Crafting Minecraft: Negotiating Creative Produsage-Driven Participation in an Evolving Cultural Artifact

Alex Leavitt
Annenberg School for Communication, University of Southern California

Introduction – "The pajamas should make you fall asleep faster!"

The room was packed with probably ten thousand fans, sitting and chatting with one another, sometimes cheering, anxious and excited, but this was to be expected of Minecon: the very first offline fan event held, in Las Vegas, for the renowned online video game, Minecraft. A boy of maybe 10 or 12 years old – a surprisingly common occurrence at a convention that I expected to attract primarily male, tech-savvy twenty-somethings – approached the microphone, after waiting forty-five minutes in a line that stretched down the dozens of rows from the main stage. This hour was dedicated to a question-and-answer session with the Swedish development team, Mojang. The microphone was lowered, and the boy asked about… sleepwear. Players could shear it from sheep, he explained, just like how you make part of the bed you sleep in to create a save point. "The pajamas should make you fall asleep faster!" A tumultuous uproar from the audience: suggestions for adding new elements to the game, of course, are common to this group of player-fans. After an attempt to quiet down the room, Markus – the team lead of the devs – gave everyone a quizzical look. And Jens, Minecraft's then-appointed lead developer, said apologetically, "We'll think about it."

Minecraft, possibly one of the most popular games of the past decade, surpassed any initial expectations of creator Markus Persson – also known by his internet handle, *notch* – in terms of games sold but also players enticed to the now cult classic. *Notch* was the only individual to imagine, code, and update Minecraft for a few years, since its

initial launch in late 2009, and only until the game began raking in millions of dollars did Persson hire a small development team. With only a couple years past its launch, Minecraft now boasts millions of players… and, uniquely, just as many creators.

Because even with its massive popularity boost, Minecraft as a game was – and still is – not complete. In addition to *notch*'s hand-picked team of employees, Minecraft has evolved over time as thousands of players have become producers: creating tutorial videos, sharing screenshots of in-game creations, analyzing in full detail the game mechanics, fashioning adventure maps, and – for the technically-inclined – banding together to reveal the official obfuscated ("intentionally jumbled") code and hack away at it to create modifications, which are distributed widely for other players to implement into their own games. In other words, a verifiable ecosystem of player-creators exists that creates *alongside* the official production process, making Minecraft possibly one of the largest and broadest participatory cultural productions ever.

This paper looks deeply at the hierarchies of creativity, communities of participation, and teams of collaboration that contribute to Minecraft as a cultural artifact. In particular, I look critically at how players' experiences of Minecraft as a game evolve alongside the negotiations of participatory roles, the boundaries of derivative value, and the development of the game itself. Through ethnographic participant observation and interviews, I aim to answer: How do individuals negotiate the horizons of produsage in relation to an ever-evolving media artifact? I demonstrate that varying levels of familiarity with Minecraft lead to equivalent game experiences, but by building upon and advancing in the social structures of creative participation in the produsage process, player-creators begin to deviate in their expectations from other producers and the game

itself. Also, I suggest that the empirical findings from this study reveal that the peculiar nature of evolving participatory cultural artifacts do not necessarily lead to a balanced, democratic state of participation for all involved individuals. Instead, I suggest that a recursive process of co-production bounds this participation, where updates to the game impact participants' expectations and values, moderated by how the community defines what it values.

From the Crafting Table to Crafting Theory: Minecraft and Its Ecosystem of Produsage

Participation in and around Minecraft may be framed through the lens of participatory culture, especially through the conceptual relationship of the user-producer known as *produsage*.

The general framework of participation in a Minecraft-like ecosystem falls in line with what Jenkins et al. (2006) call participatory culture, which they define as:

> [A] culture with relatively low barriers to artistic expression… strong support for creating and sharing one's creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created).

This paper primarily extends participatory culture to a deeper theoretical underpinning of participation founded in the relationships between participants and the roles they play as "producers" and "consumers," especially in the changing distinction between those roles. Bruns (2008) describes the intersection of these practices under the label "produsage," which "highlights that within the communities which engage in the collaborative creation

and extension of information and knowledge… the role of 'consumer' and even that of 'end user' have long disappeared, and the distinctions between producers and users of content have faded into comparative insignificance" (2). Probably the most important element of the produsage model that Bruns introduces is that of the "fluid heterarchy" that emerges from collaborative creative action in the production of "temporary, unfinished artefacts" open for further creative reinterpretation (240).

While Bruns's primary examples of produsage involve evolving technological platforms utilizing collectives of participants to contribute information to these systems, he provides a small number of examples of what he calls "creative produsage," that focus on distributed creative work (230). He argues that "not all the contributions made by all produsers in the community are likely to be of uniform, high value to the shared underlying project." But the case studies he explores operate in very different ways than Minecraft, in that the participation does not directly impact the primary creative process. Minecraft, on the other hand, has participants directly involved in the back-and-forth with the game's developers *as they develop the game*.

This distinction is particularly important for understanding how the evolution of the cultural artifact impacts the participatory ecosystem. Literat (2012) provides a strong framework for participation in crowdsourced art: participants may increasingly contribute to the artistic work all the way up to co-production with the "alpha artist." Still, crowdsourced art purposefully draws from crowds to contribute; an open cultural artifact like Minecraft did not initially have this in mind (though, as I explain later, the expectation for participation emerged from the community).

Therefore, this study contributes to the produsage literature by providing empirical evidence for the underlying processes of creative co-production. It is not enough to understand the productive context within which participation operates; instead, we must also look to the negotiated boundaries that emerge from the politics of participation in cooperative creative spaces. Minecraft provides a unique case of an evolving media artifact that introduces challenges to the "level playing field" model of most theoretical work on produsage. As the artifact evolves, participants react to its evolution, confounding the ordinary negotiations between participants regarding their participation as the participatory infrastructure – Minecraft as a platform for creative contribution – fluctuates too.

Digital Ethnography: Methods and Sites for a Virtual "World"

This study represents the cumulative effort of 9 months of formal ethnographic fieldwork starting in autumn 2012 in the Minecraft player-producer community. I conducted an extended case method (Burawoy 1998), from which I established a grounded theory approach (Glaser 1978) to understanding the process of creative co-production.

For this project, formal multisited ethnographic fieldwork encompassed some traditional, offline participant observation in combination with primarily digital, online participation observation. This included watching players offline play the game on their computers and participate in information-related (such as referencing wikis and other resources while playing) and community-based (participating on forums, speaking on social media, etc.) activities, as well as reading game forums, keeping up with official

announcements, mapping out spaces of community engagement, and touring digital player spaces such as multiplayer servers. This observation occurred in various roles as an explicit researcher, a committed player in multiplayer settings, or a pure observer. Also, I participated as a player on my own by not only downloading and playing the game over the course of 3 stages of official updates, but I also attempted to become involved in the modding community by trying out old and new mods and editing some of the game code on my own.

Beyond participant observation, 22 interviews were conducted with players, server moderators, and mod programmers to ask in more detail about players' perceptions of the gaming community, motivations to participate, and changing in-game experiences. Finally, in addition to interpretation of field notes and interview transcripts, I used archival material – mainly curated from online resource websites like fan forums, informational wikis, and news articles – to supplement findings. Many of these artifacts I encountered during two years of exploratory research preceding this study, through participation as a Minecraft player, whether while browsing community sites, playing the game with friends (or strangers), or attending live events (like Minecon or Penny Arcade Expo, two gaming conventions).

Punching Trees: A Contextual History of Minecraft

Minecraft is an independently-developed, Java-based video game, created by Swedish game developer Markus Persson, where the player navigates a randomly-generated, cube-based world in which s/he can collect resources, build shelter, explore caves, grow food, and raise animals. The game operates on a 10-minute day-and-night

cycle: after 5 minutes, the sun sets, and monsters appear; if the player has not created a proper shelter, s/he must survive by fashioning tools and weapons. In addition to this "survival" mode, Minecraft also allows players to maneuver in a "creative" world where every type of cube and item is available to build fantastic creations. Players initially tended to use survival mode alone and creative mode on multiplayer servers, though with the addition of new server-based mods, these gameplay styles have spread across all types of play.

Minecraft was released to the public for PC in May 2009, though by official standards it was released as a stable game (its beta version) in November 2011. In the period before the release, the game was developed during a public alpha stage, during which players could buy the game at a discount. However, because Minecraft was developed alongside the rise in its popularity, the growing audience of players was able to participate in the social and creative process of its development: sharing screenshots of creations, uploading videos of playthroughs (Ligman 2011), debating on social media sites, providing suggestions to the official development team, creating hundreds of "mods" (Nardi & Kallinikos 2007; Sotamaa 2010) that implement new features to the game, and with these mods creating more downloadable content (such as formulated, original adventure maps).

Minecraft continues to be updated frequently: in 2013, a small team at Mojang releases downloadable "snapshots" of to-be-released game versions to the public to test new features and identify bugs. After a few months, Mojang sends a stable update to all players' computers. Players frequently refer to Mojang's releases as the "official" or

"core" version. The community develops many modifications for the world, but untouched versions of the game are dubbed "vanilla" Minecraft.

Mine or Craft: The Emergence of Roles in Creative Produsage

Participation in Minecraft relies heavily on (though does not absolutely necessitate) being a player. To gain access to in-game materials and experience, one must download, install, and play Minecraft. But immersion in the game and thus engagement with the larger community of players shapes creative involvement: for example, if an individual wanted to create a downloadable adventure map, s/he would have to first download the proper mods to edit the game and, when the product was finished, then share it on a game forum or upload it to a curated map website. Still, the map itself and its presentation to the community would also have to be framed in a way that would attract other players to download it: the creator must situate his- or herself in the game experience. The experiences that players have in Minecraft vary, but they remain crucial to how individuals interact with the game at all levels of play. This section explores typologies of roles that players employ in a produsage ecosystem: what they interact with in Minecraft, how and to what degree they interact with it, and how such interactions produce roles for individuals in the larger Minecraft community. These roles then affect how player-creators at all levels relate to the game and express expectations for how the game should interact with them in the future.

Basic player roles emerge from amount of interaction with the game and experimentation with gameplay styles. Minecraft players fall in line with Bartle's typology of game players: achievers (action on the world), explorers (interaction with the

world), socializers (interaction with other players), and killers (action on other players) (Bartle 1996). Much of the interaction with Minecraft falls in line with its features: a player can participate in a survival mode or creative mode, in a single-player game or on a multiplayer server, or through in-game goals like exploring dungeons or building complex machines with "redstone," Minecraft's in-game craftable circuitry. In a Minecraft panel at the Penny Arcade Expo, the panelists – participants on a popular Minecraft podcast – discussed how different playing styles developed different player types and how these types impacted what experiences individuals wanted to derive from the game:

> So, there different classes I think in Minecraft of what to do: you've got the adventurers, you've got the miners, the builders, people like to do farms. I think I'm the adventurer. You're the redstone guy, that's why you want more redstone updates, right? … I think they've done a good job of alternating the updates to where everyone gets a little bit of something they want, like each update is something different, so depending on what kind of player you are, this might not be your update, but the next one might be.

While many players refer to their gameplay as simply "addictive," familiarity with the game's mechanics and elements also impacts how players perceive the extent of Minecraft's world: for instance, experiences players prefer to explore advanced features and experiment with modifications, while new players are content to investigate the boundaries provided by the original game. One player, Sam, who had only been playing for a few months, said that his wish to explore the full potential of the original game restricted any need to go find mods:

> I don't think I've solved all of vanilla yet. There are a number of problems that I have seen other people solving, that I haven't gotten to. Since the first time I played the game, they've added another boss-like enemy, and things that seem like additional threats/challenges that I would like to

pursue. I haven't built a successful boat/water elevator, I haven't really collaborated with another player until very recently.

In-game player roles also intermesh with participatory roles in the context of the produsage ecosystem around Minecraft. Participation occurs across a spectrum of ever-advancing levels of creation and participation in the development of the game: from playing the vanilla game to installing mods, from creating adventure maps and aesthetic skins to writing advanced code to change the game. Some players also contribute through feedback: frequently through social media channels like Twitter and Reddit, where Mojang's employees interact with players, individuals will provide opinions of recent updates and suggestions for new features, as well as participate with more commitment as an informal game tester and bug reporter. Finally (though I do not explore their participation in this paper), some players with media-making skills will create tutorial or playthrough videos that thousands of players view on a daily basis.

In relation to the emergence of produsage roles, Bruns (2008) focuses on folksonomies as a "system of knowledge categorization and structuration" (187). Though he describes role-making as possibly "too elusive to provide a strong sense of temporary unity for many participants," Minecraft players – as members of a creative produsage ecosystem – very strongly self-categorize based on how they interact with the objects of the ecosystem: players play, map-makers create maps, modders mod. What is important, though, is that all participants remain players from the start.

Even while Mojang, the official developers of Minecraft, can be considered part of the player category, ordinary players indicate a distinct separation of the developers from the rest of the community. Nearly all of my interviewees – and, many times, users in my observation of forums posts – describe the developers with an othering, but

powerful, "they." For example, one forum complaint about a new update described the relationship between players and developers as "But they [make some questionable decisions] with the Minecraft community in mind…" According to players, the community is made up of players, creators, and modders, and the developers are removed.

LOW   **familiarity with game**   HIGH

boundary of
creative perception

PLAYERS   CREATORS   MODDERS   DEVELOPERS

participants   alpha artists

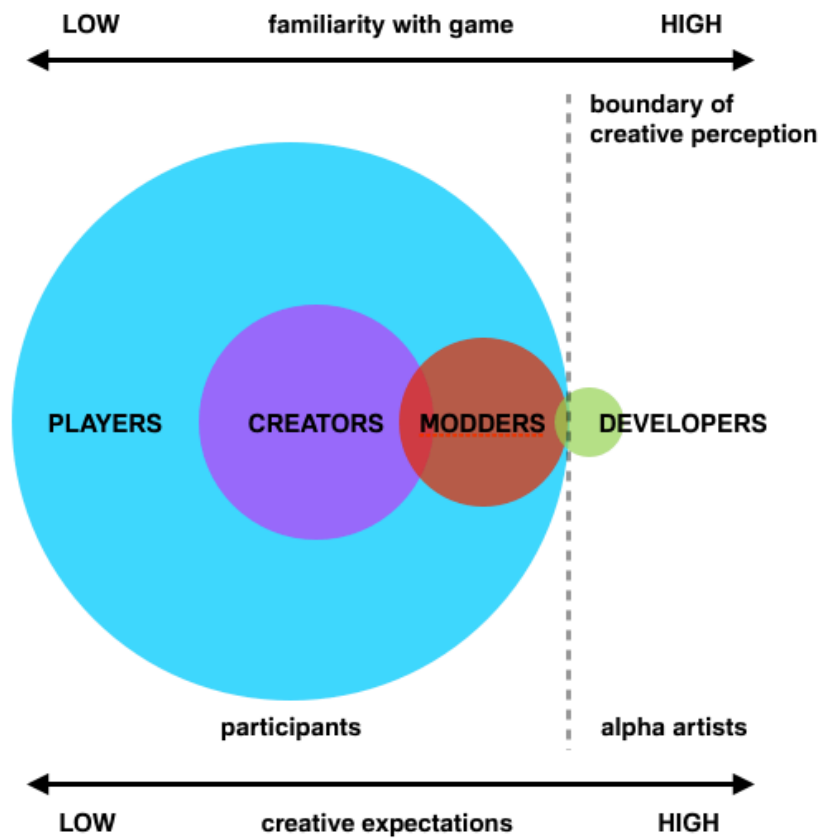LOW   **creative expectations**   HIGH

Figure 1. Roles of produsage from the perspective of participants. Every participant is a player, though some occupy a more distinct role. Some players and modders can be considered developers (such as bug testers or modders that have their mods integrated into the original game), though largely the developers remain distinct from participants.

"Does Mojang still care about the players?": Defining Expectations in Creative Produsage

The distinction between players and developers, though, remains important for how we conceptualize the produsage process in a creative, participatory media artifact. Many players reference the creative vision of *notch* and his development team as structuring the primary experience that individuals take away from playing the game. Players articulate that central, dominant experience in a variety of ways (that will be explored later in this paper), but they describe that experience as bounded by a "vision" that Mojang has for the game, that the developers have planned and build upon incrementally with each release. Interestingly, the reality of Minecraft's iterative production means that goals outlined one year may not be accomplished – or might be entirely different – by the next (evident, for example, from team meetings shown in the documentary *Minecraft: The Story of Mojang*).

Still, players view the development team akin to the director of a traditional film, paving a way for the future of the game through hierarchical, top-down decision making. One of the core tensions in evolving creative produsage-driven cultural artifacts, then, is the role that the "alpha artist" plays in crafting experiences (Literat 2012), versus the role that participants have in impacting those experiences. For instance, Kevin, an advanced player that has been involved with Minecraft since the early alpha release, highlights how the developers occupy the top, creative role:

> It isn't my game. If Mojang wants to go a whole completely different route, that is their prerogative and right as the developers. I might not be happy but I can't complain. I bought the game and liked the game when I bought it. I don't have to update if I don't like the updates being released. However I have got my money worth and more from what they have done with the game. There isn't anything they have added that I have not liked. Everything they put in the game only really adds to it and has not subtracted from it.

Because players believe that the developers at Mojang first and foremost architect the experience that individuals have with the game, a set of norms and expectations emerge from the produsage process based on the relative level of participation on the part of each individual. First, players believe updates to the game should adhere to a particular experience derived from the core vision, though it is possible to stray from this core. And second, because Minecraft is in a sense limited by that core vision, players argue that the potential to participate in the development of ancillary content (maps, mods, etc.) for Minecraft should be encouraged. Of course, participants that contribute at higher increments of creative production provoke these trends by providing alternatives to the central thread of top-down production, such as by filling in gaps in players' needs for expanded in-game features and goals. Player-creators like modders take it upon themselves as a responsibility – comparable to the responsibility of Mojang to contribute meaningful and precise additions to the core experience – to contribute to alternatives and even expect fellow produsers to fulfill that role. Taken together, all of these expectations ultimately frame how players of all types articulate what is valued in evolving creative produsage settings.

To understand how these expectations emerge, it is important to reiterate the technical context within which players play. Minecraft as a game has undergone dozens of official iterations, and the community of game modders continually produces new mods that add new features, items, enemies, or even worlds, so a player's experience of Minecraft constantly changes over time. Therefore, a player's interaction with the game always changes depending on official updates but may change *more* as players personalize the software based on needs or whims.

The editability of the game thus provides the opportunity for players to design particular experiences for themselves. Still, players articulated that Minecraft as a whole provides a central experience that manifests from Mojang's core vision. Players from newbies to experienced modders all described this experience in varying ways, such as the "Minecraft feeling" or the game's "original spirit." Charles, an active player since the early alpha release, outlines the basic feeling that Mojang has designed:

> Minecraft is a game fundamentally about creation. It focuses on simple objects that can be manipulated. It doesn't try too much to presuppose what you might want to make, instead trying to give you simple tools for making things. Its granularity is intentionally large; an artistic choice made by *notch* it its conception. It has a vaguely archaic or fantasy theme, lacking things like complex machines in favour of alchemy and magic and zombies.

For all players, the architecture, mechanics, and "laws" of the game (Lessig 2006) dictate the initial framework of an experience. Minecraft's design as a sandbox game, where participants encounter minimal goals at their leisure, and particularly its lack of driving narrative initially foster a much more open experience to begin with; players then build a personalized experience from interacting with parts of the game. Without any familiarity, many new players articulated their experience of Minecraft's world in relation to other games they have played (some cited its similarity to Dwarf Fortress and other adventure games).

As players gain more familiarity with Minecraft's in-game features, older players then express their experiences by drawing from their immersion in the game. That experience of course changes over time as Mojang provides iterative updates. All types of players refer to Mojang's updates as crucial markers of stages in the game (eg., "I first started playing sometime during 1.7.3 beta about 3 months before 1.8."), and they

frequently cite how the experience changes based on the time they started playing.

Charles, a veteran player, explains that "alpha updates were crazy."

> They'd fundamentally change the way the world works. For example, on our first server, one of my friends built a large upside-down pyramid in the air. The only way into it was by swimming directly up a lavafall. A few updates later, nobody could enter the pyramid, because players could now take damage in SMP. The construct's fundamental conceit was broken. The alpha updates were pretty rough on the multiplayer scene where your map just kept evolving. I don't know that I'd say the game is really moving any slower, now, though. It's more refined. We're getting more new items and fewer new terrain blocks. … The most recent stuff seems to be focused on making the world seem a little more alive, like you're not the only actor. Early versions tended to feel a little like a Myst world: alone in an abandoned universe.

Still, the game is – again – bounded by the creative power that the developers wield. Karl, who has been playing for almost a year and a half on his own, experimenting with some mods, explains that while mods can add new experiences, they can be seen as mere additions. He described this, saying:

> Minecraft is a very personal game. A game that can be modified to fit the users mind. If one person feels there isn't a lot of mobs then they can find a mod to add more. This makes Minecraft reach out to a bunch of more players because it makes them happy to customize their experience. Me, personally, do not like these kind of mods. I enjoy the vision that mojang has created as it's base element.

For experienced players, creators, and modders, the driving factor for continued participation in Minecraft revolves around boredom. As new players grow more familiar with the game, they grow tired of playing with the same mechanics and features (Debeauvais et al. 2011). While new additions to the official game provided by Mojang can renew interest in the game, advanced players frequently describe a sense of boredom overwhelming their gameplay. One experienced player-turned-map-maker describes this process: "I've always felt that default Minecraft holds a fantastic sense of awe originally.

Gazing out onto the massive and lovely world open before you is incredible. However, as you progress in the game things become more 'regular', which often prompts people I've interacted with to seek out something to spice up their gameplay." New players experience a similar trajectory. Sam, who has only played for a few weeks, said:

> As I become more familiar with the game, I play less. The longer I play, the more problems I find easy to solve, and therefor boring. I know how to grow food and make bread. I know how to organize torches to direct me in or out of a mine. I know what to do when I screw up. I know how to stay safe from night creatures. Now there is a phase at the beginning of each new world where I am re-solving old problems. It doesn't get until several hours in until I feel like I am working on new things. This annoys me. Unless multiplayer and mods satisfy me, I will probably stop playing again.

Players of all types describe how the lack of goals within the game prompted them to expect such features to be added in later. The iterative creative process, however, is not as clean-cut as all players would hope for. Players tend to seek out new alternatives like mods when they find gaps in their gameplay, like Caleb – who describes himself as having participated almost daily for the past three years – when he talks about the lack of difficulty in Minecraft and how that prompts him to see out mods and maps:

> For me and seemingly many others, the default game is fairly 'easy'. Mobs are fairly easy to battle, and survival doesn't have a proper end game set of good goals. While the bosses added later were nice, they don't provide a real end to the adventure. I use tools to modify spawners and craft custom terrains unlike anything you'd see in default Minecraft, be it a weaving castle, a decaying swamp, or a massive floating city, it gives a player a sense of awe in the game again, after they've experienced the default game.

Newness, on the other hand, motivates players at all levels to explore various additions beyond the core component of an evolving creative cultural artifact. Modifications of course provide this alternative. One creator reflects on this exploration:

Some turn to mods, some to maps, many to both. By giving yourself a new opportunity to learn things and discover stuff you never could see in the default game, I personally have found it reinvigorates my desire to play the game. Something new is refreshing and fun for me as a player to experience, and often I can take something away from it to improve my gameplay and my building/design abilities too.

New players draw similar connections. John, a relatively new player that has been participating in Minecraft for about 9 months, simply says that "Mods just give more."

I think of them a little like as an expansion pack that extends the game play and brings new opportunities for new combinations of blocks/systems/automation. The main changes between [vanilla Minecraft and mods] are having more choice, or a wider palette to choose from, and being able to automate processes so there is more time to do other things. Sometimes, doing the menial jobs, like harvesting wheat, can get rather boring. When jobs become a chore rather than a pleasure, it makes the game a hindrance rather the relaxing pastime it should be.

Some players, though, find that particular mods can be daunting. Kristen, a high school student who has been playing for almost two years, says that her initial experience with mods "didn't go well." Even though the additions didn't really improve her experience, technical issues also got in the way of her enjoyment:

I don't think the laptop I had at the time could handle it. I remember trying to get this one that would have villagers that would mine and harvest and build for you and I'm pretty sure I messed up in the installation process somewhere. And whenever I tried to install [another], the mod was never on the right version of Minecraft. It used to get pretty frustrating. I think I tried to use mods before I even understood how to use a texture pack and back then things were even less noob friendly.

Players also express tensions around how certain modifications of Minecraft provide too many options, thereby providing an unsatisfactory experience. Some players, though, see most or even all additions as acceptable extensions of the Minecraft world,

and players can utilize modifications on the edge to rekindle the experience. One creator

described this as:

> People complain that it's kill the original spirit of Minecraft, and I share
> theirs views in some cases (like the portals one, or the one where you can
> build a nuclear reactor) because it's not coherent to the original style of
> Minecraft. But I understand that people can like this kind of mods,
> because I guess that they search for the "Minecraft feeling" with it.

> Beyond players, creators and modders are also motivated by boredom to *create*.

Frequently, creators and modders expressed the need to solve gaps in the experience;

their creations were cited as improving upon various aspects of the game that they had

identified as lacking. For instance, one map-maker described his creations as solving the

"issue" of boredom without providing too new of an experience: "Generally people let

me know that they find my maps close to the original game, but that the dungeons and

landscapes that I've made, add something new to the game… I think that people I've liked

my maps because it solves the issue of repetition/boredom, without breaking with the

original spirit." Even as an advanced modder, *DrZhark*, the creator of the popular *Mo'*

Creatures mod, described a similar experience where the lack of variety required him to

look out for a way to change the experience:

> I was really enjoying playing Minecraft for the first couple of weeks. I've
> been an avid gamer for many years, but over the last couple of years I
> never found a game I really enjoyed until I discovered Minecraft.
> However, after three weeks I really felt the need for more variety in the
> game. I browsed the web and forums looking for mods to add extra
> creatures to the game, and found that nobody had done it. Then I stumbled
> upon MCP[1] and started browsing the deobfuscated code and I thought,
> why don't I do this myself?

He identifies a void in the game that, as someone with the proper technical skills, he

could solve. Evidently players recognized the same issue; he quoted his mod as having

---

[1] Minecraft Coders Pack, a collection of scripts and tools that allows an individual to decompile and unpack
the Minecraft software and unobfuscate the code to edit it for mod creation.

been downloaded over 380,000 times by September 2011. In April 2013, DrZhark's horses were implemented officially into the game by Mojang.

Uniquely, creators and especially modders articulate their position as contributors to the ecosystem of Minecraft from a different position than ordinary players. In a produser role, he states how he also ventured into the territory of being evaluated according to other players' experiences of Minecraft. Describing the reactions to his mod, he said, "I've noticed that it is extremely difficult to keep the users happy. Even in a case like this, a free mod for a game that is still in Beta. But I've received many more messages from satisfied users than the negative comments. I try to ignore the negatives and focus on the positives." In pinpointing other players' displeasures with the modification he created, he suggests a subtle boundary between players and modders, a point that confronts the potential of equal co-participation in produsage settings, akin to Bruns' description of unequal relations amongst participants and the contributions they produce.

Interestingly, social interaction provides a sense of newness as well. While there are a number of mods for Minecraft's multiplayer servers (especially regarding moderating what players can and can't do), many of them are easier to implement in the first-person game. Even without many gameplay-altering mods, though, some advanced players claim that the social aspect of Minecraft provides a way to negate boredom, as players collaborate on adventure missions or build elaborate creations together (falling in line with the work of Taylor [2006] on sociality in online games). Patricia, a 30-year-old player who has been playing since the earliest release of Minecraft, relates that her most recent enjoyment comes from running multiplayer servers. "It's not fun when you can't

share your experience with other people," she says. Another older player, Trevor, says that "Being involved with a good community online really engages me." The social aspect changes gameplay to such a degree that "without the community and the group of players I play with, I would be playing a completely different game," because "having other players adds so much more depth to the game" beyond "just building and killing mobs for the most part."

One common conflict with the quest for newness in the iterative experience of Minecraft occurs between the expectation that new and relevant content should always be developed and the actual process of producing that content. Players repeatedly express what they believe *should* be produced, especially reflecting on the Minecraft feeling to detail what should be allowed or not. As stated before, players also simultaneously recognize Minecraft as guided by the developers' vision. Therefore, a key component that structures the conflict between expectations and production is the idea of "balance."

For example, Karl, one advanced player, explains how he believes the developers try to create equilibrium between additions that provide new and difficult elements to the game (what players expect) and content that retains the proper feeling:

> Well actually I feel that Mojang does a pretty good job keeping their updates full of new things. When Mojang adds all these things into Minecraft I think it is part of two things: 1) I feel that they are trying to balance the game. When they just recently increased the difficulty of the skeletons, I think they thought they were too easy, and now when you play… you think and strategize how to keep surviving night after night. And 2) It doesn't diminish the feel of the game. When they added villagers and the trading system, it wasn't like when you add a mod because mods are extremely detailed… Unlike vanilla where you get emeralds and you do a simple trade, nothing more.

However, the conflict that arises in his explanation is that even when the developers try to strive for balance with the introduction of new mods, the production of new content

sometimes doesn't achieve the potential that it could to create the proper experience that older players expect.

Even with balance, though, players occasionally detail how some updates can be off-track from the vision (or the perception of a vision) that guides development. Players tend to use forums to voice their opinions through large walls of text to express their concerns. For instance, one player wrote:

> I think Minecraft development has a distinct lack of vision. Don't get me wrong, it's great that they are actively developing the game. But… the features they add are (for the most part) 'mildly interesting' to just 'why would I want that?' for me. They feel like developers go 'hmm, what random thing can I think up to add to the game today'. A mod API or adding new experiences with a distinct vision in mind would be huge. Not just gimmicks. Every time they've tried to set an actual direction/goal they just seem to push it ahead or shift away from it.

Here, the player describes various new updates to the official version as "gimmicks" that don't add to the player's preferred experience. Because the game is not complete, the player also implies that there was a "distinct vision" to begin with; although he doesn't delineate what the "actual direction/goal" might be in his mind, he sees the actions by Mojang of continually updating the game not fulfilling a unified, ideal state that will come at the conclusion of the game's development. Another player, in the same forum, describes a similar experience: "As a long-time server admin and been playing this thing for so long, content creeping is not really the most attractive thing about Minecraft. I want tools to expand on the experience there already is."

Though these conflicts pop up now and then in community discussions, participants also recognize that a cycle occurs. This recursive cycle of co-production is particularly important for understanding how the roles and expectations created through the produsage process evolve recursively over time, as players interact with developers,

developers integrate contributors feedback into new iterations, and those evolved

iterations produce new norms, interactions, and expectations.

Players initially identify the cycle in their reactions to iterations of their game

experience. After one panelist at Penny Arcade Expo described himself forgetting about a

new update that many people disliked, another panelist responded: "There's a cycle – it's

really crazy that they introduce something new, and we all hate it, because we want it

back the way it was. Like the [updated] sounds in the game… eating, nobody likes that.

Now I don't even realize it when I eat."

Further, all levels of participants understand that developers pay attention to the

community's productions, but they also expect that attention. Karl describes how the

expectation that the developers interact with the community becomes a core component

in the cycle of recursive co-creation:

> I know a couple of people who feel that Minecraft has changed drastically
> in the past couple of updates and, yes, they do have their reasons for their
> upset attitudes. I do not agree or disagree with some of the decisions that
> Mojang makes to the game. The fact is that the game is, in a way, run by
> the community. The community decides what they really like and what
> they don't like. For example in the 1.5 update when they nerfed bone meal
> so that it took 9 bone meal to grow 1 wheat, the people said,"Woah wait a
> minute; that's not cool. Can we have that taken away?" Mojang replied by
> lowering it from 9 bone meal to just 2 or 3. Seeing that some people may
> not be happy with this… it's not only the Mojang staff that makes
> decisions, it's also the decision of the community of the people. Which
> means that, yes, the people have a reason to be mad, but also it's Mojang's
> game, and they do what they feel is right for the game, and you can't
> expect the final decisions to be accepted by everyone. I think Mojang
> knows this going into developing the game and they have to take the input
> of the community and their own personal choices that they think will
> benefit the most.

He identifies that Mojang's creative direction is greatly impacted by the whims of the developers, but he also emphasizes the importance of the community's feedback on the developers' decisions.
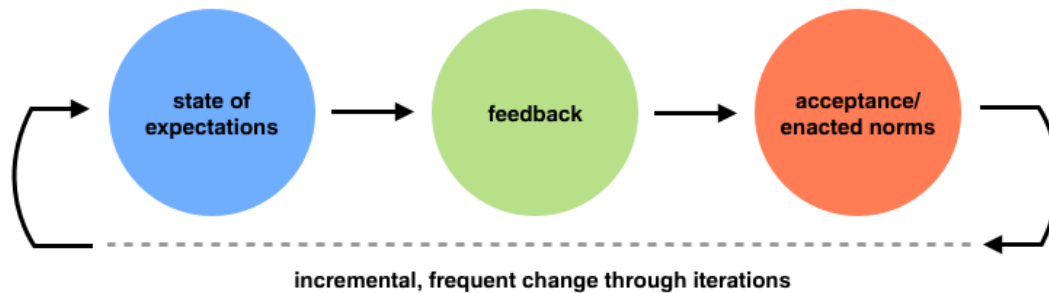

Figure 2. The recursive co-creation cycle, where the process repeats as Minecraft's developers introduce incremental and frequent changes to the game through iterations produced through the cycle.

The cycle of recursive co-creation thus operates on a simple flow of norms: first, players develop a state of expectations around the participatory nature of their interactions with developers and the game; second, after the developers release an iteration of the game, communication feedback occurs both ways between players, creators, modders, and developers; and finally, there is a state of acceptance on the part of the community, where a new set of norms are enacted. The cycle is recursive because, while it repeats, both participants and developers negotiate each stage of the cultural artifact's iteration. The process resembles what Kelty (2008) calls a "recursive public," speaking about open-source software programmers that not only maintain and modify the code they produce but also the means of their existence as a group.

Mining for Diamonds: Articulating What is Valued in Creative Produsage

The expectations that emerge from various player roles reflect a range of articulations around what players find valuable in the outcomes of the produsage process. Even so, the perception of a core vision of Minecraft driven by the developers bounds what can even be valued by participants in the first place. This point particularly challenges the framework of produsage-driven participatory cultures, in which meaningful participation manifests through the recognition of valuable contributions by members of the community. While this still happens in a creative produsage process, the primary boundary around what is valuable remains structured by whatever is produced at the top of the creative hierarchy (namely the development team).

Beyond the limits of that wall, though, various processes of community decision-making moderate what becomes popular. Comparable to Mimi Ito's description of recognition and status within the anime music video community (Ito 2011), Minecraft players download and provide feedback on the varying additions created by the community. Advanced creators and modders especially appreciate these responses: "I love the people that are willing to try things of mine out and give me honest feedback. I take everything said into deep consideration and look for every way possible I can increase enjoyment and understanding within my projects. Both positives and negatives are incredibly valuable to me, and I feel that by listening to my players I create meaningful rapport with then to help drive the experience in the best way possible." Members of the community self-organize to moderate what becomes popular and define what content doesn't make the cut:

> Currently, on the Minecraft forums we have a Community thread… where mapmakers and players gather, discuss ideas, critique maps, and have a fun time doing so. That's one way of addressing a map's 'score', and often maps that are made by big names, generally people with YouTube

channels, can get them a lot of attention too. It all comes down to how enjoyable the map is to both watch and play. If a map is poorly designed or unbalanced, people wouldn't want to play it.

Because Minecraft's community has expanded across a variety of social media platforms – Twitter, Reddit, YouTube, Minecraftforum.net, and more – these communication infrastructures also inflect and reinforce the community's moderation of what becomes popular. For example, as a video gets popular on YouTube and its views increase, the view count feeds into YouTube's recommendation algorithms so that video becomes more visible. This is an especially important aspect for new players, who articulated that – before attempting to try out mods – much of what they found intriguing and valuable about Minecraft was framed by the community resources they viewed, such as gameplay videos and contributions to the Minecraft wiki.

The larger Minecraft community's moderation of what becomes popular still must interact with individuals' experiences and expectations as they emerge from participants' roles in the co-production of the game. The recursive cycle remains important because players at different stages can be affected by what they perceive the community to value. New players, for instance, must create that value on their own: "I haven't been a part of the community to know where the cutting edge is." Advanced creators and modders, on the other hand, must keep on top of their own participation in the recursive cycle in addition to understand what the community wants or needs. As each official iteration of the game is released, they must react to how the community expresses what they find valuable in the new features and gameplay experience in order to keep their own productions relevant.

Conclusion – Recursive Participation: Speaking Back to Produsage

This study has demonstrated how the process behind creative produsage operates in an ongoing creative cultural product. Minecraft's vibrant community illustrates that particular roles emerge from creative co-production and how those roles shape expectations for all participants – from players to developers – and further impact how individuals articulate value from what is and how it is produced. Further, the case of Minecraft's social world demonstrates the process of recursive co-production, where at various stages these expectations and values are built upon and reestablished.

The case of Minecraft suggests, interestingly, that the role of the "alpha artist" continues to matter: all participants expressed some experiential and creative boundaries based on the core game produced by Mojang's developers, which conveyed a particular feeling in players form which they did not want to deviate outright. When we extrapolate from Minecraft to other creative, participatory-culture-driven cultural artifacts, the position of the "alpha artist" will matter just as much as the types of roles and participatory behaviors that emerge within the produser collective.

Minecraft's form as a video game structures participation in a very particular way, but its role as a platform – not only literally as software but also metaphorically as a foundation on which participants build ancillary media – enable unique participatory behaviors to occur that the platform can support both technologically and socially. Charles pinpoints this crucial difference:

> Even though it feels like that to me, by not adding any kind of story or plot, others have their own opinion about what Minecraft is like and what limitations there are to what can be added. … It gets rather to the heart of Minecraft-as-game vs. Minecraft-as-platform... Sometimes, a feature will be only useful for Minecraft-as-platform, like when they added the ability to have things recursively ride each other. Sometimes it's primarily useful

for Minecraft-as-game, like when they improve monster AI on harder settings. … The Minecraft platform and game are just two very related aspects of the same product. Sometimes they'll work on one and sometimes they'll work on the other. (And, in actual fact, everything on one side affects the other at least a little bit.)

Identifying Minecraft's role as a platform for cultural production thus provides new opportunities for theoretical application to empirical research on the processes behind creative produsage. As the internet continues to link individuals in networked collaboration, the role that platforms play in acting as a coordinating space for that collaboration will shift as the creative and social dynamics that underlie it remain structured by the traditional cultural production process (eg., Minecraft's core vision). Future research can continue to explore the implications of distributed creative work as the cultural artifact changes across forms, such as film or music.

References

Burawoy, M. (1998). The Extended Case Method. Sociological Theory, 16 (1).

Bruns, A. (2008). Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage. New York, NY: Peter Lang.

Debeauvais, T., Nardi, B., Schiano, D., Ducheneaut, N., & Yee, N. (2011). If You Build It, They Might Stay: Retention Mechanisms in World of Warcraft. In *Proceedings of 6th International Conference on the Foundations of Digital Games*. Retrieved from http://www.nickyee.com/pubs/FDG%20-%20Retention%20(2011).pdf

Glaser, B. (1976). Theoretical sensitivity: advances in the methodology of grounded theory. Mill Valley, CA: The Sociology Press.

Ito, Mizuko. (2010). The rewards of non–commercial production: Distinctions and status in the anime music video scene. First Monday, 15 (5). Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/2968/2528

Jenkins, H., Clinton, K., Purushotma, R., Robison, A., & Weigel, M. (2006). Confronting the Challenges of Participatory Culture: Media Education for the 21st Century.

Retrieved from http://digitallearning.macfound.org/atf/cf/%7B7E45C7E0-A3E0-4B89-AC9C-E807E1B0AE4E%7D/JENKINS_WHITE_PAPER.PDF

Jenkins, H., Ford, S., & Green, J. (2013). Spreadable Media: Creating Value and Meaning in a Networked Culture. New York, NY: New York University Press.

Kelty, C. (2008). Two Bits: The Cultural Significance of Free Software. Durham, NC: Duke University Press.

Lessig, L. (2006). Code: And Other Laws of Cyberspace, Version 2.0. New York, NY: Basic Books.

Ligman, K. (2011). Let's Play Super Rutgers RPG: Interactivity by Proxy in an Online Gaming Culture. Paper presented at Game Behind the Video Game, Rutgers School of Communication, Newark, NJ. Retrieved from http://direcritic.files.wordpress.com/2011/04/kris-ligman-lets-play-super-rutgers-rpg.pdf

Literat, I. (2012). The Work of Art in the Age of Mediated Participation: Crowdsourced Art and Collective Creativity. International Journal of Communication, 6.

Nardi, B. & Kallinikos, J. (2007). Opening the Black Box of Digital Technologies: Mods in World of Warcraft. Presented at 23rd EGOS Colloquium. Retrieved from http://www.artifex.org/~bonnie/Nardi_Kallinikos_EGOS_08.pdf

Sotamaa, O. (2010). When the Game Is Not Enough: Motivations and Practices Among Computer Game Modding Culture. Games & Culture, 5: 239 – 255.

Taylor, T. L. (2006). Play Between Worlds: Exploring Online Game Culture. Boston, MA: MIT Press.

Appendix. The Passion that Fuels Minecraft

This ethnography is based on the fieldwork I conducted on an internet-driven media phenomenon, a popular game called Minecraft, throughout the course of an academic year while in graduate school from 2012-2013. My research was driven by the need to speak further to the idea of the co-creation process: a shift in the culture industries, where media companies increasingly deal with active audiences that speak back to producers, writers, and other creatives involved in the production process.

My involvement with the Minecraft community started in early autumn of 2010, when a friend introduced me to a popular YouTube video of a player constructing a 1:1 scale of the Starship Enterprise. Like thousands of other eventual players, the video intrigued me to an extent that I eventually purchased the alpha version of the game (at that time discounted, with the promise of free updates). I became drawn into the community, watching dozens of videos, trying of mods, and playing with friends, often into the dark hours of the night and frequently with all of us screaming at the top of our lungs as we encountered sudden monsters in the twisty entrails of the underground Minecraft tunnels. Nowadays, I rarely play Minecraft anymore, but I continue to keep up to date with the community and the various updates that manifest from the development team.

As a participant for more than two years before conducting this formal research, I made informal observations that I greatly relied on in writing up this study. But that is not to say that I framed this study as an objective observer removed entirely from bias or privilege. As an individual, I represent most of the core segment of the population that participates in these types of game spaces: white, male, middle class (without identifying

as discretely heterosexual). Does that impact my interaction with this space? I would like to argue not, as – and, having worked in the realm of fan studies in the past, I am not too surprised about this – all of the participants encapsulated in this project were particularly enthusiastic to share their experiences with me.

Henry Jenkins has argued that fan-driven ethnographies – encapsulated by naming the researcher as "acafan" – bridge a gap of knowledge and access that other scholars are sometimes not privy to, while also addressing prior criticisms (really, pathologizing) of scholars doing fan work. As he notes in a blog post,[2] acafen have "accountability" to the communities they are studying: a recursive public, in a sense, where fans (already analytical in their own ways) can speak back to scholars' analyses, sometimes with even more vigor. Some scholars have pushed back against Jenkins' popularizing of the term,[3] and for good reason: Henry notes that scholars in this vein can access different voices and thereby reach different conclusions.

At such a high level of analysis, I recognize that I fit neatly into the aca-fandom framework, though I would like to argue that I don't situate myself within it for this analysis. However, it is important to point out that I have particular biases that drive the research questions in this study. For instance, one major conflict around the Minecraft community has been Persson's and Mojang's questionable relationship with the modding community, where such activities are vaguely encouraged *and* discouraged. The fact that Mojang promised the community a modding API years ago and has still not delivered remains a stain on the community's view of the team. My position regarding this conflict is largely irrelevant to this paper; however, I am strongly in favor of allowing these sorts

---

[2] http://henryjenkins.org/2011/06/acafandom_and_beyond_week_two.html
[3] For example, see Ian Bogost's blog post: http://www.bogost.com/blog/against_aca-fandom.shtml

of behaviors to occur (particularly having been a member of the free culture movement for a number of years). Thus, while my position within the community is at such a distance that it does not necessarily impact the behaviors and social relations that guide it (unlike, say, if I were a notable member of a well-known modding group), the argument I wish to put across guides the kind of questions I am interested in (though, to be blunt, I have not misrepresented the importance that mods and other participatory opportunities play to the community in favor of making that argument).

Further, it must be noted that my distanced position is both strategic and convenient. Because studying such a distributed system of actors is difficult – literally thousands of participants and millions of pieces of media – I chose the route of, rather than focusing on a local area of the Minecraft community that I could readily access, finding a sample of participants that self-elected their participation in the study via online communication. All of the interviews conducted in this project were through online means, primarily over email. However, I want to argue that this decision was largely tactical as well: not only was I able to conduct more interviews more easily (for example, because email provides immediate transcription and reference via search, though especially because I was able to conduct multiple interviews simultaneously), focusing solely on online communication reinforces the norms of the Minecraft community: many interactions occur primarily online, and these interactions are largely limited to in-game text chat, message board posts, and instant messaging. While many players participate with family and friends – especially those under the age of 13, who primarily play together in or after school – I feel that allowing participants to describe their experiences in much the same way they do in the community infrastructures (social media, forums,

etc.) would not misshape their self-disclosures. In fact, I believe it matches the metacommunicative routines that players are frequently required to adhere to when participating in digital communication: for example, I had two interview participants that responded on their phones. Having to think about Minecraft away from the computer is, as I believe from personal experience, a difficult but necessary task that many players face, as they consider their role in the system (eg., I'm a builder, and I need to keep thinking about how to coordinate my team to construct the castle tonight).

Overall, it's a bit strange to say I might have occupied an ambivalent position while conducting this research: to many participants, I may have been seen in the role of a journalistic reporter, inquiring about the sustained phenomenon that Minecraft has been for the past few years. The enthusiasm that I encountered by participants in fact sometimes challenge me to do more work: for instance, I had teens under the age of 16 politely ask to be interviewed and, when I had to decline, tell me to email them back as soon as I had approval to speak with them, because they just loved talking about Minecraft that much. Similarly, I had a handful of parents email me to ask if I would interview their young children (some even as young as 7), because they were as passionate about their kids' enthusiasm as the kids were for the game.

While I doubt that my ethnography will shape anyone's outlook on the developments that have occurred around Minecraft, I certainly hope that this study will be able to highlight the unique processes of participating in a produsage-driven community that underlie playing such a simple, online game, particularly for those in the creative and technology industries that would otherwise not have known about this particular case study.