



# **GAMEPLAY MODE**

**WAR, SIMULATION,  
AND TECHNOCULTURE**

**PATRICK CROGAN**

Gameplay Mode

## ELECTRONIC MEDIATIONS

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PATRICK CROGAN

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*Dedicated to the memory of*

RONNI REDMAN

(1966–2007)

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# Introduction

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## Technology, War, and Simulation

Maxis's 2008 computer game *Spore* (Electronic Arts) offers a world of interactive play that tells us much about the world in which it jostles for position among competing digital entertainments. Designed by Will Wright, legendary designer of video game classics *Sim City* (Maxis, 1989) and *The Sims* (Maxis, 2000), it is a game of many modes. Single-player play (including first-person, tactical, realtime, and turn-based strategy), asynchronous interactivity, user-generated content creation, and publishing are all built into the downloadable or packaged commodity. The player controls the development of a species from its beginnings as a single cell organism through stages of biological, then sentient, socioeconomic development up to and beyond global technocultural forms. The final phase is one of space exploration and colonization. Players compete against game- or user-created species, first to achieve phase victories and ultimately to make one of the game-winning moves: be first to reach a star in the center of the galaxy, or to defeat the cyborg species defending it. The game package encourages players to spend time on creating new species. The developers run Web sites supporting user communities for sharing, testing, and celebrating creatures and for developing new applications around these activities.

Key elements of today's digital media technoculture are immediately readable in *Spore*'s release and the buzz of both enthusiastic and annoyed user responses to the game. A virtual world and virtual history simulator, its

ambit was global in the way that Western media conglomerates envisage the globe. It was released internationally in September 2008 and was then available globally for download from the publisher, Electronic Arts, one of the largest multinational game publisher-distributors. Although essentially a single-player game, it sought to compete with multiplayer virtual game-worlds by building in user creation and sharing of content, managed by EA and the developer, Maxis. This immediately brought angry responses from buyers because the game's digital rights management software lodged itself unannounced on their computer registries and restricted their ability to play the game online from more than one registered computer. This led to a rights management hack version of the game becoming the record peer-to-peer download in the months after the game release before EA modified the copy protection software to better match the online usage the developers wanted to encourage.

Global solicitation of player-consumers in simulated virtual environments, problematic appropriation of user creativity, copyrighting and negotiation of intellectual property, ever-expanding packages targeting player participatory and community involvement—these themes have all attracted attention in digital media studies. From a more specifically games studies perspective, *Spore* also offers its grand mobilization of artificial life and procedural generation software as significant developments in game design and animation technology.

What is not recognizable in *Spore* when approached from the perspective of digital media and games studies is its adoption of the military technoscientific legacy forged in the face of total war and the nuclear age inaugurated by the cold war. This has nonetheless had a profound impact on the development of computer games. It is there in the permanent warring across biological and sociocultural phases of *Spore* gameplay, in the routine terms for these modes (tactical realtime strategy), and in the game victory conditions (win the race to an objective or defeat the ultimate enemy). It is also to be found in less explicit ways, inhabiting the technological lineages of digital computing, visual displays and interactivity, virtual space simulation, and software development. It is there in the teleological tweaking of evolutionary principles that inform the key game dynamic of competitive creature evolution: game goals dictate the direction and prerogatives of evolution, whereas

in biological theory, evolution is not teleological. Something deeply embedded in the cold war development of simulational technologies, at the center of which was the digital computer, is playfully explored in *Spore*: the impulse to model phenomena by hypothetically extending and extrapolating its future to see how that future may be predicted, modified, and controlled.

This book is about this military technoscientific legacy and its shadow in contemporary technoculture. It may be better to think of contemporary technoculture as the shadow. This is closer to the perspective I take in the chapters that follow, but I look at many of the ways in which other futures for technocultural becoming are sought and experimented with in adopting this weighty legacy. I examine this theme through computer games because they and the practices that have developed around their use are especially privileged technocultural forms for this purpose. Computer games are the first major global technocultural form native to the computer, and they are a defining technology of the contemporary digital information age. This is why I generally prefer to call them *computer games*, as opposed to the more common term *video games*, although for the sake of variety I use both terms interchangeably.

In many respects, these computer-based entertainments represent a point of generational division between those brought up in recent media contexts that contain video games as a matter of course, and those who are older. This partly explains their habitual appearance in mainstream media as a focus of (and even a scapegoat for) anxieties about adolescent behavior and the deleterious effects of media exposure for children. Simplistic, misinformed discourse about the nature of video games, which frequently focuses on their obvious relation to their military origins as simulation training aids, tends to fill the space of what should be a more rigorous and reasoned examination of these relations. Most media studies and video game researchers either outright reject or avoid engaging the mainstream moral panic approach to video games and their relation to violence. They throw the baby out with the bathwater, avoiding the question concerning technoculture's relation to war and the military that computer games pose so insistently beyond the media effects debate, which itself is unable to articulate it adequately in these terms.

I will approach computer games differently for the purposes of this study, with the aid of some exceptional guides, because as I just suggested, contemporary media and video games studies tend not to recognize just how significant this military technoscientific legacy has been and continues to remain for our world of mediated digital culture and communications. Whereas media technology historians identify the military funding and developmental contexts in which digital computing and simulational technologies first emerged, media studies, and video game studies in its wake, seem to prefer neither to dwell on the legacies of these beginnings nor to follow the story forward too closely. This may strike one as particularly strange today in the wake of the large-scale military involvements of the United States, the United Kingdom, and so many other Western and developing states around the world in the first part of the twenty-first century. On the other hand, this perhaps better explains what I would call the elective naivety of much media and games studies, which avoid a frank consideration of computer games as forms that emerge out of ongoing interchanges between war, simulation, and contemporary technoculture. In this formulation, naivety is not meant to signal ignorant immaturity but to indicate the stubborn popularity of notions of culture and technology that ignore the profound connections of each to war in both their origin and ongoing development.

There have emerged some significant exceptions to this state of affairs in recent years. Roger Stahl's *Militainment, Inc.: War, Media and Popular Culture* and Nick Dyer-Witherford and Greig de Peuter's *Games of Empire: Global Capitalism and Video Games* are the most substantial of these. Stahl examines in detail across several forms of media entertainment (reality television, sports coverage, toys, and computer games) the expansion and transformation of the relations between the military and entertainment spheres since the war in the Persian Gulf of 1991. He argues that in this period, which corresponds with the rise of computer-based media technologies, interactive war developed out of the previously dominant (and still significant) spectacular packaging of war in mainstream Western media. In this solicitation of the citizen for entertainment purposes, the provision of an explosive, spectacular (but always sanitized) vision of the battlefield gives way to a "projection into the action" via the interactive situating of the viewer in a more

experiential, immediate, and realtime virtual war.<sup>1</sup> He identifies military-themed video games as the most representative of militainment's cultural manifestations of "the emerging politics of the virtual citizen-soldier, produced by the changing configurations of electronic media, social institutions, and world events."<sup>2</sup> A central theme for Stahl is the contradictions of a more involved, embodied, and immediate (if virtual) experience of war that nonetheless wants to secure the insulation of the citizenry from a deliberative social and political engagement in the interminable war on terror prosecuted in their name.

Dyer-Witherford and de Peuter also explore the post-cold war period via their focus on video games as products and active contributors to the latest phase of global capital's empire theorized in a critical modification of Michael Hardt and Antonio Negri's influential 2000 book of the same name. They identify video games as originating from the same military technoscientific efforts as the computer itself.<sup>3</sup> The U.S. military-industrial complex was the "nuclear-armed core of capital's global domination," and games remain "umbilically connected" to it.<sup>4</sup> Dyer-Witherford and de Peuter examine the emergence of commercial video games from out of this core before going on to analyze their contemporary role in the "immaterial" political economy and in the maintenance and dissemination of global capitalist hegemony.

While Stahl and the *Games of Empire* authors concentrate on the post-cold war era of American technoculture and geopolitical adventure, I seek to make more substantial theoretical connections with the period in which the computer develops from out of the total mobilization of World War II to explore the longer lines of becoming of the changing configurations of media, social institutions, and the world associated with global capital, digital technoculture, and the current crisis of the political in American civil society. Simulation will emerge as central to the virtualization of the citizen in the contemporary moment (with all its contradictions). The complex connections between war and technoculture made concrete in the lineage of computer-simulation technologies from this period have implications for critically approaching today's situation. My consideration of these may add another dimension to the valuable and substantial work on the political and economic critique of computer games in relation to war and the military accomplished in these studies.

## War

War, simulation, and technoculture are the three principal terms I address here, but first I must emphasize their interrelatedness. A schematic map of this book would have computer games at the center of a triangle, the points of which are war, simulation, and technoculture. The historical, technological, and conceptual connections between these three corners of the triangle, each with the other two, pass through the history, technology, and conceptual development of computer games. The latter are constituted out of these passages.

Gilbert Simondon, the mid-twentieth-century philosopher of technology whose work has been rediscovered in anglophone contexts in recent years, has an influential concept for the kind of relational dynamics I am sketching out here: transductivity. Simondon described it as

a process—be it physical, biological, mental or social—in which an activity gradually sets itself in motion, propagating within a given domain, by basing this propagation on a structuration carried out in different zones of the domain: each region of the constituted structure serves as a constituting principle for the following one, so much so that a modification progressively extends itself at the same time as this structuring operation.<sup>5</sup>

This ontogenic process involves a reciprocal, rebounding effect rather than a linear enchainment of causes and effects from a single original cause. Simondon developed the notion in order to account for technical evolution and its interaction with social change. Adrian Mackenzie states that Simondon later generalized transduction to name any process “in which metastability emerges.”<sup>6</sup> Transduction, argues Mackenzie, “aids in tracking processes that come into being at the intersection of diverse realities.”<sup>7</sup> Our examination of computer games, therefore, is best thought of as an attempt to track the transductivities between war, simulation, and technoculture.

War’s place is crucial in this book’s framing of video games. The absence of substantial critical examinations of the central, ongoing role played by military technoscience in the development of computer games in recent scholarship is readily apparent to anyone scanning the indexes, content pages, and abstracts of the growing body of published work in game studies

and related subareas of media and cultural studies. We will encounter many instances of this in the course of our second look at influential theorizations of computer game phenomena. To compensate for this, I devote substantial effort in what follows to considering military-led and -funded technological research and development in terms of its influence on computer game hardware and software. This is certainly necessary, but more fundamental to the aim of this study is the reconsideration of war as no longer simply opposed to peace as an exceptional, temporary interruption. Peacetime and wartime cannot, if they ever could, be neatly separated into discrete durations, as seemed to be the case during and after World War II. While this may, and indeed should, be a fairly obvious and noncontroversial assertion—for both the United Kingdom and the United States, not to mention the other victors of that conflict, the number of days since that they have had no armed forces on active duty in some part of the globe is negligible—the assumption that brackets war off from peace, and the military from the domestic or the civilian spheres, is still tenaciously held in mainstream discourses surrounding politics, economics, and social and cultural life.

There are some important critical and cultural theorists for my project who have undermined this assumption, none more so than Paul Virilio, who has not ceased to question its distorting effects across the interpretation of art, architecture, media, culture, history, and politics. His notion of pure war describes the tendency toward the undermining of any definitive separation of wartime and peacetime existence. This tendency crystallized in the passage to total war traversed in the course of World War II and gained momentum in the cold war era. The cold war continued the processes and technics of total mobilization beyond the end of the “hot war” under the decisive stimulus provided by the advent in 1945 of the nuclear weapon. The impact of the latter continues to be underestimated today.

Virilio has characterized the essential feature of this pure war tendency as the increasing ascendancy of logistics over strategic and political prerogatives in the organization of life. In *Pure War*, Virilio cites a definition of logistics that issued from the Pentagon in the early postwar era: “Logistics is the procedure following which a nation’s potential is transferred to its armed forces, in times of peace as in times of war.”<sup>8</sup> The transfer of a nation’s potential to its armed forces in this guise of a generalized policy and procedure

would amount to the transformation of a nation into logistical potential and a concomitant blurring of the distinction between times of peace and war. To bring it back to video games, *Spore* players play in this blurred time, getting pleasure from their hypothetical creatures designed to evolve into successful species in a hypothetical historical technoscientific contest leading to a space operatic conclusion. They play through various modes adopted from tactical and strategic political training and simulation practices traceable back to the technoscientific think tanks and research teams of the 1940s and 1950s. These were first assembled in the government-led reinvention of the scientific interface with industry during World War II and consolidated in postwar arrangements. One cannot hope to critically comprehend contemporary computer simulation-based technoculture without taking account of this historical development and its ongoing unfolding.

### Simulation

That technoculture is productively understood as computer simulation based, and that computer games provide a valuable gauge of this situation, is articulated neatly in this quote from influential interactive media and games theorist Espen Aarseth: “The question is what is the essence of computing? If there is such an essence we could say it is simulation: that is the essence from Turing onwards. Games of course are simulations and computers are a prime platform for doing simulations.”<sup>9</sup> Aarseth has in mind Alan Turing’s vision of the modern digital computer as a universal machine capable of imitating other machines when he identifies simulation as the essential constituent of computing and therefore of computer gaming.<sup>10</sup> We will examine in some detail, in particular in the first chapters of this study, the wartime and postwar logistical contexts in which both the technologies and the conceptualization of computer simulational practices flourished. Understanding the simulational milieu in which computer-based technoculture has developed since the 1940s is key to any substantial critical account of that development.

Simulation is a process by which a phenomenon is representatively modeled by another phenomenon. The process involves a selective reduction in the representative model of the complexity of elements composing the simulated phenomenon. Gonzalo Frasca puts it in the language of postwar

systems theory: “Simulation is the act of modeling a system A by a less complex system B, which retains some of A’s original behaviour.”<sup>11</sup> As technique and complex of technical devices, or rather as their combination, computer simulation was invented to deal with natural, sociopolitical, economic, cultural, tactical, strategic, and logistical phenomena. Of course, technology itself pervades these phenomena. Simulational technics immediately became a factor in the phenomena their development was dedicated to address.

As the now-pervasive “prime platform for doing simulations,” computers have had a major impact on history and society over the last sixty years. It is a difficult task to find the right scale to assess this impact without missing something of its scope and extent, even while it is problematic to overgeneralize about the “information,” “digital,” or “computer” age. If these terms, as well as the critical work done under these names, designate general conditions or developments in this period differently, it is evidence of these difficulties as much as it is of differing assessments of what is most essential or determining in the technological changes of the recent past. I want to focus on how simulation has been and remains a crucial motivating and enabling factor of these changes. The electronic digital computer promised a greatly enhanced capacity for this technique—or, better, technical tradition of a family of techniques, including games of all kinds, military training devices and exercises, probabilistic statistics, and so forth. The digital computer offered a reconfigurable platform for simulating different phenomena, the calculating power to model complex interactions, and the speed to do so in real time. This is the assumed ground of the designed activities and experiences promised by a game like *Spore*.

Developing computer simulation in a military technoscientific context of the logistical drive toward a permanent preparation for the eventuality of thermonuclear conflict, it is no wonder the calculative power and speed of the digital computer forged pathways leading toward preemption. The modeling of real-world physical or human behavior to experiment with its hypothetical futures amounts to a technics of anticipating what has not yet happened. This needs to be considered as both an extension and an exacerbation of the purposive quality of technics in general; the technical instrument or system is always taken up in a gesture aimed toward the future its