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Robert Baumgartner

"Main Objective: Don't Starve": Representations of Scarcity in Virtual Worlds

At first glance, video games and scarcity seem to have little to do with one another: the medium is intrinsically dependent on the economic abundance of twenty-first-century capitalism, and has become a symbol of the contemporary affluent middle-class life-style. This inseparable connection to material abundance is evident in every aspect of its production and consumption, be it the massively globalized and resource-consuming production process of its hardware and software, the energy required to maintain the individual devices, servers, and data centers, the massive cost of developing and marketing modern AAA (or "blockbuster") games,[1] or the cost of consoles and games for private consumers.

But at the same time, video games are also inherently attracted to the concept of scarcity. We have to remember that, as a digital structure, the video game is built on a dichotomy of quantified (binary) states. As a consequence, everything that is processed is primarily treated in strictly arithmetic terms, no matter its appearance on the screen. But the processing of various sums is meaningless if these sums have no discernible relevance. Fortunately, the so-called ludic model of gameplay[2] synergizes very well with this characteristic: in contrast to improvised free play (*paidia*), ludically organized games base themselves on strict sets of rules and define verifiable conditions for victory and defeat. Through the merging of sums and rules, the previously "neutral" sums at the base of the medium become parts of meaningful interactive challenges—they are converted to resources that can be gained, lost, and, when organized in the right way, mean victory or defeat. Consequently, video games tend to portray their interactive challenges through a lack—or scarcity—of resources or options for players. This is most apparent in early video games, which ended in a "loss" scenario when players ran out of limited resources, such as allotted play time or retries.

1   An example: the AAA game *Star Wars: The Old Republic* (2012) cost US$200 million (including the development budget, marketing costs, and other expenditures). Cf. Ben Fritz and Alex Pham, "Star Wars: The Old Republic—The Story behind a Galactic Gamble," *LA Times*, 20 January 2012. Online at http://herocomplex.latimes.com/games/star-wars-the-old-republic-the-story-behind-a-galactic-gamble/#/0 (last accessed 4 January 2014).
2   A term established by Roger Caillois in 1958 for various forms of pre-digital games. Cf. Roger Caillois, *Man, Play and Games* (Chicago: University of Illinois Press, 2001), 13.

Although the artificial creation and mastery of scarcity never stopped being the prima-ry way of creating rule-based challenges, the actual representation of these mechanics has seen drastic change. During the 1990s and early 2000s, video games were slowly transformed from arcade-like exercises in hand-eye coordination to high-quality home entertainment with a higher grade of complexity, both in gameplay and narrative. With a greater focus on storytelling and a more "casual" target demographic, more and more games established less rigorous conditions for victory and defeat in order to allow more players to experience the whole story of the game. An example: the first-person shooter *Call of Duty 4: Modern Warfare* (2007) replaced the strict time and resource limitations of its predecessors not just by establishing a much more lenient resource policy, but also by providing the avatar with a regenerating health pool that only required players who had taken a hostile hit to take cover behind a wall for several seconds in order to recover and continue the fight—scarcity was transformed from a constant threat to a short-term issue. This strategy of scarcity reduction also tended to create discrepancies between gameplay and narrative: even if levels or storyworlds such as small islands or abandoned space stations were depicted in narrative terms as places of scarcity, they were rarely designed and experienced as such. This easily cre-ated situations where players were showered with useful items while being told that their characters were experiencing dire material hardship.

However, during the last decade, we can observe significant changes in this practice. Instead of hiding the scarcity at their core, more and more games exhibit it by not only placing representations of economic and ecological scarcity in the center of their fictional world and story, but also at the core of their gameplay. Consequently, these games not only try to depict their worlds as "authentic" spaces of scarcity, similar to those in passively consumed media such as films and novels; they also utilize the spe-cific mediality of the video game to let players experience emotional and intellectual states associated (by the developers) with scarcity.[3]

3   The medial process that potentially leads to players being affected by intradiegetic events to a degree that is usually only experienced when one is actually physically involved in events is complex, but has been well described by the German game studies scholars Jochen Venus and Stephan Günzel. Cf. Venus, "Erlebtes Handeln im Computerspiel," in *Theorien des Computerspiels: Zur Einführung*, ed. GamesCoop, 104–27 (Hamburg: Junius, 2012).

The Digital Post-Apocalypse

The last decade has seen a significant trend towards the depiction of post-apocalyptic settings and worlds in all forms of popular media. Be it in the form of a nuclear war, a regular or "zombie" pandemic, or an unexplained cataclysm, many of these scenarios have resulted in the elimination of most of the human population and the partial or complete collapse of economic and political structures. The situation of the scattered survivors, who have to scavenge for basic resources in barren environments, destroyed ecosystems, and the ruins of the past, often puts emphasis on the presentation of scarcity, thus (at least potentially) confronting middle-class consumers with the ephemeral nature of their current lifestyle. This new-found obsession with scarcity and the consequences of environmental collapse is elaborated in many of the most popular contemporary games such as *Fallout 3* and *Fallout New Vegas, The Last of Us, Left 4 Dead, Metro 2033, Metro Last Light,* or *The Walking Dead.* All of these games place their protagonists in ruined post-apocalyptic worlds where they have to struggle with the constant lack of resources such as food, ammunition, functional equipment, and currency—if it still exists. Their surroundings, civilization (especially urban environments), and even nature itself can no longer offer resources in the ways established by the imagination and practices of modernity.

Civilization

The collapse of civilization has destroyed the complex industrial and economic structures that are necessary to produce and distribute refined goods on any but the most rudimentary level. Most of the mentioned games emphasize this fact by turning the abandoned husks of factories, shopping malls, and warehouses into explorable game spaces. However, they are no longer spaces of abundance, but almost empty: the few objects that have survived the onslaught of time and other desperate survivors are either strewn among the unusable wreckage of the past or hidden behind locks and dangerous traps. The destitute emptiness of locations strongly associated with affluence is a striking symbol of scarcity, while the difficulty in obtaining the few precious resources that ensure the avatar's survival—once-commonplace items, like potato chips, instant meals, and soft drinks—gives players a new appreciation for material comforts usually taken for granted.

Nature

What about nature? In romanticist paintings (e.g., Thomas Cole's cycle *The Course of Empire*, 1833–1836) or early speculative fiction of the nineteenth century (such as Richard Jefferies's post-apocalyptic novel *After London*, 1885), the collapse of civilization and the end of human meddling also meant that nature had a chance to reclaim lost territory and regenerate. However, in most contemporary post-apocalyptic video games this is not the case. Often protagonists will walk through a barren wasteland among ashes and burnt trees that no longer bear fruit. Even worse, the fantastic settings of these games turn the environment—or what remains of it—into active threats to the player: the water is irradiated and slowly kills the avatar that drinks it to survive, the plants are toxic, and most of the surviving wildlife has mutated into aggressive abominations that actively attack and pursue humans. Even if the environment has survived the global catastrophe, as in *The Last of Us* or *The Walking Dead*, it can no longer provide for the survivors—because they lack the skills to harvest its remaining bounty.

Dealing with Scarcity

Using their entire arsenal of media and features, the aforementioned video games invite players to experience this post-apocalyptic world of scarcity for themselves: they not only confront players with a constant lack of resources and thus gameplay options, but also reflect and elaborate this deficit on a narrative level by creating spaces and situations that can only be understood and navigated from a perspective of scarcity. An example for the ethical dimension that gameplay decisions can gain by combining these aspects is the adventure game *The Walking Dead* (2012–2014). The game puts players in the shoes of a survivor in a global zombie pandemic and forces them to decide the fate of a half-starved group of survivors: who among the men, women, and children receive some of the precious remaining food rations? If given the chance, should the group loot a car full of supplies belonging to other survivors, thus damning them to starvation? Unlike more conventional games that provide players with enough information to be adequately sure about the mechanical and narrative consequences of their actions, *The Walking Dead* never becomes predictable: good deeds might have negative consequences, wrongs might go unpunished—under conditions

of constant scarcity, a clear conscience is just another unaffordable luxury. However, players perceiving this scarcity-based scenario as an invitation to follow behaviors based on rational choice theory are soon disappointed: the game not only systematically obscures the potential costs and benefits of choices by limiting information and mixing in unpredictable social dynamics between group members, it also prolongs its causality over hours of gameplay, thus turning any "rational" decision into a gamble with an uncertain future. The self-interested decision to loot the "abandoned" car at the end of episode two costs the protagonist dearly when the car's owner returns in episode five to take revenge on those that damned his family to starvation and death. The explicit omission of optimal choices can feel unsettling for players who are used to seeing games as a sandbox for informed decisions and optimal (narrative and mechanical) outcomes, or, as pointed out by Nick Dyer-Witheford and Greig de Peuter in *Games of Empire* (2009), as a training ground for modern economic thought and practice.[4] But for the same reasons it also holds subversive potential, because it forces players outside the box of economically optimized decision-making and helps them to imagine alternative modes of thought.

As a consequence, games posing these difficult questions, such as *The Walking Dead, The Void,* and *Pathologic* (the latter two developed by the Russian studio Icepick Lodge), often tend to be much less relaxing than expected. This would also explain why they are so few in number compared to those games that turn scarcity in a source of manageable "fun." This is most apparent in the subgenre known as sandbox-survival simulation. This genre is relatively young and has not yet garnered much scholarly attention, except for its progenitor, *Minecraft,* which was released in 2011. Since then, many games with the same gameplay structure have been published or put into development, among them *DayZ, Eidolon, The Long Dark, The Forrest, Rust, 7 Days To Die, Salt*, and *Don't Starve.*

The basic structure of the genre, here illustrated by *Don't Starve*, is easily explained: without much ado, the player character is put in the middle of a randomly generated landscape that appears to be mostly untouched by civilization. As in all games of the genre, players start out without tools, food, shelter from the elements, or a map. They soon become painfully aware of this fact, because while they inspect their character and surroundings, the saturation symbol starts emptying and continues to do so.

4   Cf. Nick Dyer-Witheford and Greig de Peuter, *Games of Empire: Global Capitalism and Video Games* (Minneapolis: University of Minnesota Press, 2009), xv.

Nutrition can be found by gathering berries or turnips, but these can only stave off hunger for a short time. And with the passing of time and the arrival of night or bad weather, temperatures fall and threaten the player character's health—even a campfire goes out without constant refueling. Without decisive action, they will soon starve, or die from exposure: they are threatened by constant scarcity from all sides.

However, survival games have their name for a reason: by picking up basic resources like rocks and sticks from the ground and combining them, player characters can build crude stone tools, such as axes, pickaxes, or hammers. These can be used on the surrounding trees and boulders to produce logs, flint, rocks, and ore—which in turn are combined to create better tools, simple shelter from the elements, fire, and most notably, weapons such as bows and spears. Hunting provides more food but brings the risk of injury or death—but death comes easily enough, as only very few games of the genre are content to threaten with just death from starvation, thirst, exposure, wounds, intoxication, or even sleeplessness. Most also feature supernatural monsters (such as zombies, mutants, or giant animals) that are most active at night. They kill unprepared avatars in a short time and negate hours of work. However, the creation of more and more elaborate weapons and armor is slowly leveling the playing field: after a few hours, players routinely hunt wildlife, strengthen and expand their shelter, and gather more resources in order to create refined devices or tools that optimize the efficiency of their economic output by automating many activities or providing easily accessible resources. Optimal planning and execution of available actions for hours of playtime pay massive dividends: a fortified camp, a never-ending stream of food and crafting resources, even luxury items and domination of the island's beasts. The specter of scarcity has been exorcised, only to be superseded by abundance.

But why are these games so fascinating for contemporary players, especially considering the fact that they do not feature an elaborate story? Why would players expose themselves to the stress and anxiety of simulated scarcity? And why does this genre appear to be so familiar even while it is considered barely established? This question leads us back to the eighteenth century and the "invention" of scarcity in its modern form. I exclude the early origins of this development and focus on the writings of Adam Smith, David Hume, and Jean-Jacques Rousseau, who imagined the human condition

as a constant struggle with both natural and self-imposed scarcity. The details[5] are less important than the effects of this cultural transformation: during subsequent decades (and under the influence of early capitalist and enlightened rationalist thought), scarcity was not only transformed into an imagined constant, but together with its twin concept of abundance, it became the basis of a new teleology. Now scarcity, the Malthusian specter that threatened civilization, could be overcome. And by the application of rational enlightened thought and economic action, it could even be turned into everlasting abundance. One of the most striking fictional illustrations of this trend is Daniel Defoe's *Robinson Crusoe.* The well-known story has been read as a prototype narrative of early modern economic thought: a white male finds himself isolated from civilization and experiences scarcity on all levels—until he uses his educated mind and perseverance to unlock the hidden plenty of his island environment. All of this happens in a re-creation of the course of civilization, from hunting and gathering to crafting, simple agriculture, and finally economic autarky and plenty.

We can read these survival games as interactive re-enactments of this process, digital robinsonades that establish scarcity as the big existential threat—only to turn it into abundance. The survival simulation allows players to realize this phantasma of modernity in a safe arena, the "magic circle"[6] of the game, where the odds are designed to be in their favor. The anxiety or insecurity that players might feel when facing the simulated scarcity is willingly endured, because it makes the almost guaranteed payback all the sweeter. Games like *The Walking Dead, Pathologic*, or *The Void* deconstruct this mode of gratification by breaking these artificial shackles and confronting players with an unmitigated dose of scarcity and unpredictability that not only casts doubt on their expectations of games, but also on their perspective on scarcity and abundance in general. In this way, scarcity in the virtual world appears not only as a barely containable liminal concept that challenges the social and economic values held dear by late capitalist consumer societies, but also as a tool of self-reflection for the video game as a medium that struggles with its heritage as a producer of escapist gratification.

5   Hume and Adams supported the consumption of more resources in the name of taste and culture, while Rousseau proposed human self-control and discipline. Cf. Nicholas Xenos, *Scarcity and Modernity* (London: Routledge 1989), 4ff.
6   Cf. Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (Boston: The Beacon Press, 1955), 10.

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Suggested Playing:

Icepick Lodge. *The Void (Тургор)*. 2009.

Klei Entertainment. *Don't Starve*. 2013.

Telltale Games. *The Walking Dead*. 2012