



University of  
**Salford**  
MANCHESTER

# Surviving the Middle Ages : notes on crafting gameplay for a digital historical game

Hiriart, JFV

<b>Title</b>	Surviving the Middle Ages : notes on crafting gameplay for a digital historical game
<b>Authors</b>	Hiriart, JFV
<b>Publication title</b>	The SAA Archaeological Record
<b>Publisher</b>	Society for American Archaeology
<b>Type</b>	Article
<b>USIR URL</b>	This version is available at: <a href="http://usir.salford.ac.uk/id/eprint/48421/">http://usir.salford.ac.uk/id/eprint/48421/</a>
<b>Published Date</b>	2016

USIR is a digital collection of the research output of the University of Salford. Where copyright permits, full text material held in the repository is made freely available online and can be read, downloaded and copied for non-commercial private study or research purposes. Please check the manuscript for any further copyright restrictions.

For more information, including our policy and submission procedure, please contact the Repository Team at: [library-research@salford.ac.uk](mailto:library-research@salford.ac.uk).

# SURVIVING THE MIDDLE AGES

## NOTES ON CRAFTING GAMEPLAY FOR A DIGITAL HISTORICAL GAME

Juan F. Hiriart

*Juan F. Hiriart is a lecturer in the Department of Computer and Videogames at the University of Salford in Greater Manchester, United Kingdom.*

“The past is a foreign country: they do things differently there,” wrote L. P. Hartley (2002 [1953]) in the opening lines of his novel *The Go-Between*. For me, the past has always been fascinating, and so the multiplicity of ways in which people connect with history in one way or another. From the reading of historical fiction, the watching of films based on past events, or the engagement and participation in highly demanding forms of reenactment, a surprisingly large number of people find pleasure and satisfaction in traveling back in time. For them, “the past is not only present,” as Rosenzweig and Thelen noted, “it is part of the present” (1999:178). As an avid gamer, and professional game developer, my interest in the past gravitated naturally to the study of the relationships between all these forms of historical engagement and digital games, arguably one of the most important media in the current cultural landscape.

For the last four years, I have been directing this interest to Ph.D. research investigating the dynamic intersections between history, learning, and computer games. Defined as practice-based research, this study builds up from the development of a historical game in which, giving myself complete freedom to experiment and put to the test different assumptions about historical gameplay, has become a useful tool to investigate the ways in which digital game technologies can be used to foster the meaningful and critical understanding of the past.

Following nothing more than my personal interest and intuition, I decided to situate my game in the early medieval period of Anglo-Saxon England. This turbulent moment of British history has always been interesting to me, as it was the time in which this land, although on the brink of being colonized by Danish invaders, became a single unified state with an identity that lasts to this day. Despite being very interested in this time period, I had to recognize that my knowledge of medieval British history was sketchy at best, so a good part of my energies at the beginning of the research

were devoted to immersing myself in the complexities of the Anglo-Saxon world. To become myself an informed traveler in this particular period, I selected and studied a wide selection of historical sources and materials. These were not restricted to academic texts but also considered a heterogeneous collection of historical engagements, the type of which Katie King (2008:12) encapsulates as “pastpresents,” forms “in which pasts and presents very literally mutually construct each other.” Among these, I thoroughly enjoyed the research of heritage sites, experimental archaeological reconstructions, reenactment groups, television series such as the Irish-Canadian production *Vikings*, and the excellent collection of Bernard Cornwell’s books *The Warrior Chronicles*, very recently turned into a television series by BBC America.

A key part of any design process is the writing of a program, loosely defined as a “wish list” containing a set of criteria on which the design is based, and by which it will be evaluated. In this case, the design program had to consider at least four interdependent and interconnected in-game systems: representation, simulation, narrative, and play. As representation, the historical game had to allow players to visit the Anglo-Saxon world, granting the exploration of representative buildings, the meaningful interaction with believable characters, and the manipulation of objects and tools of cultural significance. As simulation, the world needed to be augmented with procedural algorithms communicating “how things worked” at the time. Non-player agents had to exhibit believable behaviors, communicating social and cultural patterns of interaction with other agents and the environment and reflecting the complex layers of meaning associated with the struggle of surviving in the harsh living conditions of medieval time. As narrative, the game had to convey factual information about the historical period while also letting players participate in the construction of a nonlinear storyline. Finally, and perhaps most importantly, the game needed to work as a game. It needed to be engaging and fun, setting into motion all the mechanisms that make games intrinsically motivating.



Figure 1. Third-person level of interaction within the Anglo-Saxon village. The player can freely explore the simulated world, build, and interact with objects of cultural significance.

Having an initial list with the components that would form the basis of the player experience, the task that followed consisted of devising initial ideas—gameplay and game mechanics—that could make it concrete in a digital artifact. At this stage, the temptation of following existent industry game genres was very strong but needed to be restrained. A review of literature quickly shows how researchers facing a similar endeavor very often fall into the making of direct connections between existent commercial games and learning or epistemological approaches to history, without taking the time to consider historical gameplay as a *new design space*. Certainly, the analysis of games that already have been built is always useful, but in order to understand the “wicked” problem of designing historical gameplay, a different approach was needed. As a design process, the development of historical gameplay required experimenting with new ideas, establishing a productive dialogue between theory and praxis.

Admittedly, a project of this nature would have been impossible only a decade ago, where the building of a functional

game, even in a prototype state, would have been an almost impossible task for a single developer. Fortunately, the “democratization” of game development technology, a process led by game engine providers such as Unity, Unreal, and Crytek, has moved game development to a point in which even a single developer, without the extensive budget, knowledge, or specialization from big 200-team studios can quickly construct games exhibiting many of the state-of-the-art technologies available in top commercial titles. For this project, I chose to work with the popular Unity game engine, a platform with which I have been working since its early versions were released. In my opinion, this engine and editor offer important advantages when trying to find creative solutions to complex design problems. Within the engine, every game entity can be malleably shaped by the addition of components, very much like adding blocks of new functionality as playing with Lego bricks. This component-based system greatly facilitates quickly implementing and evaluating new design ideas, introducing changes, or removing functionality without seriously compromising other systems already working in the game.



Figure 2. Top-level simulation of the Anglo-Saxon world. The environment is modeled through a hex-grid system reflecting environmental changes and agent interaction.

As the project progressed, a sequence of different prototypes was developed and evaluated. This process led not only to concrete “products” but also to the conception of provisional theories about historical gameplay. In this article, I would like to center my attention to one particular theory: the spatial perception of the game world and its relation to different historical conceptualizations.

The perception of space in video games is interfaced by the metaphor of the camera, which at a functional level dictates how the player sees the world and what he/she can do. In first-person shooters (FPS), for example, the camera is posi-

tioned at the player’s head, remediating many of the cinematic conventions from the subjective shot. Moving the camera slightly backward, it becomes a third-person perspective, a point of perception that allows for a different type of embodiment and gameplay interaction. As the camera moves far away from the character and higher in altitude, the perspective becomes omnipresent, allowing the player to de-center his attention from the character to the game world. Interestingly, these shifts in distance, scope, and spatial perception can be productively associated with two separate historical epistemologies, also defined as a function of their distance to the object of study: micro- and macrohistory.

Microhistory, defined as “the intense historical investigation of a small area” (Szi­jártó 2002:209) studies a particular historical period with a high level of detail, many times centering the attention into a single person, place, or event. It concentrates on the personal experiences of everyday life, with the conviction that these small narratives provide a good standpoint to look into the broader sociocultural structures of past societies. Within the game, the player would assume the role of a particular Anglo-Saxon individual—a powerful *ealdorman*, *ceorl*, or even a slave—looking at the world through his eyes and experiencing his everyday life, problems, and limitations. As the camera moves further away from the character, the game allows the player to connect with a macrohistorical perspective. At this level, the emphasis is less on personal narratives and more on ideas of space, size, and distance in historical interpretation, allowing the player to explore the multiple relationships of interdependency between agents, resources, and game geography. The game offers multiple instances to make decisions, which reflect in long-term effects on the environment, resources, and larger social structures (Figure 1).

Within the Anglo-Saxon game prototype, both instances of play are implemented through nested simulations, an approach that has been used in physical war games (Sabin 2012) but to my knowledge not yet sufficiently explored in digital historical games. Digital implementations of this pattern consist of a series of relatively independent but interconnected simulations running historical processes at different scales. In more concrete terms, a first simulation runs an immersive, navigable third-person interface, which allows the player to walk around and interact with non-player agents and other objects from the environment. The player experience focuses on surviving the harsh life conditions of early medieval England, something that can only be achieved by establishing a successful, self-sustainable village. To do this, the player needs to interact with a second level of simulation, which drives the point of perception to the perspective of the entire game world. This system is modeled in more abstract terms through a hex grid, in which each hex represents a specific patch of land and contains detailed information about the village’s physical environment. Although separate, the interaction at both the immersive and village levels is necessary to achieve the game goals and any change in either the upper or lower simulation level have a substantial effect on the other (Figure 2).

Although still not finished, the game prototype currently is at a state in which most of the systems responsible for interacting at different scales can be played. Looking ahead to the project’s plan, development will continue in iterative cycles of design, implementation, and evaluation. Through this process, my goal is to validate the gameplay ideas that allow users to interact and create meaningful links between with micro and macro perspectives, through the interplay between narrative and simulation systems and different levels of representation. Hopefully, the research project will yield design patterns and design principles that could be implemented in both historical and nonhistorical games, expanding to related domains of application, such as virtual reconstructions, museums, exhibitions, and formal learning contexts.

### References Cited

- Brewer, John  
2010 Microhistory and the Histories of Everyday Life. *Cultural and Social History* 7(1):87–109.
- Hartley, Leslie  
2002 [1953] *The Go-Between*. New York Review of Books, New York.
- King, Katie  
2008 Networked Reenactments: A Thick Description amid Authorships, Audiences and Agencies in the Nineties. *Writing Technologies* 2(1):1–8.
- Rosenzweig, Roy, and Thelen, David  
1998 *The Presence of the Past: Popular Uses of History in American Life*. Columbia University Press, New York.
- Sabin, Philip  
2012 *Simulating War: Studying Conflict Through Simulation Games*. Continuum International Publishing, London.
- Szi­jártó, István  
2002 Four Arguments for Microhistory. *Rethinking History* 6(2):209–215.