Chapter 4
DataPlay:
Experiments in the Ludic Age

Colleen Macklin
Parsons the New School for Design, USA

ABSTRACT

DataPlay is a research project inspired by the concept of a "ludic age" (Chaplin & Zimmerman, 2008), where the challenges of extracting knowledge from the "data deluge" of the information age (Economist, 2010) are met with game-based approaches to information design. This paper examines Mannahatta: The Game in order to illustrate the issues involved in translating large datasets into games and game mechanics. The prescriptive work of Tufte (1983, 1990) regarding information visualization provides a conceptual framework and is applied to this paper. Tufte's (1983, 1990) approach is convergent and divergent from the strategies uncovered in the research into games as ways to not just visualize, but directly experience data.

INTRODUCTION

The 19th century was the industrial age; the 20th century, the age of information. Will the 21st century be the ludic age?

This question, posed by Eric Zimmerman and Heather Chaplin at the Games, Learning and Society 4.0 Conference at University of Wisconsin, Madison in June 2008, has sparked a set of experiments by the lab I direct, PETLab (Prototyping, Evaluation, Teaching, and Learning) at Parsons The New School for Design.[1] Our research initiative "DataPlay" is an attempt to imagine and make games for the ludic age. DataPlay is an attempt to try out different forms of representing data in games – forming "data-based games." In essence, we are linking the practices of information visualization with game design to create spaces where data is not only represented – it is directly manipulated and transformed through play. If the challenge of the information age is the "data

DOI: 10.4018/978-1-4666-1864-0.ch004

deluge" (Economist, 2010) can "gaming literacy" (Chaplin & Zimmerman, 2008) devise strategies for the navigation and discovery of new properties and possibilities within data? Is it possible to game the systems found in this information, finding new solutions to complex problems? If games are a viable response to the challenges of the information age, what will they look like? What is at stake in the transition between the information and ludic ages? How are social tectonics shifting and re-forming to create this new age, and who are the players? What follows is a tour through the early days of the ludic age with an in-depth look at one of our experiments, *Mannahatta: The Game*, and the lessons we learned about designing "data-based games."

FROM STEAM ENGINE TO GAME ENGINE

The psychological impact of the Information Revolution, like that of the Industrial Revolution, has been enormous. It has perhaps been greatest on the way in which young children learn. Beginning at age four (and often earlier), children now rapidly develop computer skills, soon surpassing their elders; computers are their toys and their learning tools. Fifty years hence we may well conclude that there was no "crisis of American education" in the closing years of the twentieth century -- there was only a growing incongruence between the way twentieth-century schools taught and the way late-twentieth-century children learned (Drucker, 1999).

This quote, from an influential 1999 article in *The Atlantic Monthly* written by Drucker (1999), provides insight into the challenges of the information age and the kinds of literacies needed to successfully navigate it. The shift in learning cited above stems from something Drucker (1999) doesn't directly mention, but alludes to: If computers are "toys" for youth, they enable children to play with information. Whether that information is crafted into a game experience or simply an unstructured space for surfing, play is a fuel for learning in the information age. Might someone looking back from the future point to this moment and these gamers as the foundation of the ludic age?

If so, what is the legacy the information age leaves the ludic generation? One might actually be a byproduct of the new technologies and literacies of the information age: Data. The data trails that we leave behind as we move through our day, on and offline, has formed what a recent issue of *The Economist* terms "The Data Deluge":

Everywhere you look, the quantity of information in the world is soaring. According to one estimate, mankind created 150 exabytes (billion gigabytes) of data in 2005. This year, it will create 1,200 exabytes. Merely keeping up with this flood, and storing the bits that might be useful, is difficult enough. Analyzing it, to spot patterns and extract useful information, is harder still. Even so, the data deluge is already starting to transform business, government, science and everyday life. It has great potential for good—as long as consumers, companies and governments make the right choices about when to restrict the flow of data, and when to encourage it (Economist, 2010).

The report calls for more individual knowledge and control in how personal data is used, more transparency and making more data available to users. As the authors point out, "[R]ather than owning and controlling their own personal data, people very often find that they have lost control of it" (Economist, 2010). One of the largest challenges thrown over the millennial wall from the information age of the 20th century might be: What will we do with all of the data we generate, how will we make sense of it, and how can we have more transparency and control over our own data?