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Home - Game Mods

Introduction: Mod Mod Glorious Mod

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"Dismiss this, it's just about mods!" This sentence was a comment a reviewer wrote on an early conference paper submission. The subtext was clear to me, the writer. Rather than say the paper was substandard (which may well have been the case), the reviewer could not imagine that discussing game mods could be of any value to an academic audience. Well I don't know who the reviewer was so I am briefly going to inflict my retort on you, gentle reader.

Firstly it never hurts for theorists to get elbow deep in practice, just as it does not hurt for a practitioner to encounter, experience and test a little theory. In my experience from running game design classes, even professional gamers learn a great deal from discussing and debating game design, both the successes and the failures.

My students may well complain that I intellectualize, but even the most intellectual of game theorists can learn from the actual process of game design, and from watching people play. Theorists learn about the entangled issues of game design, the politics of user testing, and the designer fallacy (I designed the game, I know how best to experience it, if the audience can't work it out there is something wrong with them, not the design). Practitioners in turn can begin to understand (perhaps) how theory, good theory, can help open eyes, inspire new design and turn description into prescription. Granted, even theorists can get confused between describing a good game and prescribing what makes a good game, but it is an excellent way of thinking more deeply about why good games work, and whether breaking down their success into rules, guidelines or patterns can actually create more good games.

What are mods? According to Finch (2011) and Wikipedia (2012), "Mods, short for 'modifications' are user-made edits made to PC videogames..." We will take a wider view of mods in this book, but Finch's (2011) definition is a reasonable starting point:

What is a mod? Mods, short for 'modifications', are user-made edits made to PC videogames, the game equivalent of fan fiction.

Traditionally free, they range from minor code changes to fix bugs or smoothen gameplay to 'total conversions'—complete overhauls of art assets to form an entirely new experience.

A computer itself could be considered "modded" (O'Brien, 2012), but none of the authors in this book seem to take this definition. Game modifications can be artwork, skins (graphic look), tools, total game transformations, new code, or, perhaps less clearly, games ported to other platforms by fans. They can also be homage games, which link back to earlier separate, but thematically-linked game worlds. These are not necessarily mods in a strict sense. The endgame, rather than higher, locked levels, could be the modding itself, to extend and expand the enjoyment of the game. In a similar vein, Scacchi (2010) proposed five types of game mods: user interface customizations, game conversions, machinima and art mods, game computer customization, and game console hacking.

In "Am I Mod or Not? - an Analysis of First Person Shooter Modification Culture" Nieborg (2005, p.11) suggested exact definitions would not be forthcoming:

Although both gamers and scholars do not have any trouble with the term 'mod' and seem to share a common understanding of what is or what is not a mod, the question whether a game is a mod or a "regular" (commercial) game is an arbitrary one.

"Arbitrary" is a strong word, but it is true that the semantic distinctions between a tool to create mods, an editor to design or save levels, and the distinction between a partial mod and a total mod, are all contestable. What exactly are the criteria by which a modification to a game can be considered to be a game mod? Merely changing keyboard shortcuts is not enough; a game mod in this day and age seems to be less and less any incremental additions or deletions to a game level, and more and more a noticeable and significantly intentional change to the gameplay and experience of the game itself. And the audience for game mods is increasingly demanding (Totilo, 2011). Unfortunately we don't yet have terms to distinguish between games that have been personalized or otherwise incrementally altered, games that have been significantly created ex nihilo, and game mods that provoke and challenge our notion of the original games or of the gameplay itself (Laukkanen, 2005).

If not a pedigree, at least mods have some form of a history; they have been around for a good three, four, even five decades. In this book Peter Christiansen argues that SpaceWar! (1962) was the first game mod. It was at least a good sign of hacking culture (Laukkanen, 2005). And that is half a century before the release of this book. Of course there is debate over the first mod, Bogacs (2008) named the 1983 game Lode Runner as the first game with a game editor, but he seemed to think Ms. Pac-Man was the first game mod, created in 1981 and released in 1982. More recently, ZZTT (1991) was a text program with an editor; it spawned many mods (Au, 2002). Au noted that by 1993 there was also a Castle Smurfenstein, a humorous mod of Castle Wolfenstein, where all the Nazis were replaced by Smurfs. Some of the original files are still online (Johnson, n.d.).

Arguably, it was DOOM, released in 1993 by id Software, which was not just a pioneering First Person Shooter 3D game, but also the first game to be deliberately designed for modmaking. The company released WADs (Where's All the Data?) mods; the Doom Editing Utility (DEU) software and later The Doom Construction Kit: Mastering and Modifying Doom, and a free version of DOOM that was downloaded over 10 million times.

For turn-based games, Lochutus (2010) dates Civ-modmaking back to 1991 for Civilization I, but as a "mainstream phenomenon" (and the development of modding communities) to 1996 for Civilization II. Quite possibly the first hack-modded turn-based game was Empire or Classic Empire, originally written by Walter Bright, and released in 1977, (Godfellow, 2006). It was not intended for modding, the mods and ported version were distributed, if not altogether legally, and modding it inspired the lead designer of Civilization II to promote modding features with Civ II, even if he had to disobey his own company to do so (Godfellow, 2006).

Why design mods? Mods can extend the life of the original game, and inspire the professional game designers and owners of the original franchise. Au (2002) wrote:

Player-created additions to computer games aren't a hobby anymore -- they're the lifeblood of the industry.. Miller and his "Wolf3D" developers watched astounded as mods "actually helped extend the life of a game by providing free additional content for players to explore.

Brian Reynolds, the lead designer of Civilization II (and a self-confessed hacker or modder of Empire) risked the displeasure of his employers in creating

scenarios for Civ II modders. In a fascinating online interview with Troy Godfellow (2006) he noted:

Much of the "viral marketing" we got for Civ2 in the first year came from the power of the scenario & mod community. The mods & scenarios also made the Civ2 expansion packs possible, and these in turn kept the franchise going strong for the full five years until the release of Civ3 - you could still find Civ2 selling for a strong price in any game store right up until Civ3 shipped. Indeed, scenarios and modability are now cornerstones of the whole franchise - every Civ generation gets multiple X-packs and the modability just becomes more and more detailed. So truly I think the scenarios and [sic] modability have proven key not just to Civ2 specifically but to the whole Civ franchise (and I'll happily take credit for defiantly taking the first step against orders, one of my last great feats of "commando programming"!)

Although adding modding scenarios to Civilization II was a dangerous career move for Reynolds, (but a huge factor in the ongoing success of the game franchise), mod design can be also be the entry ticket into a professional job in the game industry. Perry (n.d.) asked Valve founder Gabe Newell how to get a job, considering how tough it was to break into the industry with no prior experience. Newell replied "The best thing to do is to start making content using the MOD tools that are out there."

The foot in the door can be for mod tool design as well. Robert Duffy was so frustrated by the QuakeEd level editor for id Software's Quake II, that he offered his own improved version for free on his website. This piece of altruism was not overlooked; he was offered a job over the phone by id Software's cofounder, John Carmack (Au, 2002).

Game companies know that their modding tools are also interview resources, and business products. Gary Newman, the inventor of the famous modding tool, Gary's mod, flunked his own job interview with Valve, (Totilo, 2010), but he still managed to sell his add-on tool over a million times (Senior, 2012). As Newman mentioned to Totilo, modding is no longer simple and amateurish, it is a serious business, and a popular hobby. Nardi and Kallinikos (2007) note that "CTMod claims over one hundred million downloads—an astonishing figure for any software."

Large scale mod design involves vast amount of people management, and can lead to jobs in non-gaming industries. For example, Nehrim (Sureai, n.d.), is a complete game conversion of Elder Scrolls IV: Oblivion. The designers claim it is a totally new story and characters, and features original music and 56 professional voice actors, all recorded in a professional recording studio in Berlin. Although I cannot guarantee the modders scored recording contracts, has anyone heard of "Mages' Got Talent"?

Apart from increasing one's employment prospects, designing a game mod is one of the few fields of criticism where one can design and test an alternative to the current offering from the comfort of an armchair. Joubert (2010) noted:

Since time immemorial, players have looked at the games they've played and decided that they could do one better. It's the classic scenario which begins with a humble "what if?" and eventually turns into a vast community-driven spectacular of custom content, innovative ideas and foul-tempered 13-year-olds trying to blast each other with AKs.

Are mods quality products? Mods are not necessarily low-quality. Will Wright has remarked on their creativity (Au, 2002), Scacchi (2011) has remarked on their use as "a leading form of user-led innovation in game design and game play experience". And Bethesda, the makers of the Elder Scrolls series, wrote in 2011 on their blog:

Bethesda has a long history of supporting the modding community, and for good reason. It's a science fact that mod tools make the world a better place: they make modders happy because they can mod, they make developers happy to see modders gaining experience, and they make fans happy to see an endless stream of content they can mess around with.

Quantity is not always quality, but there is an argument to be made that many in the modding community believe some mods are as well designed as the original games (Fomin, 2012). Mods can target more specialized audiences, and thus can (sometimes) create a more thoughtful and authentic experience than the actual game they originated from, they can be a reflexive experience (Nardi and Kallinikos, 2007). Au (2002) wrote "while the professional WWII games are quite good in their own right, their believability is marred by the assumptions of mass market and the clichés of the first-person shooter genre". He noted that some mods have no onscreen bloodshed, unlike the original games.

Further, Au (2002) remarked: "mods can come up with new gameplay elements that the industry is too conservative to implement, or noncreative to come up with." Two examples of Battlefield mods with an original theme are Siege (Siege mod team, 2003) and Battlefield Pirates (Scurvy Cove Productions, 2003).

Nardi and Kallinikos argued that despite limited tools, modding in World of Warcraft can greatly improve the user experience:
However, the quality of play—the user experience—is vastly changed through the use of mods. Mods reduce effort, make visible invisible
parts of the game, aid players in coordinating with one another, and capture important aspects of a player's history of play.

Au (2002) suggested that one way of comparing the quality of mods is on authenticity, on how well it compares to the original historical
event or situation. Judged on historical authenticity and battlefield realism, Day of Defeat is actually better than both of them, treating the
grim nature of World War II with the fidelity it deserves. "The ultimate compliment for us," says Thornton, "is when veterans of military
service play our game and say, 'That's just what it's like!"

In his online blog piece, "The Top 10 Game Mods Of All Time," Finch (2011) proposed various criteria for judging the aesthetic value of mods. By best, he appears to mean most influential in the gaming community. But he also listed the following attributes: atmosphere (such as in Aliens TC), innovative gameplay and genuine team work (Team Fortress), inventive and creative (Chaos DM), populist appeal (Counter Strike), and also incredible popularity (Defense of the Ancients, with 20 million players in China alone), path-finding "gritty realism" (Red Orchestra), the most successful indie project on Steam (Garry's Mod), and one without selection criteria listed unless you count "a story-driven experimental ghost story" (Dear Esther). He also quoted Bethesda's compliment to the Cube Experimental mod, "one of the most impressive mods for Fallout 3" (CUBE Experimental), while Black Mesa contained "an exhaustive overhaul of detailed art assets." So for Finch, mods can be judged on their atmosphere, gameplay, popularity, gritty realism, transmedial innovation, or sheer amount of work undertaken.

Wawro and Miller (2011) used similar criteria for their sixteen best mods, they wrote "Valve Software elevated the first-person shooter to a narrative style with the debut of Half-Life," and they also seem to value games that

were modded to reflect completely different genres and gameplay. In passing they also mention how one Elder Scrolls III: Morrowind mod has a complete environment modeled by fans' imagination as to the back history of the entire Elder Scrolls universe. The one unique feature they mention is not really a mod, or is it? In the original Half-Life game one can choose between a gun or a flashlight, but not both. In this mod, there is duct tape to tie the gun to the light so the player does not have to shoot in darkness. Considering the setting is a research complex, duct tape makes sense, but affects the gameplay (now the game is far less scary). It is arguably the only example listed by critics where modding has to balance immersion versus in-world realism.

A similar online article by Fahey (2011) also featured the same criteria. Kenney's 2011 article on the most significant 15 mods (although entitled modders, it refers to the mods themselves), also emphasized the importance of completeness and immersivity, and the ability to combine several game genres in the one game. Senior's 2010 article on the ten most "essential" Oblivion mods favored those which adjusted gameplay, had a greater amount of detail, and evoked a rich sense of atmosphere.

The online article by Hatfield (2012), "The 25 best Skyrim Mods," mostly ranked and judged mods on how far they could either redress Skyrim issues or add aesthetic effects. He also mentioned a mod by an arachnophobe that was designed to remove all spiders from the game, but the replacements were giant bears that appeared in the most inappropriate places. So mods can be selected for unexpected humor, but generally the way in which mods were judged appears to be mostly on account of popularity, additional detail they add to textures and atmospheric effects, homages such as games within games or games recreated in a completely different game engine, or improvements to user interface and game balance issues.

There is however some debate as to whether greater progress was made in terms of products (the mods) or the process (the tools designed in order to create the mods). In his short online article, Locklear (2002) argued that the real stars of modding are the toolmakers rather than the modders themselves. Apart from the issue of modding tools versus mods, very few of these awards and rankings seem to have been based on how the mod provokes us or challenges convention.

There are reflexive games and reflexive game mods. The game September 12, inspired a Socratic debate between a philosopher and a digital humanist (Rockwell and Kee, 2011), Space Refugees was almost a game mod, a thoughtful agency-reversing homage to space invader games, (Whalen, n.d.);

and Escape from Woomera, a game mod, was a semi-ludic criticism of refugee policy in Australia that infuriated the then government minister (Nicholls, 2003). At least one home-made mod has accidentally threatened and humiliated US intelligence services, Congress and mainstream media (Sonic Jihad, see Losh, 2007); yet much more debate seems to focus on games per se rather than on modding. There is still room to develop more reflexive mods, and to further develop game mod criticism.

While it appears that modding is an excellent way for a player to personalize and customize their gameplay, Nardi and Kallinikos put forward an interesting ethical and legal question. On pages 12-13 they wrote:

Mods, then, are a creative means by which to make a game fit players' interests, values, feelings, and orientations in pleasing ways. Mods go some distance toward allowing players' personalities to shape experience with a software artifact... In other words; are we witnessing the rise and subsequent fall of FPS mod culture based on an open-source ethos or are we at the beginning of a new era featuring cleverly commoditised user-created content?

In "Am I mod or not", Nieborg (2005) also warned us that "the bottom-up practice of developing mods is collaborative in nature and in certain cases somewhat artificially created. There is an absence of criticism on the rise of commodification practices within gaming culture." He also noted in another publication (2007) that "A lot of digitized information seems to be up for grabs. Leadbeater's model of mass creativity equals constant unpaid labor by the masses but not so much for the masses." These issues have come to the attention of not just game design academics (Kücklich, 2005) but also business academics (Jeppesen, 2004).

In our first chapter, "Between a Mod and a Hard Place," Peter Christiansen elaborates on why people design mods, the value of modding, and how modding is carried out so as not to raise the ire of game developers. For example, he refers to SpaceWar! as the first game mod. Christiansen pronounces it significant not because of technical achievement, but because it was never a commodity. It was never sold, mass-produced, or underwent copyright protection. The freedom of content creation possible with game modding leads to his observation that "modding allows people to make the games that the industry is not making." The "counter-hegemonic process" that he believes is possible with game modding is perhaps still to be fully realized, for the very people who could pay for the computer games featuring alternative interpretations of the gaming industry tend to be the very demographic that is the target of the alternative viewpoints. One example Christiansen gives is Finnwars, a Battlefield mod [http://www.moddb.com/mods/finnwars]. The Finnish mod is a replay of three wars Finland fought (with the USSR and with Nazi Germany), but a period of history not well known or remembered in the West. This mod saw the development of a standalone game, FinnWars II [http://www.iceflakestudios.com/fw2static/].

In Chapter 2, Natalie Underberg explains the design of a game mod, Turkey Maiden Educational Computer Game, to teach about Depressionera Ybor City, Florida history and culture. The area is known for its historic cigar industry and Latin immigrant population. The game itself is based on a Spanish folktale collected from Ybor City, Florida and was adapted into a video game mod using the popular Role Playing Game (RPG) Neverwinter Nights. "Use of 'The Elder Scrolls Construction Set' to create a virtual history lesson", by Eric Fassbender, is our third chapter. In it, Fassbender describes his use of the level editor Elder Scrolls Construction Set (TESCS), to create a history tour of Macquarie Lighthouse, possibly the first lighthouse in the Southern Hemisphere. The mod was based on municipal blueprints, the 3D assets were imported into TESCS from 3D Studio max via a Civilization plugin (modders are used to these unusual software workflows), and Fassbender carefully outlines the steps required to create his mod and the avatar guide, (featuring lip-synched spoken information on the Lighthouse), all of which was then displayed on Macquarie University Reality Centre's three monitor display and immersive projection screen. Oblivion's TESCS is a powerful but easy tool to create complete mods that include realistic avatars and lip-synched verbal conversation. It can also feature some interesting musical accompaniments (which was the focus of Fassbinder's research). As a spatial visualization tool, it has been used for creating virtual buildings and cities by architects and urban designers (Varney, 2007).

One architect, Andrew Smith, of CASA at the University of London, said in Varney's 2007 article for The Escapist that "only when they [architects] actually see the work that they realize the power and potential of gaming for architectural visualization. As such, most of the work is carried out by the modding community, rather than academics or professionals." His viewpoint is seconded by Chris Totten, who with some advice from Valve level designer Chris Chin, wrote his Master's thesis on how game design can help architectural design (Gamasutra staff, 2009) and a later article on how architectural design can help game mod design (Totten, 2010). So where does one start? Kevin Conway's Chapter 4, "Game Mods, Engines and Architecture", undertakes an introduction of some of the features of game design, particularly level design, and he discusses the pros and cons of mods for architectural visualization, ending with examples of a Bruce Goff House (Bruce Goff houses are a good challenge for 3D modeling, as they were known for their idiosyncratic and "organic" design). There are many issues here which deserve further inspection; such as, which techniques of place making can help level design? How do architects address and extend the art of interactivity in a digital medium? Since the above essays, is architectural visualization via game engines now seen as a reputable pursuit by professional architects? Are they satisfied with the levels of graphic fidelity and amount of realistic detail? These issues are also of interest to other designers, from designers of human computer interaction, to designers of Virtual Reality environments.

In Chapter 5, "Teaching Mods with Class", I was interested in how students could learn about game design issues through level design, and modding allowed them to build complete levels within a single semester course. I was also very interested in how the design briefs I gave them, along with the ambitious design goals they had, if any genuinely creative and engaging solutions could emerge in the time given. So in this chapter I predominantly discuss game mods my students have created, but I also give some of my thoughts on what is best to focus on or to avoid in class, and ideas on how modding can be seen not only as an in-game level modification, but also as a way of modifying the game environment itself where even if the software is not directly modified, the agency, interface, and cultural design is significantly impacted.

Are mods creative? Although I may have touched on creative aspects of modding in my own chapter, there is no chapter directly on this issue, (at least not yet), as to whether game mods can be seen as creative, and there is no chapter on the related issue as to how to judge the aesthetic values (and perhaps categories) of game mods. Can there be a masterpiece mod? As I indicated earlier, mod theory is not the most detailed part of game studies, and the lack of a thorough response to these questions intrigues and infuriates me.

However, I can say that mods are definitely used creatively by design professionals. We don't have a chapter on game mods for art, (for that you might want to read the thesis by Bogacs, 2008). However, we do have a chapter on game mods for film-making. "Choosing a game and game engine for modding", by Friedrich Kirschner; examines some of the theoretical and conceptual ways in which mods can be used, perhaps you would like to create your own film. Kirschner reviews the histories and theories entangled up with machinima (game engines used and modified to make films). He explains his own design approach to a machinima competition, the mod itself, and the modding tools that he designed to help create his mod. Although this chapter may appear to be discussing practical matters, it is also a theoretical exposition on machinima as process rather than as product, and its position within game design and game studies.

Until Virtual Reality (VR) pills are available on prescription from the local pharmacist, the closest most of us will get to VR is probably via a large multi-wall installation, a CAVE. In Chapter 7, "CryVE: Modding the CryEngine2 to create a CAVE system", the final chapter, the authors Marija Nakevska, Alex Juarez, and Jun Hu, take us through the use of the Crysis engine to create a CryVE. A CryVE is a virtual environment (VE) created by projecting onto multiple walls game levels running inside a CryEngine game engine. This project is derived, at least in part from CAVE UT; and the original CAVE projects (multi wall VR projection system). The authors provide code and pseudo-code so you can run CryEngine and CryEngine mods as large-scale interactive projections, and they also give examples of mods that take advantage of such large surround spaces.

If you are interested in how researchers use other game engines to create multiwall or surround screen environments, you might also like to check out http://publicVR.org, the website of Jeffrey Jacobson (the inventor of CAVE UT). The publicVR website includes free downloadable models and levels, but if you are also interested in projection calculations I recommend http://paulbourke.net/, the website of visualization scientist Paul Bourke. His website describes in some detail how to design low-cost multiwall and curved screen projections for planetariums and domes using game engines and real-time rendering engines such as Source (Half-Life 2), Blender, and Unity.

To cut to the chase, there are many critical and theoretical and design-related issues lurking beneath the surface of game mods. Critical issues range from how to judge the aesthetic, technical and social values of game mods, to how or even whether one can construct general principles of criticism that can be applied to the judgment of game mods. Would this differ significantly from criticism in game studies? Are the theoretical issues involved in game mods merely a subset of game design theory, or something else? Should one reference or pay homage to the original game, can a designer display genuine innovation and creativity in the design of a mod? Could the design of game mods, and the design of tools to create game mods, be improved through criticism and theory? Are these toolsets useful and usable in teaching? And can the tools and techniques of game mod design be applied in areas beyond computer games? In the following chapters we touch on many of these issues, but we may well raise more questions than answers, the work has just begun!

References

Au, W.J (2002). Triumph of the mod. In Salon. [Electronic version]. Retrieved 1 May 2012, from http://www.salon.com/2002/04/16/modding/

```
Bethesda. (2011). New Creation Kit to bring modding tools to Skyrim. In Bethblog (Bethesda blog). Electronic version]. Retrieved 1 May 2012, from http://www.bethblog.com/2011/01/19/new-creation-kit-to-bring-modding-too...
```

Bogacs, H. (2008). Game mods; a survey of modifications, appropriation and videogame art. Bachelor Thesis, Vienna University of Technology, Vienna. [Electronic version]. Retrieved 1 May 2012, from

http://web.student.tuwien.ac.at/~e0326417/game_mods/game_mods.pdf

Fahey, M. (2011). These Are the Best PC Game Mods of 2011. In Kotaku. [Electronic version]. Retrieved 1 May 2012, from http://kotaku.com/5871352/these-are-the-best-pc-game-mods-of-2011

Finch, G. (2011). The Top 10 Game Mods Of All Time. In The creators project (blog). [Electronic version]. Retrieved 1 May 2012, from http://www.thecreatorsproject.com/blog/the-top-10-game-mods-of-all-time

Fomin, E. (2012). Best Game Mods. In UGO.com. [Electronic version]. Retrieved 1 May 2012, from http://www.ugo.com/games/best-game-mods

Gamasutra Staff. (2009). GameCareerGuide: Game Design And Architecture. In Gamasutra. [Electronic version]. Retrieved 1 May 2012, from http://www.gamasutra.com/php-bin/news_index.php?story=24065

Godfellow, T. (2006). Civilization Chronicles Interview with Brian Reynolds. In Civfanatics. [Electronic version]. Retrieved 1 May 2012, from http://www.civfanatics.com/interviews/CivChronicles_Brian_Reynolds.php

Hatfield, T. (2012). The 25 best Skyrim Mods. In PC Gamer. [Electronic version]. Retrieved 1 May 2012, from

http://www.pcgamer.com/2012/01/17/the-25-best-skyrim-mods/

Jeppesen, L. B. (2004). Profiting from innovative user communities: How firms organize the production of user modifications in the computer games industry. København: Department of Strategic Management and Globalization. Copenhagen Business School. (Working paper). [Electronic version].http://www.evl.uic.edu/index.php Retrieved 1 May 2012, from

http://research.cbs.dk/da/publications/profiting-from-innovative-user-communities(6ea9f480-c020-11db-9769-000ea68e967b).html Johnson, A. (n.d.) The first 'Official' Castle Smurfenstein Home Page. In andy's page. http://www.evl.uic.edu/aej/smurf.html Joubert, R. (2010). A (REALLY) BRIEF HISTORY OF GAME MODDING. In NAG online. [Electronic version]. Retrieved 1 May 2012, from http://www.nag.co.za/2009/03/19/a-really-brief-history-of-game-modding/. Posted Mar 19, 2009, last updated Jan 07, 2010.

Kenny, W. (2010). 15 Modders who changed PC gaming. In GamingBolt.com: Video Game News, Reviews, Previews and Blog. [Electronic version]. Retrieved 1 May 2012, from http://gamingbolt.com/15-modders-who-changed-pc-gaming

Kücklich, J. (2005). Precarious Playbour: Modders and the Digital Games Industry. In The FibreCulture Journal, 5: Precarious Labour. [Electronic version]. Retrieved 1 May 2012, from http://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-...

Laukkanen, T. (2005). Modding Scenes. Introduction to User-created content in computer gaming. [Electronic version]. Retrieved 1 May

2012, from http://tampub.uta.fi/tup/951-44-6448-6.pdf Hypermedia Laboratory, net series 9.
Lochutus. (2010). A brief history of Civ modding (pt 1). In Weplayciv (online forum). [Electronic version]. Retrieved 1 May 2012, from http://www.weplayciv.com/forums/entry.php?5-A-brief-history-of-Civ-modding-(pt-1)

Locklear, F. (2002). It's a Mod Mod Mod Mod World. In arstechnica. [Electronic version]. Retrieved 1 May 2012, from http://arstechnica.com/uncategorized/2002/04/2200-2/

Losh, E. (2007). Artificial Intelligence, Media Illiteracy and the SonicJihad

Debacle in Congress. In Media / Culture Journal, 10(5). [Electronic version]. Retrieved 1 May 2012, from http://journal.mediaculture.org.au/0710/08-losh.php

Nardi, B., & Kallinikos, J. (2007). Opening the Black Box of Digital Technologies: Mods in World of Warcraft. 23rd EGOS Colloquium.

[Electronic version]. Retrieved 1 May 2012, from http://www.darrouzet-nardi.net/bonnie/Nardi_Kallinikos_EGOS_08.pdf

Nicholls, N. (2003). Ruddock fury over Woomera computer game. [Electronic version]. Retrieved 1 May 2012, from

http://www.theage.com.au/articles/2003/04/29/1051381948773.html

Nieborg, D. B. (2005). "Am I Mod or Not? - an Analysis of First Person Shooter Modification Culture." Paper presented at Creative Gamers
Seminar - Exploring Participatory Culture in Gaming. Hypermedia Laboratory (University of Tampere). [Electronic version]. Retrieved 1 May
2012, from http://www.gamespace.nl/content/DBNieborg2005_CreativeGamers.pdf

Nieborg, D. B. (2007). In Search of a Disclaimer - Mass Creativity as a Business Model. [Electronic version]. In Gamespace. [Electronic version]. Retrieved 1 May 2012, from http://www.gamespace.nl/content/2007_Insearchofadisclaimer_Nieborg.pdf

O'Brien, T. (2012). First Trial Over Video Game Console Mods Begins. In switched. [Electronic version]. Retrieved 1 May 2012, from http://www.switched.com/2010/11/30/matthew-crippen-first-trial-video-gam...

Perry, D. (n.d.) Valve founder Gabe Newell (interview online). In switched. [Electronic version]. Retrieved 1 May 2012, from http://www.switched.com/2010/11/30/matthew-crippen-first-trial-video-gam...

Rockwell, G. M. & Kee, K. (2011). The Leisure of Serious Games: A Dialogue. Game Studies, 11 (2). [Electronic version]. Retrieved 1 May 2012, from http://gamestudies.org/1102/articles/geoffrey_rockwell_kevin_kee

Scacchi, W. (2010). Computer game mods, modders, modding, and the mod scene. In First Monday, 15(5). [Electronic version]. Retrieved 1

May 2012, from http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2...

Scacchi, W. (2011). Modding as an Open Source Approach to Extending Computer Game Systems. In S. Hissam, B. Russo, M.G. de Mendonca Neto, and F. Kan (Eds.), Open Source Systems: Grounding Research, Proc. 7th. IFIP Intern. Conf. Open Source Systems, 62-74, IFIP ACIT 365, Salvador. [Electronic version]. Retrieved 1 May 2012, from http://www.ics.uci.edu/~wscacchi/Papers/New/Scacchi-OSS2011.pdf

Senior, T. (2010). Ten essential Oblivion mods. In PCgamer. [Electronic version]. Retrieved 1 May 2012, from

http://www.pcgamer.com/2010/07/16/ten-essential-oblivion-mods/

Senior, T. (2012). Garry's Mod has sold 1.4 million copies, Garry releases sales history to prove it. In PCgamer. [Electronic version].

Retrieved 1 May 2012, from http://www.pcgamer.com/2012/03/16/garrys-mod-has-sold-1-4-million-copies...

Sureai, (n.d.). NEHRIM. In nehrim. [Electronic version]. Retrieved 1 May 2012, from http://www.nehrim.de/indexEV.html

Totilo, S. (2010). Meet Garry, The Guy Who Re-Made How We Re-Make PC Games. Kotaku. [Electronic version]. Retrieved 1 May 2012, from

http://en.wikipedia.org/wiki/Mod_(video_gaming) Totten, C. (2010). Towards a Digital Architecture. In Gamasutra. [Electronic version]. Retrieved 1 May 2012, from http://gamasutra.com/blogs/ChristopherTotten/20100611/87496/Towards_a_Di Varney, A. (2007). London in Oblivion. In The Escapist. [Electronic version]. Retrieved 1 May 2012, from http://www.escapistmagazine.com/articles/view/issues/issue_109/1331-Lond Wawro, A., & Miller. P. (2011). Top 16 PC Game Mods. In PCWorld. [Electronic version]. Retrieved 1 May 2012, from http://en.wikipedia.org/wiki/Mod_(video_gaming). Wikipedia (2012). Mod (video gaming). In Wikipedia. [Electronic version]. Retrieved 1 May 2012, from http://en.wikipedia.org/wiki/Mod_(video_gaming)) Whalen, Z. (n.d.). Space Refugees. In Gameology. [Electronic version]. Retrieved 1 May 2012, from http://www.gameology.org/files/videos/refugees.html		
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