Lethal Architecture and the Chicken Singularity

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"By their factories ye shall know them," writes German media theorist Vilèm Flusser. For Flusser, "Everything, particularly the science, politics, art and religion of the society of the time, can be traced back to factory organization" (43). In the context of our ongoing study of Mojang's Minecraft (2009), the question that arises from this thesis is, what might a critical study of the factories in the game tell us about its embedded cultural values?

There factories I want to focus on today are known as "mob grinders." These are structures that players create in order to process monsters, or "mobs," for the resources and experience points that they drop on their death. For reasons of time, I'm going to focus on grinders that produce meat from the domestic animals in the game, though the final version of this section of our book will study a much larger set of what I've come to think of as the game's "lethal architecture."

I started down this path because, let's be honest: I am the Col. Sanders of Minecraft. I am directly responsible for the deaths of many, many, many, many digital chickens. Partly as a joke, and partly as a gesture of altruism, a student of mine last year built the BFC, a free virtual chicken "franchise" on the TAG Minecraft server. Along with some of this student's classmates, I then turned the BFC into the occasion for a set of thought experiments. One of the questions that arose was whether mob grinders stand in relation to neoliberal production in a way that's analogous to how slaughterhouses stand to industrial modernity.

Why slaughterhouses? Writers like Siegfried Gideion, Vilèm Flusser, Bernard Tschumi, and David Edgerton, looking at the

topic from a variety of different fields over more than half of a century, concur that slaughterhouses exemplify both the triumphs of modernity and its worst failures (the slaughterhouse at la Villette, the Chicago stockyards and the Ford assembly line on one side, and the Nazi death camps on the other).

Another area in which the historians of mechanized killing are consistent is in their sense of it as technologically uneven full of "long-lived, disappearing, reappearing and expanding 'old' technologies" (Edgerton 165), chief of which is the handheld knife (Edgerton 164). Even today, slaughtering vacillates back and forth between handicraft and industry. Likewise, production inside Minecraft (and outside of it for that matter) seesaws back and forth from industry to handicraft. For Giedion, this is a counter to the typical modernist narrative of technological progress. He writes that the slew of patents for devices supposed to replace the knife that the American industry produced "resemble medieval instruments of torture rather than highly developed machines" (232). So as William Gibson is often quoted as saying, the future is here, but it isn't evenly distributed. We might add, after Raymond Williams and Marshall McLuhan, not only that the ostensibly obsolete past is also still here in residual form, but that its dialectical redeployment in new contexts is the machine that produces possible futures. The question is, what sorts of ideological residues come along for the ride, and what new and heady political concoctions occur?

Many of the basic techniques employed in slaughterhouses are also at work in mob grinders: the mechanical handling of animals and objects through a series of "rising and descending planes and on various levels, like a switchback railway" (Giedion 229); the use of gravity to pull entities down through buildings (Edgerton 174); stunning (174); gassing or suffocation (174). Animals not killed by the machine are killed by an avatar with a

weapon (174). Minecraft grinders are often constructed to reduce mobs to a single hit point, so that the player can collect the experience points for the kill with minimum effort. Various mods have devices for the automation of experience collection as well, but as in contemporary butchery, the handheld blade remains a major component of Minecraft mob grinding.

I mentioned the slaughterhouses of Villette earlier. In 17 just years, George Eugène Hausmann transformed the entire technical organization of the city of Paris, and Central Slaughterhouse of Villette (opened Jan 1, 1867) was his paradigmatic object (209) - "a prototype for the rest of the century" (210). Villette is a more accurate precursor for survival Minecraft grinders than the Chicago stockyards which directly inspired Ford's assembly line (though in creative mode, many players display a drive to manufacture massively overproducing grinders that mimic the excesses of the turn-of-the-century stockyards at their worst). The contrast is between small, localized and efficient production for local consumers on one hand vs the logistics of centralized processing, refrigeration and redistribution on a continental scale on the other (food and other items produced in Minecraft grinders are often sorted and stored, but rarely shipped across the virtual world).

In survival Minecraft, as in modernity, meat production is a form of efficiency: feeding crops to animals increases their worth. Giedion described how Cincinatti and Chicago "condensed" corn into whisky or hogs (215). In Minecraft, breeding, slaughtering and processing cattle to produce cooked steak refills average of 8 (of a possible 20) hunger points per wheat, at a saturation of 12.8 (also out of 20; saturation is a measure of the amount of time it takes to become hungry again after eating a given food). For raw beef, the numbers are 3 and 1.8; for bread, 1.66 and 2. This is a textbook example of how ideological assumptions become embedded in a game's procedural

rhetoric. In blunt numeric terms, carnivorous diets are superior to vegetarianism in Minecraft, and cooked food is better than raw.

The only Minecraft mod that I know of that requires a player to confront any sort of representation of the process that produces the meat that sustains their avatars is called Butcher Hooks. It requires you to first slaughter, then hang, fillet and smoke or pack your meat in frozen chests for storage and later use. Like vanilla Minecraft, Butcher Hooks is free of blood and offal, though not without its horrors: unprocessed raw carcasses eventually rot. Moreover, the mod allows players to hang dead mobs from the same hooks from which they'd hang edible carcasses, though further vivisection of mobs other than livestock is not possible.

In his "anonymous history" of the relationship between mechanization and death, Giedion strives for dispassion. He sides with the modernist avant-gardes, writing that "It is more honest to picture death in its crassness as the Spaniard, Louis Bunuel [sic], in his motion picture _Le Chien Andalou_ (1929), did symbolically" (242) ... the "crass, cruel; and true" is useful because "Its directness captures something of the eternal horror of death" (243). Minecraft engineers compete on YouTube to produce ever-smaller and more efficient mob grinder designs, which almost invariably feature windows that reveal the entire killing process. But our ideology is not the unblinking stare of early modernity. Mob grinders can and do spark regular fits of outrage from sentimental Minecraft players protesting the "unethical" treatment of digital animals.

To me, such protests smack of Peter Slöterdijk's formulation of cynical contemporary ideology: Minecraft players know perfectly well what they're doing, yet they're still doing it, even as they complain about equivalent acts occurring elsewhere (Žižek,

Sublime Object 25). On the Concordia Minecraft servers, there are a wide variety of mob grinders of all sizes, shapes and designs. The ones that consistently attract acts of vandalism or statements of outrage, whether ironic or otherwise, are the chicken grinders (chickens are the only animals in the game that can power an autopoeitic grinder; everything else requires the input of additional resources). Yet mob grinders like the BoneCrusher (which grinds skeletons, which might be cute in Minecraft, but nevertheless also try and kill you) see regular usage and remain well maintained. Outside, wholesale slaughter of all sorts of mobs proceeds apace. Grinders that employ villagers in some capacity, such as wheat farms and iron farms, are special cases that require more time than I have here, and we can discuss them during question period if you like. But when players react against them, as they finally did to bring about the closure of the mLab server's "Village of the Damned" iron farm, that too is rooted in sentiment rather than critique.

The ethical questions that mob grinders can raise concern not digital animals, but processing cycles, which affect the human and nonhuman alike. Left unmonitored, a highly efficient, overproducing mob farm has the potential to fill its "chunk" of the Minecraft world with thousands of entities: eggs, feathers, animal carcasses, leather, bones and so on. The computation power required to render all of these entities can slow gameplay in the chunk, and sometimes, the world, to a crawl.

I know this because my students and I were responsible for an infamous event on the mLab server that has been memorialized as "the Chicken Singularity." As part of the BFC project, I built "the Chicken Cube," a prototype chicken grinder for my students to consult. One of them threw a switch that put the machine in egg-producing mode and forgot to reset it. Several days later, a slow digital poultry-based apocalypse ensued. It was my fault. Something I had constructed severely taxed server resources. It

cost time and money to fix. I made it difficult, if not entirely impossible, for others to play the game in that world for days. But my ethical lapse occurred not on the level of a symbolic representation of mechanized slaughter, but in my abuse of collective processing resources. Any other resource-intensive activity would have been as problematic.

This is the sort of insight that I hope to gain from further critical gameplay and research into Minecraft mob grinders. I think that ultimately what mob grinders represent is a kind of allegory for neoliberal production, like the Star Trek replicator, cryptocurrencies like Bitcoin, or that cliché of 21st century arts and humanities labs, the 3D printer. The fantasy is that anyone can have local material excess at little to no cost. The reality is not only that our compact fantasy factories are deeply imbricated in collective global infrastructures that are very material and very real, but that our dreams of excess are already taxing these infrastructures to the breaking point. Tea. Earl Grey. Hot.