NDD thesis, I suggest that the virtual nature experiences digital games provide may at times actually inspire more affective commitment to environmental causes than the direct experiences most conservationists advocate. On the other hand, as critics of overarching new media assert, engagement with digital games can create a false sense of agency in that belief in the efficacy of one’s virtual engagement may discourage more direct entanglement in the complicated and contentious politics of “real” natural resource management. The result, I propose, is a likelihood that digital games will increase the widely documented “environmental values-behavior gap” between professed commitment to environmental causes and effective action in support of such causes.

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1. Introduction

How to move global society towards greater sustainability is an increasingly pressing question for all manner of researchers and practitioners. There are many ways to approach this question, emphasizing social, economic, political, and psychological issues, or a combination thereof, respectively. One particularly popular approach among environmental advocates in the neoliberal age has been to focus on changing individual behavior by promoting greater awareness of environmental problems and, following from this, a commitment towards exhibiting more “pro-environment behavior” consistent with sustainability (Maniates, 2001). This is particularly true within the realm of biodiversity conservation, where conservation-focused organizations around the world invest considerable resources and energy in developing environmental education programs in pursuit of this aim (Fletcher, 2015).

Recently, this goal of encouraging pro-environmental behavior via educational programming has become caught up with the increasing enthusiasm over the potential of “the Internet” and “social media”¹ to inspire greater political awareness and action in

general. This is particularly the case with so-called web 2.0 media that offer users the opportunity to creatively shape media in a process often called “prosumption” (Beer and Burrows, 2010; Ritzer and Jurgenson, 2010). Proponents contend that web 2.0 technologies offer profound possibilities to empower consumers as a force of progressive change (Ritzer and Jurgenson, 2010) and prominent conservation organizations have become invested in this trend, promoting new interactive media platforms in order to increase support for conservation (Bücher and Igoe, 2013) – a dynamic Bücher (2013, 2014) labels “nature 2.0.”

One increasingly popular form of such nature 2.0 comprises digital (video and computer) games that invite users to interact virtually with conservation landscapes (Bücher, 2014; Sandbrook et al., 2015). Sandbrook et al. (2015) call these “conservation games,” defined as “those intended to make a positive contribution to conservation.” This trend draws on the immense appeal of digital games (DGs) in general as well as a growing trend towards “gamification” (the application of certain gaming characteristics) in diverse social realms, including business, education and health care (Kapp, 2012; Burke, 2014).

A peculiar aspect of such conservation gaming is that it seems to fly in the face of longstanding concerns among environmentalists that increasing mediation of humans’ relationship with nonhuman nature by audio-visual technologies, including video games as

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¹ The reason for placing these terms in quotations will be made clear in the next section.

well as television, film, and web-based media, is diminishing support for ecological causes by reducing the direct nature experiences that are believed to generate pro-environmental commitment and behavior. This concern implicates all forms of digital media rather than those solely focused on virtual nature experience. Particularly prominent in this perspective is Louv's (2005) well-known "nature-deficit disorder" (NDD) thesis but similar concerns have been voiced by others (e.g., Pergams and Zaradic, 2006, 2008; Kareiva, 2008). Pergams and Zaradic, for instance, correlate a decrease in national park visitation in a number of high-income societies with the rise (among other factors) of "videophilia," defined as "the new human tendency to focus on sedentary activities involving electronic media" (2006: 392), a trend that Kareiva (2008) considers a grave threat to the future of conservation generally.

The use of DGs to promote conservation, then, embodies a certain paradox: an attempt to harness videophilia to combat the negative conservation implications attributed to videophilia itself. Yet the consequences of this paradox for the potential of digital games to effectively contribute to conservation have yet to be analyzed as an important component of the growing popularity of nature 2.0. While Büscher (2014) describes digital games as a key category of nature 2.0 he mentions them only briefly. On the other hand, Sandbrook et al. provide a preliminary exploration of the potential of digital conservation gaming yet do not situate this within emerging discussion of nature 2.0 per se. Meanwhile, a substantial body of research in (new) media studies has explored the use of DGs for a variety of social causes yet conservation games have not been specifically addressed thus far.

The present analysis therefore brings these discussions together to develop an expanded exploration of DGs as an important new arena in which conservation is represented and championed within the realm of nature 2.0. I do so by analyzing DGs developed and promoted by prominent organizations in support of one of the world's great conservation causes: protection of tropical rainforest. Reflecting the rather "fuzzy" boundaries between web 1.0, 2.0, and 3.0 categories in general (see Barassi and Treré, 2012), the relationship between DGs and nature 2.0 is somewhat ambiguous, since only some conservation games contain actual presumptive elements – for instance, MyConservationPark, discussed by both Büscher (2014) and Sandbrook et al. (2015), and the several games explored by Koot (2015). Yet even DGs without explicit presumptive content embody some of the logic of web 2.0, in that "video-games are interactive software; they require the player to provide input to make the procedural model work" (Bogost, n.d.: 2; see also Alexander, 2008). Indeed, Burke asserts that games add a unique and vital ingredient to the web 2.0 mix, for while other media "are replacing human interactions with digital interfaces and allowing people to have access to vast resources through the Internet, to be connected with everybody, and to provide built-in support groups . . . [w]hat's missing is the motivation, and that's where [gaming] comes in" (2014: 34). On the whole, then, DGs can be seen as something of an intermediate category bridging nature 2.0 and more conventional digital media. To emphasize the elements of nature 2.0 embodied by DGs in general – motivation and participation – my analysis thus focuses on games without direct presumptive content.

As arguably the first in-depth inquiry into this relatively new object of analysis, this research is unavoidably exploratory, seeking primarily to build on Sandbrook et al. (2015) to develop an expanded conceptual framework for future investigation of conservation gaming. Consequently the empirical basis for the analysis is rather limited, drawing primarily on my personal engagement with the two DGs that form its main subject matter, a methodology employed in previous research on digital gaming (see Gee, n.d.). I began by conducting a thorough online search for conservation

games, utilizing several web sites that seek to collate and promote such games² as well as the examples listed by Büscher (2014) and Sandbrook et al. (2015) in their pioneering discussions. From this I identified games focused on tropical rainforest conservation specifically for closer examination. Based on an inductive analysis of this sample, I selected two games that seemed to best exemplify significant patterns for in-depth analysis (detailed below). For each of these games, I analyzed both their actual content through direct engagement and discussions about them conducted online. As Büscher (2014) points out, nature 2.0 is usually intended to support actual conservation in offline spaces. Hence I have followed his suggestion to bring together research concerning on- and offline phenomena by also drawing on my own participant observation on experiential education excursions to neotropical rainforest environments as the basis for a limited comparison with the content of one DG. Admittedly, these two data sources fit together somewhat awkwardly, yet they combine to raise important questions about the form and function of conservation gaming as an invitation to more rigorous subsequent study.

I begin by describing a growing debate concerning the extent to which new media can contribute to progressive politics in general. I then explain how this debate plays out in emerging discussion of nature 2.0 in particular. Subsequently, I describe the rise of DGs and their promotion for educational and political purposes, including as supports for biodiversity conservation. I then link this discussion to overarching concerns about NDD in relation to the influence of audio-visual mediation of human–nonhuman relations. In opposition to the NDD thesis, I contend that virtual nature experiences offered by DGs can actually inspire more affective commitment to environmental causes than the direct experiences conservationists commonly advocate. On the other hand, as critics of overarching new media assert, DGs can create a false sense of agency in that belief in the efficacy of one's presumption may discourage more active engagement in the on-the-ground politics of natural resource management. The result, I propose, is a likely increase in the widely documented "environmental values-behavior" (EVB) gap between professed commitment to environmental causes and one's effective action in support of such causes – a gap that may in fact be actively encouraged by the increasing trend toward neoliberalization in conservation policy and programming (see Büscher et al., 2014).

2. How not to liberate the world

This is the subtitle of Morozov's (2011) contentious tome *The Net Delusion*, a scathing critique of the capacity of "the Internet" to facilitate progressive political action. "The Internet" is in quotations and capitalized here to echo Morozov's point that there is no unified set of media comprising the phenomenon in question but rather a diverse array of more or less loosely related sites, platforms and networks. Observing a widespread euphoria concerning the Internet's capacity to solve all manner of social problems, which he calls "internet-centism," Morozov (2011, 2013) asserts that this optimism is wildly out of proportion with what the technologies comprising the internet (in lower-case now to emphasize its diversity) is actually able to achieve. Others go further, contending that the Internet may in fact diffuse and forestall more progressive action by providing users with the illusion that they are making significant change by simply clicking links and "liking" causes, dynamics disparaged as "clicktivism" and "slacktivism" (Fuchs, 2008; Lovink, 2012). This is seen to be exacerbated by the "nichification" the Internet promotes in channeling users

² See <http://ecogamer.org/>; <http://www.gamesfornature.org/>; <http://appsineducation.blogspot.nl/2014/01/apps-for-researching-rainforest>.

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