



GREENING THE SYSTEM

Exploring the Impact of Ecocritical
Modding of *The Sims 4* on our
Sustainable Imaginaries



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Abstract

This thesis explores the impact of modifying the commercial video game *The Sims 4* within the search for sustainable imaginaries to combat the climate crisis. The climate crisis' origin has been traced back to the era of Columbus, which saw the rise of both capitalism and the dynamics of global empire. As a simulation game based on capitalist logic, *The Sims 4* can be used as a tool to challenge built-in assumptions of capitalism. By employing a diachronic proceduralist method, and by using Donella Meadows' insights on systems theory, Amitav Ghosh' postcolonial insight, Matt Huber's class critique, and George Lakoff's understanding of framing, this thesis explores how *The Sims 4*, with emphasis on the *The Sims 4: Eco Lifestyle* expansion, connects to current popular debates surrounding sustainability (e.g. the ecological footprint, clean energy, and dumpster diving). Then, by having collected 187 mods and by understanding modding as a form of metagaming, this thesis looks into dominant patterns of ecocritical mod creation ('ecomodding'). Modding games is an active creative way for fans to engage with the source material, allowing them to participate by criticising and nuancing the discourses of sustainability this game connects to. Finally, through employing an auto-ethnographic method, the author created two new ecomods to explore ecomodding as a valuable educational experience to develop ecological citizenship.

Keywords: The Sims 4, Eco Lifestyle, Modding, Ecomods, Participatory Culture, Video Game, Fandom, EA Games, Community, Ecological Literacy, Sustainability, Ecological Footprint, Postcolonialism, Empire, Multitude, Framing.

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◇ Introduction ◇

Games as Environmental Criticism

The climate crisis is affecting our entire planet. We're already facing a loss of sea ice, accelerated sea level rise, and more intense heat waves. The climate crisis is a human-caused crisis, irreversible on a timescale of a single lifetime, and will still worsen.¹ This entire process is complex and characterised by a network of factors and influences, and addressing any of them is an inherently political act. This crisis is a "hyperobject": an object where addressing the totality is intrinsically tricky because we can only ever see pieces of it at any given moment.² This makes addressing the climate crisis difficult, because the network of factors and influences can never be fully unravelled.

Amitav Ghosh argues that the climate crisis is not merely a crisis of nature, it is a crisis of culture.³ He explains that within our culture we have a lack of social imaginaries, meaning that we lack commonly agreed visions for a sustainable future. Before developing these social imaginaries, he explains that we need to identify the cultural "practices and assumptions that guide the arts and humanities".⁴ This identification is what he considers to be "the key to understanding why today's culture finds it so hard to deal with climate change".⁵ Noel Longhurst and Jason Chilvers supplement Ghosh' understanding by explaining why having these social imaginaries is so crucial: sociotechnical visions and imaginaries of alternative possible futures have a strong influence over decisions made in the present.⁶ Together, this shows that we need social imaginaries to help enact social change, but at the same time that we need to remain critical of the values these new social imaginaries will uphold.

Where Ghosh turns to the field of literature to consider new social imaginaries, the use of video games as an alternative vehicle for climate crisis communication is also being explored.⁷ Commercial video games can present ecocritical interactive fictional worlds and processes that players can explore.⁸ For example, think of games such as *Eco*, *Animal Crossing*, or *Bee Simulator*. Players can then modify (mod) video games like these, and contribute to ongoing discourses of

¹ "The Effects of Climate Change," NASA, last accessed January 11th 2022, <https://climate.nasa.gov/effects/>.

² Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis, London: University of Minnesota Press, 2013), 4.

³ Amitav Ghosh, "Amitav Ghosh: where is the fiction about climate change?" *The Guardian*, October 28, 2016, <https://www.theguardian.com/books/2016/oct/28/amitav-ghosh-where-is-the-fiction-about-climate-change->

⁴ Ghosh, "Amitav Ghosh."

⁵ Ghosh, "Amitav Ghosh."

⁶ Noel Longhurst and Jason Chilvers, "Mapping Diverse Visions of Energy Transitions: Co-producing Sociotechnical Imaginaries," *Sustainability Science* 14, no. 4 (June: 2019): 987.

⁷ Stefan Werning, "Understanding and Communicating the Climate Crisis through Ecomodding." *Communication +1* 8, no. 1 (October 2021): 1.

⁸ Víctor Navarro-Remesal, "Pixelated nature: ecocriticism, animals, moral consideration, and degrowth in videogames," *Logos* 26, no. 2 (2019): 15.

academic climate crisis communication facilitated by those video games.⁹ The imaginaries created through these practices can then help drive environmental action. From a humanities perspective, researchers contribute through the interdisciplinary research area of the ‘environmental humanities’. This is an umbrella term that captures a set of different academic disciplines like environmental philosophy, environmental history, cultural anthropology, and ecocriticism.¹⁰ It is this last discipline that will be the most important for this research.

Ecocriticism is both a critical method and ethical discourse that focusses on the interconnections between nature and culture.¹¹ Ecocriticism originates from the field of literature, but also extends to environmental philosophy and bioethics, where it focuses on the relationship between the human and non-human worlds.¹² An ecocritical study of media is often referred to in general terms of ‘ecomedia’ or ‘green media’ and mostly applies to discussions of the ethics of representation and the effectivity of green media and communications,¹³ but to a lesser extent also includes media production.¹⁴ Sean Cubitt highlights the postcolonial angle in ecocriticism by noting that ecomedia critique is also a way to articulate “the political, cultural and economic features of both media and environments across the deep divisions of gender, class, colonialism and the global assault on and resistance of indigenous people, who stand to lose most in ecological struggles.”¹⁵ I will be using ecocriticism to investigate the practice of ecogaming, which is a practice that focuses on how games promote sustainable development. I will do this by focussing both on games-as-text and on (meta)gaming practices.¹⁶

Ecogaming is a growing trend in the games industry, but it usually does not involve the voice of the consumer. An important example of the growing attention for ecogaming within the games industry is the ‘Playing for the Planet Alliance.’ This alliance was founded during the Climate Summit of 2019 at the headquarters of the United Nations, and currently includes 41 major gaming companies that have made a commitment to a greener games industry.¹⁷ These commitments range from greening the production itself by going carbon negative, spreading awareness, and integrating

⁹ Werning, “Understanding and Communicating the Climate Crisis through Ecomodding,” 1.

¹⁰ “About,” *The Environmental Humanities at UCLA*, last accessed January 11th 2022, <http://environmental.humanities.ucla.edu/>.

¹¹ Graham Huggan, ““Greening” Postcolonialism: Ecocritical Perspectives,” *MFS Modern Fiction Studies* 50, no. 3 (Fall 2004): 701.

¹² Huggan, ““Greening” Postcolonialism,” 701.

¹³ Sean Cubitt, “Ecomedia Futures,” *International Journal of Media and Culture Politics* 10, no. 2 (June 2014): 1.

¹⁴ John Parham, *Green Media and Popular Culture: An Introduction* (London, New York: Palgrave Macmillan, 2016).

¹⁵ Cubitt, “Ecomedia Futures,” 7.

¹⁶ Ulrich D. Holzbaur, “EcoGames – Simulation Games and Sustainable Development,” *Sustainability in the Information Society: 15th International Symposium Informatics for Environmental Protection, Zurich 2001*, ed. Lorenz M. Hilty and Paul. W. Gilgen (Marburg: Metropolis Verlag, 2001), 972.

¹⁷ “Members & Commitments,” *Playing for the Planet*, last accessed January 12, 2022, <https://playing4theplanet.org/members/>.

environmental themes in mainstream games.¹⁸ Yet there is no formal role in this for the consumers. As such, consumers, also referred to in more general terms as ‘fans’, have other ways to organise themselves. Be it on discussion forums, or even larger initiatives like the non-profit organisation Fandom Forward.¹⁹ In this way, fans become a networked community that can participate within media discourses, and this network ultimately plays a part in how media circulates.²⁰ This phenomenon is captured by Henry Jenkins under the term ‘participatory culture,’ and allows for an informal setting in which social rules can be reworked in more experimental and innovative ways than a formal setting can offer.²¹ Formal settings are often more conservative and institutional, often making them static. In contrast, informal settings are often experimental and provisional, allowing informal settings to evolve to respond to short-term needs and temporary interests.²² These informal learning settings are what James Paul Gee calls “affinity spaces:” peer-to-peer teaching spaces with low thresholds where people learn more, participate more actively, and engage deeper through popular culture than they would do with the content of their textbooks.²³ This type of fanculture is closely related to civic debate and political engagement, because these spaces allow fans to train skills of citizenship by becoming political actors and let them gradually come to understand the political impact of their choices.²⁴

One of the ways video game fans can participate in an informal setting in the ecogaming discourse is through the creation of mods - modified content created by a fan community.²⁵ When mods engage with ecocriticism, they are referred to as ‘ecomods’. Kyle Bohunicky demonstrated through his analysis of *Skyrim* mods that ecomods can “provide a site for discourse and debate over environmental and ecological issues,”²⁶ and that ecomods allow players to imagine “alternatives to worlds established on the consumption and destruction of natural environments”.²⁷ In this sense, ecomodding could help develop the new social imaginaries Ghosh identified that we need in order to combat the climate crisis.

¹⁸ Playing for the Planet, *Playing for the Planet Annual Impact Report 2021*, (Nairobi: United Nations Environment Programme, 2022).

¹⁹ “Help Turn Fans into Heroes,” Fandom Forward, last accessed January 12, 2022, <https://fandomforward.org/>.

²⁰ Henry Jenkins, Sam Ford, and Joshua Green, *Spreadable Media: Creating Value and Meaning in a Networked Culture* (New York, London: New York University Press, 2013), 2.

²¹ Henry Jenkins, “Confronting the Challenges of Participatory Culture: Media Education for the 21st Century (Part One),” HenryJenkins.org, October 19, 2006, http://henryjenkins.org/blog/2006/10/confronting_the_challenges_of.html.

²² Jenkins, “Confronting the Challenges of Participatory Culture.”

²³ Jenkins, “Confronting the Challenges of Participatory Culture.”

²⁴ Jenkins, “Confronting the Challenges of Participatory Culture.”

²⁵ Tanja Sihvonen, *Players Unleashed! Modding The Sims and the Culture of Gaming* (Amsterdam: Amsterdam University Press, 2011), 13.

²⁶ Kyle Bohunicky, “Ecomods: An Ecocritical Approach to Game Modification,” *Ecozona* 8, no. 2 (2017): 78.

²⁷ Bohunicky, “Ecomods,” 85.

In this thesis, I will build upon Ghosh' and Bohunicky's work in order to explore how ecomodding the video game *The Sims 4* impacts the development of new sustainable imaginaries. In the following paragraphs, I will first provide an overview of my research questions. Then I will move on to provide an overview of the four chapters of this thesis. Third, I will motivate this thesis' academic and social relevance. Fourth, I will explain this thesis' multimethod approach. Finally, I end this introduction by introducing *The Sims 4*, and how modding this game can be a form of political engagement.

Research Questions

The main focus of this research will be the themes of sustainability in and surrounding the video game *The Sims 4*. The main research question will be: "How can ecomodding *The Sims 4* contribute to understanding and, possibly, changing the mental models that sustain the system responsible for the climate crisis?" In order to answer this question, I will divide this thesis into four chapters. For the first chapter, I will provide a deeper explanation for the mentioned 'system' in my main question through the question: "What mental models are responsible for the climate crisis?" For the second chapter, I will analyse how these mental models and ecological critiques reflect within *The Sims 4* through the question: "In what way do the alleged sustainable values of EA, as per the company's corporate social responsibility rhetoric, reflect in the design and production context of *The Sims 4*?" For the third chapter, I will analyse how modders pick up and expand upon these mental models and critiques through the question: "How does the (modding) community of *The Sims 4* (re)frame climate themes in the game?". For the fourth chapter I will explore modding as an educational practice through the question: "How can ecomodding operate as a creative critical performative practice and help us develop ecological citizenship?"

Corpus Selection

The corpus of this thesis will consist of selected works from *The Sims* franchise. This game franchise has been a major market player since Electronic Arts (EA) released the first game in the beginning of 2000. Its success has led developer MAXIS Studios to the creation of three more main games (*The Sims 2*, *The Sims 3*, and *The Sims 4*), each with a multitude of expansion packs, game packs, and stuff packs. There have been spin-off games, like *The Sims Social* on Facebook, and even a television series (*Spark'd*) that challenged its contestants to show off their *Sims* building skills. EA reported that during 2021, *The Sims 4* was played for 1.2 billion hours, 11.3 million files were uploaded into their gallery,

and 201 million files were downloaded.²⁸ The success of these games isn't slowing down yet, as the fifth instalment has already been announced.²⁹

With a franchise this big, it's important to set some limitations in place. The focus of this thesis will be limited to *The Sims 4*, with an emphasis on the *Eco Lifestyle* expansion pack. I will also touch upon the *Laundry Day Stuff*, *Seasons*, and *Island Living* expansions. This is needed because EA has created this game to be spread across several expansions, meaning that mechanics relevant to this thesis are spread across them too. This approach will also highlight through a diachronic proceduralist perspective that *The Sims 4* has changed over time, and has become an increasingly complex simulation. Plus, due to the amount of available expansions the actual configuration will differ between most players (and with mods these differences increase even more). The expansions I will discuss exemplify several discourses around the topic of sustainability (like nature conservation and conscious thermostat use). For the community discussions and content, I will limit myself mostly to centralised places of debate and file sharing such as the official *Sims* forum,³⁰ *Sims* communities on Reddit, and modding sites such as ModTheSims³¹ and TheSimsResource³². These websites structure their content by topic, presenting a logical overview of their materials.

Chapter Overview

In the first chapter I will delve into the concept of 'the system' and how it relates to 'mental models' in order to create an understanding of the aspects that have to be addressed, because it is the mental models that have to be changed in order to change a system.³³ I argue that we need to address the climate crisis as a hyperobject, as a network that is too complex to be untangled, and focus on how this network functions in its totality instead. I will use the lens of systems theory to take a closer look at the overarching network -the system- itself. Systems theory is a conceptual framework that argues that components of a system should be understood in the context of their interrelatedness, rather than in isolation.³⁴ It might seem strange to use this angle in media research,

²⁸ "2021: A year Powered by Video Games," EA, December 16, 2021, <https://www.ea.com/en-gb/news/2021-year-in-gaming>.

²⁹ Jovan, "THE SIMS 5: EA's Director of Studios talks about the next generation Sims Game," SimsCommunity, April 30, 2021, <https://simscommunity.info/2021/04/30/the-sims-5-eas-director-of-studios-talks-about-the-next-generation-sims-game/>.

³⁰ "Welcome to the Forum," The Sims, last accessed January 11, 2022, https://forums.thesims.com/en_US/.

³¹ "Mod The Sims," Mod The Sims, last accessed January 11, 2022, <https://modthesims.info/>.

³² "The Sims Resource," The Sims Resource, last accessed January 11, 2022, <https://www.thesimsresource.com/>.

³³ Donella Meadows, "Leverage Points to Intervene in a System," *The Donella Meadows Project: Academy for Systems Change*. 1999, <https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>.

³⁴ Lee A. Wilkinson, "Systems Theory," in *Encyclopedia of Child Behavior and Development* ed. Sam Goldstein and Jack A. Naglieri (Boston: Springer, 2011), 1466.

but the media play a crucial part: the mass media is this system's most potent power to achieve social control without violence.³⁵ I argue that the media can also help create new social goals, social imaginaries, to develop new sustainable social, economic, and cultural structures. Finally, I end this chapter by discussing what the path towards these new societal goals could look like by drawing upon the multitude and working class politics as possible ways of organising system change.

In the second chapter I pose *The Sims 4* as one of those media that can help develop these new structures, by analysing how the game engages with the notion of sustainability. First, I will contextualise the game by briefly addressing some relevant history of the game. Then, I will address the developer's own history, in order to understand the wider context in which this game is positioned and how this has influenced the game's development. This will lead me to discuss the largest influence: the capitalistic values embedded within *The Sims 4*. Taking this knowledge as a basis, I will then discuss three smaller examples of how *The Sims 4* has engaged with sustainability to a lesser extent, and then deep dive into the dedicated sustainability expansion pack *Eco Lifestyle*.

In the third chapter I will delve into how modders respond to *The Sims 4*'s engagement with sustainability. Through modding, players can criticise and question existing themes within the original source material. By first establishing modding as metagaming, I will demonstrate how modding functions as a gaming discourse and how this discourse includes exploring new sustainable social imaginaries. Then I will establish what characterises *The Sims*' modding community, and analyse what kind of sustainability-themed mods this community creates.

In the fourth, and final, chapter of this thesis, I will develop my own two ecomods in order to address relevant gaps within the discourse as well as explore the performative qualities of ecomodding as a critical civic practice. First, I will create an ecomod that critiques the current monetised understanding of our electricity grid by utilising Nikola Tesla's Wardenclyffe facility as alternative energy imaginary. Second, I will rework Molleindustria's *Phone Story* into a *Sims 4* mod, and draw *Phone Story*'s critique of supply chain capitalism into *The Sims 4*.

Academic and Social Relevance

The climate crisis is a very real and pressing threat to our planet, and this research will focus on how the field of commercial video games can help contribute to imagining alternative sustainable ways of living. Electronic Arts, although not a member of the Playing for the Planet Alliance and having a morally dubious image due to their unethical labour practices and money-driven attitude,³⁶ has

³⁵ Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (London, New Brunswick: The Athlone Press. 2000), 6.

³⁶ Paul Tassi, "EA Voted Worst Company in America, Again," *Forbes*, April 9, 2013, <https://www.forbes.com/sites/insertcoin/2013/04/09/ea-voted-worst-company-in-america-again/?sh=487539e57aeb>.

breached this topic in *The Sims 4* through their conservationist³⁷ storyline in *The Sims 4: Island Living*, their engagement with sustainable laundry in *The Sims 4: Laundry Day Stuff*, their addition of a thermostat in homes in *The Sims 4: Seasons*, and later through dedicating the expansion pack *The Sims 4: Eco Lifestyle* to this cause. These expansions introduced a variety of new content, which was then picked up by gamers who create mods (also known as ‘modders’). The fact that the *Eco Lifestyle* expansion is not very old yet as it was published in 2020, also means that there is very little academic research that engages with this specific expansion. In contrast, *The Sims 4* is a popular case study. There’s a lot of research that engages with modding various forms of representation within the series, such as queer representation,³⁸ disability representation,³⁹ and Black representation,⁴⁰ but *Sims 4* modding has also been used as a learning tool,⁴¹ or as a tool to explore activist futures.⁴² Yet the angle of the climate crisis remains very underused, with only Stefan Werning,⁴³ and Carien Moosdorff and Joost Vervoort⁴⁴ exploring this topic.⁴⁵

This thesis will contribute to the emerging branch of ecomodding and ecogaming research. I will base this thesis in the work of several prominent (ecological) scholars, such as the ecomodding work of Werning⁴⁶ and Kyle Bohunicky,⁴⁷ Tanja Sihvonen’s research on *Sims 2* modding,⁴⁸ and Stephanie Boluk and Patrick Lemieux’s understanding of metagaming.⁴⁹ Ecomodding research is still a relatively new branch of research, but it shows great promise in bringing together both producers and consumers in a discourse of sustainability that experiments with creating new imaginaries.

³⁷ Conservationism is the act of protecting biological life and ecosystems, in particular from the damaging effects from human activity.

³⁸ Ertuğrul Süngü, “Gender Representation and Diversity in Contemporary Video Games,” in *Game User Experience And Player-Centered Design* eds. Barbaros Bostan (Cham: Springer, 2020), 379-393.

³⁹ Shelly Jones, “Simulated Ableism: *The Sims* and the Lack of Disability Representation,” in *Women and Video Game Modding: Essays on Gender and the Digital Community* eds. Bridget Whelan (Jefferson: McFarland & Company, 2020), 90-113.

⁴⁰ Abdah St Fleur and Jennifer deWinter, “Unfiltered and True to Itself” How Content Creators Represent the Black Community in *The Sims 4*,” *American Journal of Play* 13, no. 2/3 (Winter/Spring 2021), 297-319.

⁴¹ Miroslav Ölvecký and Darja Gabriská, “Relationships Between Game Attributes and Cognitive Abilities,” paper presented at the 2018 16th International Conference on Emerging eLearning Technologies and Applications (ICETA), DOI: [10.1109/ICETA.2018.8572254](https://doi.org/10.1109/ICETA.2018.8572254).

⁴² Arturo Cortez, Ashieda McKoy, and José Ramón Lizárraga, “The Future of Young Blacktivism, Aesthetics and Practices of Speculative Activism in Video Game Play,” *Journal of Future Studies* 26, no. 3 (2022): 53-70.

⁴³ Werning, “Understanding and Communicating the Climate Crisis through Ecomodding.”

⁴⁴ Carien Moosdorff and Joost Vervoort, “How to push which button: Understanding the potential of climate games through the lens of social action theories,” Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), 2021.

⁴⁵ Due to shorter publication cycles there are also a few non-peer-reviewed publications about *The Sims 4* and its engagement with the climate crisis (like student theses), but I will not be referencing these sources.

⁴⁶ Werning, “Understanding and Communicating the Climate Crisis through Ecomodding.”

⁴⁷ Bohunicky, “Ecomods.”

⁴⁸ Sihvonen, *Players Unleashed!*.

⁴⁹ Stephanie Boluk and Patrick Lemieux, *Metagaming: Playing, Competing, Spectating, Cheating, Trading, Making, and Breaking Videogames* (Minneapolis, London: University of Minnesota Press, 2017), 9.

Together, this research will contribute to the understanding of media use, media impact, and media technologies that combat the climate crisis and promote a sustainable future.

Methodology

I will conduct this thesis by employing a multi-method approach. This type of research “involves combining data-gathering and analyzing techniques from two or more methodological traditions”.⁵⁰ Jason Seawright argues that multi-method research has the advantage that it can “test assumptions that are generally untested in single-method research, thereby transforming key issues of descriptive and casual interference from matters of speculative assertion into points of empirical debate”.⁵¹ For this thesis, this means that I am able to address *Sims* ecomodding more comprehensively than a single method allows me to. A multi-method approach allows me to highlight the connections between four areas: the modding discourse, the game as source material, the shaping factor of the developer, and the experience of designing a mod. Each of these four topics correspond to a chapter of my thesis (see ‘Chapter Overview’), which, taken together, dive into the impact of ecomodding *The Sims 4* on developing sustainable imaginaries. At the beginning of each new chapter, I will provide a more detailed overview of the central research method. In short, the first chapter will be written through a literature review, the second chapter will be a game analysis of *The Sims 4*, the third chapter will be a diachronic proceduralist analysis of selected *Sims* ecomods, and the fourth chapter will be an autoethnographic study that details how the experience of making an ecomod is a critical civic practice.

Taken together, my four selected methods allow for a comprehensive and critical approach to consider how *The Sims 4* ecomodding contributes to developing sustainable imaginaries. By conducting a literature review I will be able to situate my thesis in relation to existing knowledge about the climate crisis and address how this thesis contributes to this existing body.⁵² This method will allow me to review research that addresses causes, problems, and possible solutions relating to the climate crisis. This will lay the groundwork for the coming chapters, providing a basis to understand debates and trends happening within *The Sims 4* and its community. Then in the second chapter, in order to understand how *The Sims 4* engages with these causes, problems, and possible solutions to the climate crisis, I will be conducting a game analysis. This includes an analysis of its developer Electronic Arts, and a focus on the *Eco Lifestyle* expansion. In the third chapter, in order to understand how ecomodders pick up on *The Sims 4*'s engagement with these causes, problems, and possible solutions to the climate crisis, I will perform a diachronic proceduralist analysis where I

⁵⁰ Jason Seawright, *Multi-Method Social Science: Combining Qualitative and Quantitative Tools* (Cambridge: Cambridge University Press, 2016), 2.

⁵¹ Seawright, *Multi-Method Social Science*, 1.

⁵² Jeffrey W. Knopf, “Doing a Literature Review,” *PS: Political Science & Politics* 39, vol. 1 (February 2006): 127.

chronologically categorise and analyse selected *Sims 4* ecomods. By analysing a collected 187 ecomods, I will analyse changes in procedural rhetoric and ‘evolution’ of the modding discourse over time.⁵³ Finally in my fourth chapter, I employ an autoethnographic method to design two ecomods. This method allows me to consider the experience of ecomodding, how modding as an activity can be used as a teaching tool, and how ecomodding can be a form of political engagement that responds to academic climate discourse.

Modding as Political Engagement

It’s hard to describe what *The Sims* series is exactly, with the games being referred to as a “strategic life-simulation, a lifestyle simulator, an IKEA game and a virtual doll’s house.”⁵⁴ In the game, the player is invited to create a character (a Sim), build a house, and then play their life. Tanja Sihvonen notes that this franchise resists being categorised due to its design: it does not fit the patterns of militarised masculinity often regarded as characteristic of the field of digital games.⁵⁵ Instead, the game aims for a gender-neutral player base and introduced an inherent sociability of its characters.⁵⁶ Yet the player’s personal goals also heavily factor into the gameplay experience, as the game allows for multiple play styles and preferences. Essentially, the game acts “like an underlying foundation or platform for all kinds of constructive (or destructive) activities the player wishes to engage in”.⁵⁷ Playing *The Sims* is therefore also about playing with the game’s capabilities, testing its boundaries, and gradually developing gameplay goals.⁵⁸ This links the game’s inherent characteristics to the performative practices, and the way players modify it.⁵⁹

Modifying games –modding- is regarded as a social activity, an aspect that matches the game’s inherent socialness.⁶⁰ Modding refers to various ways official content is extended or altered with custom-produced content.⁶¹ There is a great sense of diversity in the mods and modding sites,⁶² with the content often being shared freely on platforms like TheSimsResource or ModTheSims. *The Sims* series comes from a tradition of having an active fandom, with the first instalment being referred to as having “the most vibrant emergent fan culture of a single-player game in history”.⁶³

⁵³ Stefan Werning, “Modding as a Strategy to (De)Legitimize Representations of Religion in the *Civilization* Game Franchise – A Diachronic Proceduralist Reading,” in *Discourses of (De)Legitimization: Participatory Culture in Digital Contexts* ed. Andrew S. Ross and Damian J. Rivers (London, New York: Routledge, 2019), 312.

⁵⁴ Sihvonen, *Players Unleashed!*, 9.

⁵⁵ Sihvonen, *Players Unleashed!*, 9.

⁵⁶ Sihvonen, *Players Unleashed!*, 10.

⁵⁷ Sihvonen, *Players Unleashed!*, 11.

⁵⁸ Sihvonen, *Players Unleashed!*, 11.

⁵⁹ Sihvonen, *Players Unleashed!*, 12.

⁶⁰ Sihvonen, *Players Unleashed!*, 13.

⁶¹ Sihvonen, *Players Unleashed!*, 12.

⁶² Sihvonen, *Players Unleashed!*, 13.

⁶³ Celia Pearce and Artemesia, *Communities of Play: Emergent Cultures in Multiplayer Media* (Cambridge, London: The MIT Press, 2009), 272.

This sociability of modding also creates opportunities for peer-led and teacher-moderated learning, rather than more teacher-directed forms.⁶⁴ Modding is a communal practice, where creators share their work publicly in online archives, and discuss creations on associated forums. Players of the game can learn new skills through interaction and negotiation with other gamers, being exposed to a wide range of expertise and knowledge.⁶⁵ This wide range is also brought into the modding sphere as a means of criticism, for example by employing modding as a tool to critique games about issues where they are underperforming – like by using mods to highlight disability⁶⁶ and ethnic distinction.⁶⁷ This informal learning setup then aids in the development of ‘transferable skills’: skills that are taken beyond the gaming context and into the wider world.⁶⁸ This is the basis for a new form of civic engagement: fan-based citizenship.⁶⁹ Traditionally, communication scholars have understood civic action as something deeply connected to social institutions such as political parties or activist groups such as Green Peace, yet our world has become too fluid to continue on this framework.⁷⁰ Individuals easily choose and move between multiple institutions, organisations, and groups, and the frameworks, resources, and requirements attached to them.⁷¹ Popular culture media function as resources for fans to communicate ethical frameworks (prescriptive principles) and modalities (everyday actions),⁷² allowing them to use a media text for civic purposes.⁷³ By drawing a parallel between a situation in a fictional world and the real world, fans can argue for the application of the ethical framework from the fictional world to the real world situation.⁷⁴ In this thesis I will approach *The Sims 4* as one such possible source for an ethical framework.

⁶⁴ Ludovica Price, “The Sims: A Retrospective,” *Intensities: The Journal of Cult Media* 7 (August 2014): 138.

⁶⁵ Price, “The Sims: A Retrospective,” 138.

⁶⁶ Jones, “Simulated Ableism,” 90-113.

⁶⁷ Hanna Wirman, “Regional and Ethnic Diversity in *The Sims* Mods,” in *Women and Video Game Modding: Essays on Gender and the Digital Community* eds. Bridget Whelan (Jefferson: McFarland & Company, 2020), 114-125.

⁶⁸ Price, “The Sims: A Retrospective,” 139.

⁶⁹ Ashley Hinck, “Ethical Frameworks and Ethical Modalities: Theorizing Communication and Citizenship in a Fluid World,” *Communication Theory* 26 (2016): 2.

⁷⁰ Hinck, “Ethical Frameworks and Ethical Modalities,” 3.

⁷¹ Hinck, “Ethical Frameworks and Ethical Modalities,” 4.

⁷² Hinck, “Ethical Frameworks and Ethical Modalities,” 13.

⁷³ Hinck, “Ethical Frameworks and Ethical Modalities,” 14.

⁷⁴ Hinck draws upon an example from the work of *Harry Potter* fans, who convinced Warner Brothers to produce all of their *Harry Potter* chocolate fair trade through the “Not in Harry’s Name” campaign. They achieved this by drawing a parallel between the rights of workers in real life and the rights of house-elves in the books.

◇ Chapter One ◇

The Mental Models Behind the Climate Crisis

Chapter Overview

This chapter will focus on explaining underlying causes that have led to the climate crisis. This chapter will provide the groundwork for the following chapters, elaborating on the knowledge the reader needs to have in order to understand and interpret the ongoing sustainability debates within *The Sims 4* and its ecomodding discourse. This first chapter will be guided by the research question: “What mental models are responsible for the climate crisis?”

In order to answer this question, I will first draw upon Donella Meadow’s understanding of systems theory to explain the concept of ‘mental models’. I will identify that mental models, which are the assumptions, beliefs, and attitudes within a society, lie at the root of the current crisis. Addressing these mental models provides a framework for working towards fulfilling new societal goals. Then I explain through Amitav Ghosh’ work on the crisis of imagination that we need to set new societal goals in order to design new societal, economic, and cultural structures. Next, I move on to explain that untangling the differing causes of the climate crisis is virtually impossible, and use Antonio López’ explanation of ‘whole systems thinking’ to show that instead we should focus on the system in its entirety. This is also where I demonstrate that any discussion regarding the origins of the climate crisis should also contain a postcolonial angle, to acknowledge the colonial violence that helped create our current systems of energy generation and transportation and the global power dynamics these systems uphold. Finally, I end this chapter by reviewing ways to resist and challenge problematic mental models through Michael Hardt and Antonio Negri’s conceptualisation of ‘the multitude’ and Matt T. Huber’s framework of class politics to mobilise the working class.

Research Method: Literature Review

In this chapter I will be conducting a literature review to address causes of the climate crisis and possible ways to organise counter action. The climate crisis has been a topic of interest over the last few decades, and this method allows me to position my thesis within this discourse. The purpose of a literature review is to summarise and evaluate a body of writings about a specific topic.⁷⁵ A literature review has two key components: it summarises the findings or claims from previously conducted

⁷⁵ Knopf, “Doing a Literature Review,” 127.

research and concludes how accurate and complete that knowledge is.⁷⁶ This allows me to situate my thesis in relation to existing knowledge and address how this thesis contributes to this existing body.⁷⁷ In order to properly do this, Jeffrey W. Knopf suggests following one or more out of three rules of thumb when assessing the relevance of the literature for the review. As a first rule of thumb, a review could focus on including the leading authorities of a debate. These are the frequently cited authors that are often considered key works.⁷⁸ Second, a review could focus on including recent studies from high-prestige or high-visibility sources.⁷⁹ Sources that gather a lot of attention, or come from a highly ranked university press, often help contextualise the current state of a debate and address relevant developments. Third, it is important to focus on studies that are the most relevant and helpful for your own research question.⁸⁰ A study that's more relevant to your research should play a greater role in the review.

When assessing literature for this review, I will be following these three rules of thumb Knopf proposed. I will be applying the first rule by drawing upon the work of established scholars such as Donella Meadows' systems theory, Souvik Mukherjee postcolonial insight, Stephen Kline, Nick Dyer-Withford and Greig de Peuter's insight into *The Sims*' engagement with consumerism, Sean Cubitt's analysis of obstacles preventing clean energy, Frederic Jameson's understanding of capitalism, and Henry Jenkins' insight into fandom practices. I will be applying Knopf's second rule by complementing this body of literature by bringing in more recent works of Antonio López who investigates the angle of ecomedia literacy, Matt T. Huber who criticises the climate crisis through the lens of class difference, and Jason W. Moore who criticises our understanding of capital.

Together, these scholars help me address relevant debates for this thesis, laying the groundwork for the coming chapters. There are many topics that need to be covered, and that is why I will start with the most important one first: setting and achieving social goals.

Setting and Achieving Social Goals

The first things that have to be addressed in this thesis are the paradigms and mental models underlying the process of climate change, because the paradigms and mental models are the deepest set of beliefs about how the world works.⁸¹ According to Donella Meadows, mental models are assumptions, beliefs, and attitudes that have to be changed in order to change a system.⁸² What

⁷⁶ Knopf, "Doing a Literature Review," 127.

⁷⁷ Knopf, "Doing a Literature Review," 127.

⁷⁸ Knopf, "Doing a Literature Review," 131.

⁷⁹ Knopf, "Doing a Literature Review," 131.

⁸⁰ Knopf, "Doing a Literature Review," 131.

⁸¹ Meadows, "Leverage Points to Intervene in a System."

⁸² Meadows, "Leverage Points to Intervene in a System."

these 'mental models' of the 'system' are exactly, is incredibly difficult to describe. As a hyperobject, the climate crisis is more than just an assemblage of collections and systems,⁸³ and one can only see pieces of it at any given moment.⁸⁴ Mapping out the totality of the crisis is thus virtually impossible. Therefore this thesis aims to create a better understanding about *why* the world is facing this crisis and what aspects of it are relevant in order to analyse *The Sims 4*, and give some possible considerations as to *how* to move forward through exploring sustainable imaginaries. This understanding is needed in order to understand exactly what aspects and layers of the climate crisis *The Sims 4* and its community are critiquing, and by extension, what aspects still have to be addressed. In short, we live in a carbon economy,⁸⁵ which is a problematic and unsustainable system that is interwoven with a number of other harmful processes such as anthropocentrism, extractivism, neoliberalism, and empire. Even if we cannot untangle the whole system, this approach is still useful to help highlight different aspects. This approach will form the basis for analysing *The Sims 4* and its modding community, where *The Sims 4* reflects and critiques parts of this system, and mods could selectively make these interconnections visible.

Paradigms and mental models underlying the system need to be changed in order to change the system itself, but in order to do that we, as a society, need to have concrete goals to work towards. Postcolonial writer Amitav Ghosh picks up on this topic of concrete societal goals by defining an important problem our society faces: we are in a crisis of imagination.⁸⁶ Meaning that we lack the ability to create a variety of sustainable imaginaries (goals) we can turn into actionable plans.⁸⁷ This makes the climate crisis not just one of nature, but of culture as well.⁸⁸ In order to combat the climate crisis, we thus need to work on developing shared sustainable imaginaries, so that we can use those as our goals for a new sustainable society. Although I would argue that 'imagination' is not fully encompassing of the exact crisis, as there are plenty of new imaginings within society. Consider experiments with solar power generating bicycle paths,⁸⁹ transparent solar panels that function as windows,⁹⁰ or using hemp to reduce the carbon emissions from housing.⁹¹

⁸³ Morton, *Hyperobjects*, 2.

⁸⁴ Morton, *Hyperobjects*, 4.

⁸⁵ Ghosh, "Amitav Ghosh."

⁸⁶ Ghosh, "Amitav Ghosh."

⁸⁷ Ghosh, "Amitav Ghosh."

⁸⁸ Ghosh, "Amitav Ghosh."

⁸⁹ Aleksandar Furtula Associated Press, "Road to Future: Dutch province unveils solar bicycle path," abc News, July 14, 2021, <https://abcnews.go.com/International/wireStory/road-future-dutch-province-unveils-solar-bicycle-path-78845107>.

⁹⁰ Yimu Zhao, Gerrett A. Meek, Benjamin G. Levine, and Richard R. Lunt, "Hear-Infrared Harvesting Transparent Luminescent Solar Concentrators," *Advanced Optical Materials* 2, no. 7 (July 2014): 606-611. <https://doi.org/10.1002/adom.201400103>.

⁹¹ Yaakov Florentin, David Pearlmutter, Baruch Givoni, and Erez Gal, "A life-cycle energy and carbon analysis of hemp-lime bio-composite building materials," *Energy and Buildings* 156 (December 2017): 293-305. <https://doi.org/10.1016/j.enbuild.2017.09.097>.

Unfortunately, scaling up these alternatives often reveals another problem: even when we have sustainable options, we cannot simply replace one system with another. Before the actual carbon-intensive system is changed, we need to confront carbon-intensive sectors that will not simply allow for their business models to become obsolete.⁹² That change requires a major change in the way we structure our economy, which is not only very difficult to enact, but also to imagine. As is often said: “it’s easier to imagine the end of the world than the end of capitalism”.⁹³ In that sense, we still are in a crisis of culture, just like Ghosh said. However, the alternatives we need to imagine, and the sustainable futures we create from it, need to include new societal, economic, and cultural structures. Which all relates back to the mental models that underlie the system, because these are the foundations of these new structures.

Interconnected Problems

When discussing the climate crisis, it is crucial to discuss the underlying systems that have allowed this crisis to happen. The problem with mentioning the ‘underlying system,’ is that we cannot point our finger to one specific cause. We cannot simply point towards extractivism, anthropocentrism, planned obsolescence, or other damaging issues, since they are all part of a larger network. The “system” is composed of a great many components, that all have an impact. Antonio López emphasises that we need to consider all these components together, in a practice termed ‘whole systems thinking’.⁹⁴ The practice of whole systems thinking was primarily advocated by Donella Meadows, who wrote that system dynamics “makes clear the overarching power of deep, socially shared ideas about the nature of the world. Out of those ideas arise our systems – government systems, economic systems, technical systems, family systems, environmental systems”.⁹⁵ López uses this angle to emphasise that we need to expand our curriculum designs to integrate ecological awareness and encourage productive methods of eco-citizenship, because the climate emergency is a cultural and political crisis.⁹⁶ López specifically foregrounds the role of (eco)media in this process, by stating that they “question the stories we live by,” and that they “propose new ones that will transform the paradigm underlying our current ecological crisis”.⁹⁷ López identifies three key aspects to pay attention to: underlying patterns (trends over time), systemic structures (policies, laws,

⁹² Matt T. Huber, “Ecological Politics for the Working Class,” *Catalyst* 3, no. 1 (Spring 2019). <https://catalyst-journal.com/2019/07/ecological-politics-for-the-working-class>.

⁹³ Fredric Jameson, “Future City,” *New Left Review* 21 (May/June 2003): 76.

⁹⁴ Antonio López, *Ecomedia Literacy: Integrating Ecology into Media Education* (New York, London: Routledge, 2021), 15.

⁹⁵ Donella Meadows, *The Global Citizen* (Washington, Covelo: Island Press, 1991), 2.

⁹⁶ López, *Ecomedia Literacy*, 2.

⁹⁷ López, *Ecomedia Literacy*, 18.

infrastructure, connections), and mental models (assumptions, beliefs, attitudes).⁹⁸ The ecological problems we face are design challenges rooted in these mental worlds,⁹⁹ and it are these underlying roots we need to examine if we want to start creating solutions. López approaches this crisis from the angle of ecomedia literacy, which he identifies as part of an urgent agenda to respond to the climate emergency.¹⁰⁰ Yet he emphasises this need for solutions by stating that “unless the paradigm that underlies environmental destruction is confronted and transformed, media literacy will not be part of the solution.”¹⁰¹ By doing this, he emphasises the systems theory perspective required to think through media systems in climate communication and education and that we need structural change.

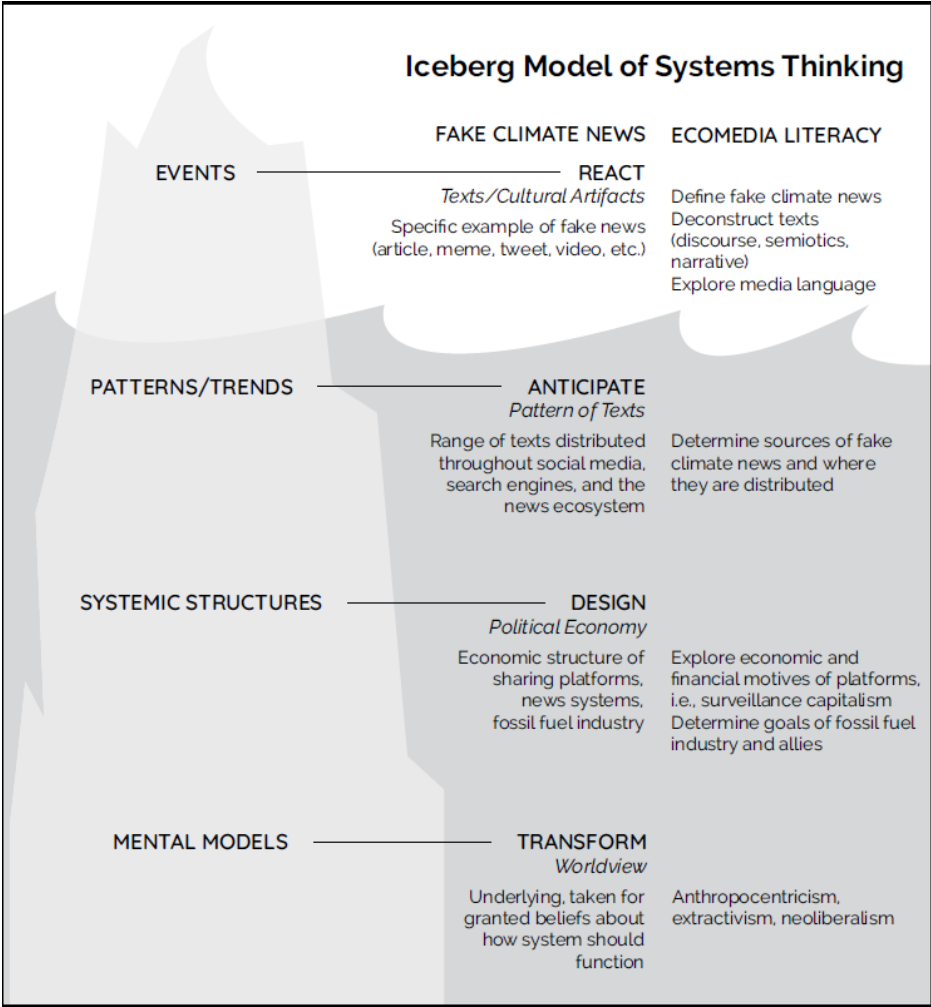


Figure 1: Antonio López' iceberg model of systems thinking and fake climate news.

⁹⁸ López, *Ecomedia Literacy*, 15.
⁹⁹ López, *Ecomedia Literacy*, 15.
¹⁰⁰ López, *Ecomedia Literacy*, 3.
¹⁰¹ López, *Ecomedia Literacy*, xv.

The main system that López identifies as the source of our planetary ecological crisis is the worldview of modernity.¹⁰² Modernity is a period that saw the rise of (late) capitalism, urbanisation, industrialisation, secularisation, and a growing rationality.¹⁰³ It also set the stage for problematic processes such as anthropocentrism, extractivism, and neoliberalism. Processes like these are also reflected in *The Sims 4*, where the player often acts out their gameplay in an urban world based on capitalistic logics. For example, by rewarding a sim's sudden desire to purchase a specific product. When the player purchases this product, they receive Satisfaction Points for the sim, which are usable as a currency to buy even more rewards. Although the Industrial Revolution in modernity has often been cited by environmentalists as *the* turning point that began the climate crisis, Jason W. Moore places an emphasis on capital and argues that capitalism's origins instead lie in the era of Columbus.¹⁰⁴ It is an era that Amitav Ghosh refers to as "the despoiling of the Americas", and uses that phrase to highlight how the capitalist system was built on colonialism, genocide, and structured of organised violence.¹⁰⁵ This system is so prevalent that video games often echo the rhetoric of imperialism¹⁰⁶ and settler colonialism,¹⁰⁷ and *The Sims 4* itself shows problematic patterns of capitalist consumerism associated with modernity (for example, through its focus on the acquisition of consumer goods).¹⁰⁸ In total this has created a culture based on a carbon economy.¹⁰⁹ The complexity of the system also means that environmental issues cannot be separated from questions of social justice and human rights.¹¹⁰ This interconnectedness is highlighted in games such as Molleindustria's *Phone Story* or Deep Print's *Kyoto: Money Makes the World go Down*. Our contemporary period of post-industrial capitalism is delocalised and deterritorialised to such an extent that it has become impossible to locate where the source of the system's power lies.¹¹¹ Although Felix Guattari does identify post-industrial capitalism's most potent weapon for achieving social control without violence: the mass media.¹¹² That is why it's important to study the climate crisis from the angle of media studies. It helps confront the way these systems influence and frame public debate, and could then help mobilise counter action. Or, in López' terms, by questioning and transforming the stories we live by, we can transform the paradigm underlying our ecological crisis.

¹⁰² López, *Ecomedia Literacy*, xv.

¹⁰³ Jack Goody, *Capitalism and Modernity: The Great Debate* (Cambridge, Malden: Polity Press, 2004), 15.

¹⁰⁴ Jason W. Moore, "The Capitalocene, Part I: On the nature and origins of our ecological crisis," *The Journal of Peasant Studies* 44, no. 3 (2017): 569. <https://doi.org/10.1080/03066150.2016.1235036>.

¹⁰⁵ Amitav Ghosh, *The Nutmeg's Curse: Parables for a Planet in Crisis* (London, Penguin Books, 2021), 124.

¹⁰⁶ Souvik Mukherjee, *Videogames and Postcolonialism: Empire Plays Back* (Cham: Palgrave Macmillan, 2017), 9.

¹⁰⁷ Mukherjee, *Videogames and Postcolonialism*, 12.

¹⁰⁸ Stephen Kline, Nick Dyer-Witheford, and Greig de Peuter, *Digital Play: The Interaction of Technology, Culture, and Marketing* (Montreal: McGill-Queen's University Press, 2003), 276.

¹⁰⁹ Ghosh, "Amitav Ghosh."

¹¹⁰ Huggan, "'Greening' Postcolonialism," 704.

¹¹¹ Guattari, *The Three Ecologies*, 6.

¹¹² Guattari, *The Three Ecologies*, 6.

Humans are not Equally Responsible

There is an important critique of placing capitalism, and by extent, the worldview of modernity, at the heart of the climate crisis: this argument tends to hide that within these systems, not everyone is equally responsible. A minimum-wage worker drinking their to-go coffee with a straw does not have the same impact on the climate as a billionaire with a private jet. There are power dynamics at play that not everyone equally profits off, creating social inequality. In order to nuance a capitalistic understanding of the climate crisis' origin, it is therefore always important to consider which group of humans is actually being discussed.

Postcolonial thinker Amitav Ghosh argues for this nuanced perspective by writing that it is not capitalism we should place at the forefront of the debate, but actually the dynamics of global empire.¹¹³ "Empire"¹¹⁴ is a planetary regime where economic, administrative, military, and communicative components create a system of networked power.¹¹⁵ This network is in the hands of the West, leading to their absolute geopolitical dominance.¹¹⁶ Ghosh further points out why identifying capitalism as the main drive behind the climate crisis is insufficient, by stating that the majority of the world's population did not live in capitalist societies for the majority of the twentieth century, and that even within the West the normal functioning of capitalism was suspended during the two world wars.¹¹⁷ What wasn't suspended, was the dynamics of empire. In this sense, Ghosh identifies that capitalism and empire are intertwined, but that capitalism should be considered as a secondary effect of empire.¹¹⁸ Nick Dyer-Withford and Greig de Peuter add to this definition by describing empire as:

"[...] the global capitalist ascendancy of the early twenty-first century, a system administered and policed by a consortium of competitively collaborative neoliberal states, among whom the United States still clings, by virtue of its military might, to an increasingly dubious preeminence. This is a regime of biopower based on corporate exploitation of myriad types of labor, paid and unpaid, for the continuous enrichment of a planetary plutocracy."¹¹⁹

¹¹³ Ghosh, *The Nutmeg's Curse*, 128.

¹¹⁴ Empire is a specific term to describe this process, as such the spelling differs across sources. Hardt and Negri, and Dyer-Withford and De Peuter always capitalise this term, while Ghosh never does. Because I do not capitalise my other terms and concepts, I have chosen to follow Ghosh' writing in this thesis.

¹¹⁵ Nick Dyer-Withford and Greig de Peuter, *Games of Empire: Global Capitalism and Video Games* (Minneapolis: University of Minnesota Press, 2009), xx.

¹¹⁶ Ghosh, *The Nutmeg's Curse*, 128.

¹¹⁷ Ghosh, *The Nutmeg's Curse*, 128.

¹¹⁸ Ghosh, *The Nutmeg's Curse*, 127.

¹¹⁹ Dyer-Withford and De Peuter, *Games of Empire*, xxiii.

In order to describe how this regime has impacted our thinking, Ghosh quotes the philosopher Jean Dupuy to explain that the modern citizen has become a *Homo economicus*; economics have taken over our very ways of thinking about the world in such a way that it is seen as the prime mover of modern history, while geopolitics and empire are regarded as secondary effects.¹²⁰ He identifies a tradition in thinking that “all social and historical processes that matter” are endogenous to the West, and rather than focussing on capitalism as an abstract economic system, we have to address racism, imperialism, and the structures of organised violence that sustain global hierarchies of power.¹²¹

Ghosh identifies the geopolitical architecture of oil as an important global hierarchy of power that hinders sustainable development.¹²² Over the course of the twentieth century, oil became the central focus of global geopolitical energy.¹²³ In fact, we can even speak of a ‘petroculture’ to describe how much our society has come to depend on it.¹²⁴ Sheena Wilson, Adam Carlson, and Imre Szeman explain that this dependence is accompanied by sensibilities and social expectations that derive from it, like the idea of “perpetual growth, ceaseless mobility, and the expanded personal capacities and possibilities associated” with the new flood of energy.¹²⁵ The oil regime is currently under American control and an irreplaceable strategic and financial asset to the US, and a product of combined Western effort spanning about 500 years. Its existence depends on maritime transportation, and hinders sustainable development. It holds back a transition to renewable energy, as renewable energy is not bound to maritime –and thus American- transport. Independence from the American network creates incentives for renewable power in countries like India and China. Yet at the same time the US and its allies are less motivated to transition to renewable energy, as it would undermine their strategic hegemony.¹²⁶ Cubitt adds another layer of understanding to this power structure by quoting Timothy Mitchell’s *Carbon Economy*, in order to note that the architectures of hydroelectric and nuclear industries are remarkably similar to that of the oil industry (in terms of geography, fluidity, and compactness).¹²⁷ This means that the refusal to invest in wind and solar power are “not simply a matter of economic determination by the world’s richest corporations, but a genuinely political issue concerning the organisation of power built on specific physical and chemical properties of dominant energy sources”.¹²⁸ I will return to this debate in my second and fourth chapter, where I will use it to analyse a gameplay mechanic of *The Sims 4*, and as

¹²⁰ Ghosh, *The Nutmeg’s Curse*, 124.

¹²¹ Ghosh, *The Nutmeg’s Curse*, 128.

¹²² Ghosh, *The Nutmeg’s Curse*, 113.

¹²³ Ghosh, *The Nutmeg’s Curse*, 113.

¹²⁴ Sheena Wilson, Adam Carlson, and Imre Szeman, *Petrocultures: Oil, Politics, Culture* (Montreal, Kingston: McGill-Queen’s University Press, 2017), 3.

¹²⁵ Wilson, Carlson, and Szeman, *Petrocultures*, 3.

¹²⁶ Ghosh, *The Nutmeg’s Curse*, 115-117.

¹²⁷ Cubitt, “Ecomedia Futures,” 6.

¹²⁸ Cubitt, “Ecomedia Futures,” 6.

the basis for one of my own ecomods. In my ecomod, I will critique this system and explore a possible alternative based on a counterfactual historical perspective.

Another dominant narrative of the climate crisis' roots in modernity that often fails to nuance the unbalanced power dynamics between people, is the identification of the period termed "the Anthropocene".¹²⁹ This word is derived from *Anthropos* from the Greek 'human', announcing this period to be the 'age of man'.¹³⁰ Jason W. Moore explains that this concept is employed to discuss humanity's place in the general web of life, and to emphasise the story of "Humanity doing many terrible things to Nature."¹³¹ 'The Anthropocene' is a term situated within the rise of Britain's industrialisation, therefore often ignoring the pre-industrial colonial roots of the climate crisis.¹³² Additionally, Moore emphasises that the Anthropocene often homogenises humanity and treats it as "an undifferentiated whole".¹³³ In this sense, the Anthropocene falls victim to Ghosh' criticism of ignoring the dynamics of global empire, and Dupuy's *Homo economicus*.

Together, these criticisms have helped nuance the origin of the climate crisis as something that is intertwined with social inequality. In this same sense I acknowledge that all concepts within this chapter are nuanced by other scholars and concepts, and that with a hyperobject of this size it's difficult –if not impossible- to employ a concept that's a hundred percent applicable. Although I argue that it's important to map out and acknowledge these debates, the debates itself should never be the main focus. Rather, it's the ways of thinking these concepts help us enable, and the possible solutions they help us consider. In this sense, acknowledging the social inequality related to the climate crisis will help draft possible plans of action. In the following section I will discuss two ideas that employ this understanding in order to create actionable plans: the multitude and working class politics.

A Multitude of Actionable Plans

There is an alternative that grows within the system of empire: the multitude.¹³⁴ The multitude is conceptualised by Michael Hardt and Antonio Negri as a new circuit of cooperation and collaboration that has risen alongside globalisation, and is a network composed of people with innumerable internal differences. It is a network in which people can never be reduced to a single identity, where all differences can be expressed freely and equally, and which enables people to communicate and

¹²⁹ Moore, "The Capitalocene, Part I," 595.

¹³⁰ Moore, "The Capitalocene, Part I," 596.

¹³¹ Moore, "The Capitalocene, Part I," 595.

¹³² Moore, "The Capitalocene," 595-596.

¹³³ Moore, "The Capitalocene," 595.

¹³⁴ Michael Hardt and Antonio Negri, *Multitude: War and Democracy in the Age of Empire* (New York: The Penguin Press, 2004), xiii.

act together.¹³⁵ The multitude relies on common knowledge passed down from others (and in turn creates new common knowledge), and at the same time it is a politically organised structure that shows a tendency to help create democratic relationships.¹³⁶ Together, the multitude resists the total monetization and primacy of profit and helps develop and protect alternatives.¹³⁷ Although this definition of the multitude is promising, I argue that it's too idealistic to provide a working definition. Therefore this definition should be nuanced by drawing upon Henry Jenkins' understanding of fan communication: although fans themselves can communicate equally, it needs to be acknowledged that fans always operate "from a position of cultural marginality and social weakness".¹³⁸ Fans lack direct access to the commercial cultural production of the works they follow, and have only limited influence over those who produce the works.¹³⁹ In case of *The Sims 4*, cooperation between the modding community (the multitude) and the EA (empire) is possible, for example through EA's collaboration with the modder Complex Sims,¹⁴⁰ but it will always remain on EA's terms.

That the multitude grows within empire, means that means of critique grows within the very system is critiques. Huggan warns that this makes the act of criticising difficult at times, because we have to take care not to fall into "familiar patterns of speech, and repeating the same self-serving clichés, that validate the view of those who believe the world is theirs, and language theirs to shape it."¹⁴¹ Dyer-Withford and De Peuter then identify a difficult paradox that needs to be addressed when discussing critical games: media giants generate profit from producing games critiquing capitalism, the very system that produces them.¹⁴² This creates the problem that these dissident politics easily become "no more than a novel twist to refresh a tired formulae,"¹⁴³ and any games that apply this kind of criticism have to be carefully designed or risk falling flat.

In order to critically analyse a system, López emphasises that a researcher has to delve deeply into the "systemic structures that interact with and influence the production of the media text".¹⁴⁴ He explains this by clarifying that:

"this means exploring cultural norms, the political economy of digital media platforms, and legacy new media, and analyzing how hegemonic global capitalist institutions that informs how and why particular patterns of news, propaganda, and

¹³⁵ Hardt and Negri, *Multitude*, xiii-xiv.

¹³⁶ Hardt and Negri, *Multitude*, xv-xvi.

¹³⁷ Dyer-Withford and De Peuter, *Games of Empire*, 187-188.

¹³⁸ Henry Jenkins, *Textual Poachers: Television fans and participatory culture* (London, New York: Routledge, 1992), 27.

¹³⁹ Jenkins, *Textual Poachers*, 27.

¹⁴⁰ "Protect Your Crown," EA, February 2, 2022, <https://www.ea.com/nl-nl/games/the-sims/the-sims-4/news/protect-your-crown-february-2nd-2022>.

¹⁴¹ Huggan, "'Greening' Postcolonialism," 711.

¹⁴² Dyer-Withford and De Peuter, *Games of Empire*, 196.

¹⁴³ Dyer-Withford and De Peuter, *Games of Empire*, 196.

¹⁴⁴ López, *Ecomedia Literacy*, 16.

disinformation emerge over time. [...] At the deepest level of analysis is the anthropocentric worldview and ideology that drives the whole system and regulates it's goals."¹⁴⁵

This thesis will apply this insight as well, by delving deeper into *The Sims* series and its creator EA in the next chapter in order to understand their role in climate education. López' insight is furthermore in line with his previously quoted Meadows, who identifies the mindset or paradigm out of which a system arises as one of the most effective leverage points to intervene in.¹⁴⁶ Unfortunately, paradigms are also one of the hardest things to change about a system. Fortunately, Meadows also considered that question. She quotes Thomas Kuhn, and summarises his argument:

"In a nutshell, you keep pointing at the anomalies and failures in the old paradigm, you keep coming yourself, and loudly and with assurance from the new one, you insert people with the new paradigm in places of public visibility and power. You don't waste time with reactionaries; rather you work with active change agents and with the vast middle ground of people who are open-minded."¹⁴⁷

Where Kuhn calls for organising "active change agents" and "the vast middle ground," it is Matt T. Huber that presents a more actionable term: the working class.¹⁴⁸ Huber calls for a 'working-class ecological politics' and centres it around two major points: shifting the class responsibility for the ecological crisis from the consumer towards the capitalist class, and decarbonising and decommodifying sectors vital to working class life (like medicine, energy, housing, and transport). Huber notes that achieving this requires a "highly organized social movement with a mass base behind it to force capital and the state to bend to the changes needed,"¹⁴⁹ and that this social movement has to confront "some of the wealthiest and most powerful sectors of capital in world history."¹⁵⁰ This confrontation requires confronting a list of 100 companies that have been responsible for 71% of all emissions since 1988.¹⁵¹ Organized working-class movements have formed the "largest challenge to the rule of capital" in the nineteenth and twentieth century.¹⁵²

Where Ghosh' sustainable imaginaries are the *goals* we collectively work towards, Meadows and Huber help frame *how* we get to them. Applying this knowledge to *The Sims 4*, the sustainable imaginaries are conceptualised within the actual gameplay, where the players can both design and try out new futures in order to set and negotiate goals for our own future. The *how* aspect can then

¹⁴⁵ López, *Ecomedia Literacy*, 16-17.

¹⁴⁶ Donella Meadows, "Leverage Points: Places to Intervene in a System."

¹⁴⁷ Meadows, "Leverage Points: Places to Intervene in a System."

¹⁴⁸ Huber, "Ecological Politics for the Working Class."

¹⁴⁹ Huber, "Ecological Politics for the Working Class."

¹⁵⁰ Huber, "Ecological Politics for the Working Class."

¹⁵¹ Huber, "Ecological Politics for the Working Class."

¹⁵² Huber, "Ecological Politics for the Working Class."

be found in mobilising the game's audience, in using the game as a basis for real-world political engagement. This is where *The Sims 4* can function as an earlier mentioned 'affinity space,' and encourage its players to take up climate action.

Conclusion

The climate crisis is a very difficult and intricate problem our world is facing, and solving the immediate threat will require major coordinating efforts. We need to address the very way people conceive our world: through the mental models underlying the system. Mental models constitute the deepest set of beliefs about how the world works, and we need the world to work differently, because the current system will not sustain humanity. Our current system is built upon values of colonialism, imperialism, and organised violence that have framed the world as something to consume. This (over)consumption is unsustainable, and unequally divided across the world. Employing a postcolonial perspective shows that it is largely Western countries who hold the power to keep consuming, and seek to hold control over it. This mindset of consumption extends to people showing that human rights and social justice are fundamentally a part of this narrative, and to the natural world as described through 'the Anthropocene'. This mindset goes back to the era of Columbus. Capitalism, based on consumerism, has this mindset at its core. Changing this mindset would effectively mean redesigning several of our economic and social systems.

Reimagining these on the basis of new mental models in order to imagine a new way or multiple new ways of living is difficult. We are amidst the crisis of imagination, and we do not often know what kind of future we're striving for. Although the immediate threat is to create stronger legislative action to decarbonise the top carbon-heavy companies, afterwards we still need to imagine new societal ways of living. Where the mass media works as a tool to sustain post-industrial capitalism, we can also use this network to question and propose new stories to live by. We need options for new systems that do not prioritise money and profit over nature preservation and human rights. This is where the strength of communities come in. People are multifaceted, and it is always difficult to consider the angle in how to approach citizens. In this first chapter I have already discussed them as 'fans,' 'the working class,' and as 'modders,' and an argument can be made that these kind of discourses tend to target 'the left'. Plus, people are often part of multiple communities. This thesis will focus on the mobilisation of the community of *Sims 4* modders, through their engagement with redesigning the game. Before understanding how modders engage with the game, I will first look into what materials and debates the game itself hands to the player, and what types of thinking that affords.

◇ Chapter Two ◇

Sustainability in *The Sims 4*

Chapter Overview

In this chapter, I will be focussing on *The Sims 4* as a critical tool to communicate and analyse the climate crisis. This chapter will focus on the *Eco Lifestyle* expansion in specific, and how its developer EA has shaped this game. The central research question is: “In what way do the alleged sustainable values of EA, as per the company’s corporate social responsibility rhetoric, reflect in the design and production context of *The Sims 4*?” In order to answer this question, I will first provide a brief historical contextualisation of the video game franchise. Then, in order to help determine how EA has influenced the game as its developer, I will look into EA’s history and own communicated values about environmental action. Next, in order to situate the environmental theme of *Eco Lifestyle*, I will briefly look into environmental and sustainable gameplay afforded by *The Sims 4* previous to the *Eco Lifestyle* expansion. Finally, I will deep dive into the *Eco Lifestyle* expansion by highlighting four major gameplay additions that the pack introduced (the Eco Footprint, Dumpster Diving, Civil Designer career, and Neighborhood Action Plans). Yet before I step into this, I will first present my research method and provide a brief tool reflection on using *The Sims 4* as a critical tool.

Research Method: Game Analysis

In this chapter I will be conducting a game analysis of *The Sims 4* by employing Ian Bogost’s conceptualization of ‘procedural rhetoric’ and George Lakoff’s understanding of ‘framing’. Clara Fernández-Vara describes game analysis as a “structured, systematic, and methodological [way] to discuss games”.¹⁵³ The goal of such an analysis is to “learn something new about the game, hopefully something that might have been overlooked or not noticed before”.¹⁵⁴ I will be writing this game analysis by employing the understanding of ‘procedural rhetoric’ in order to analyse the logics of the game’s mechanics and dynamics, and then by using ‘framing’ in order to create an understanding of how the ideas promoted through the mechanics and dynamics shape the way *The Sims 4* communicates the climate crisis.

¹⁵³ Clara Fernández-Vara, *Introduction to Game Analysis* (New York, London: Routledge, 2019), 10.

¹⁵⁴ Fernández-Vara, *Introduction to Game Analysis*, 19.

Procedural rhetoric is defined by Bogost as “the act of making an expression or argument through a game’s processes or rules”.¹⁵⁵ This game analysis method is designed for “unpacking computational arguments,”¹⁵⁶ where the “expression is found primarily in the player’s experience as it results from interaction with the game’s mechanics and dynamics, and less so (in some cases almost not at all) in their visual, aural, and textual aspects”.¹⁵⁷ A proceduralist reading of a game thus primarily focusses on messages conveyed through a game’s code. Bogost later nuances this understanding of meaning making through games in an article with Treanor et al. where they note that “any claim about a game’s internal meaning must take *all* elements into consideration”.¹⁵⁸ They offer the distinction between ‘internal readings,’ which focus on game dynamics, operational elements, and code, and ‘external readings,’ which focus on interpretable elements such as context, form, theme, and culture.¹⁵⁹ They illustrate this claim by offering an analysis of the game *The Marriage*. *The Marriage* is an experimental art game where the player has to balance a blue and a pink square, that seeks to express the act of balancing differing values between heterosexual partners in order to keep a marriage going.¹⁶⁰ A strict proceduralist reading of this game would blind the research to the gender connotations of blue and pink, demonstrating that an external reading is required to nuance an internal reading.

I will employ George Lakoff’s understanding of framing analysis to perform this external reading. Framing analysis helps understand how a research object, in this case *The Sims 4*, promotes political perspectives or ideologies. Lakoff draws from his own background of cognitive neuroscience to centre this analysis around the concept of a ‘frame’. A frame is an idea, a mental structure within a person’s mind that helps them understand a certain topic and shapes the way they perceive the world.¹⁶¹ We know these ideas through language, and when we engage in political debate we engage the frames that relate to the topic.¹⁶² Lakoff illustrates this through the use of the term ‘climate change’. ‘Climate change’ is a term that originates from conservative discourses, designed to be used to sound “less frightening” than ‘global warming’.¹⁶³ Lakoff explains that the term ‘climate change’ is designed to be associated with pleasant things: ‘climate’ as something that reminds people of

¹⁵⁵ Treanor et al. “Proceduralist Readings: How to find meaning in games with graphical logics,” paper presented at the 6th International Conference on Foundations of Digital Games, 2011, 115.

¹⁵⁶ Ian Bogost, *Persuasive Games: The Expressive Power of Video Games* (Cambridge, London: The MIT Press, 2007), 3.

¹⁵⁷ Ian Bogost, “Persuasive Games: The Proceduralist Style,” GameDeveloper, January 21, 2009, <https://www.gamedeveloper.com/design/persuasive-games-the-proceduralist-style>.

¹⁵⁸ Treanor et al. “Proceduralist Readings,” 116.

¹⁵⁹ Treanor et al. “Proceduralist Readings:” 116.

¹⁶⁰ Rod Humble, “The Marriage,” Rod Games, last accessed 25 July, 2022, <http://www.rodvik.com/rodgames/marriage.html>.

¹⁶¹ Lakoff, *Don’t Think of an Elephant*, 14-15.

¹⁶² Lakoff, *Don’t Think of an Elephant*, 14-15.

¹⁶³ George Lakoff, “Why it Matters How We Frame the Environment,” *Environmental Communication* 4, no. 1 (2010): 71.

swaying palm trees and coastal cities, and ‘change’ as something that just happens without human intervention. Therefore, no one is to blame when the climate changes.¹⁶⁴ This example shows that it is therefore vital that we remain critical of the terms and frames used within a debate, and realise what ideas they truly represent.¹⁶⁵ Making an argument requires careful consideration of terminology, in order to draw upon your desired framing. Therefore, in this thesis I employ the term ‘climate crisis’ rather than ‘climate change,’ in order to underscore the severity of the situation this planet is facing.

By successfully reframing the public discourse, we can change the way people see the world.¹⁶⁶ Reframing is an ongoing process of repetition by like-minded individuals until an idea enters the normal public debate. When an idea becomes fixed within the debate, it becomes an established frame.¹⁶⁷ It requires focus and dedication, and most importantly, a system of communication.¹⁶⁸ Language and imagery can activate a frame, and an activated frame becomes difficult to challenge. The more often a frame is activated, the stronger the idea becomes. Frames cannot be challenged by mere fact: if a fact doesn’t fit a frame then the fact is often ignored, challenged, or belittled.¹⁶⁹

Employing language to convey ideas is a difficult science. Lakoff draws upon Frank Luntz’s understanding of language use. Luntz recognises that “the right use of language starts with ideas – with the right framing of the issues,” and that this framing should reflect a consistent moral perspective. Luntz’ writing is not just about language: it is about ideas.¹⁷⁰ Ideas that are then conveyed through frames. Framing is thus not exclusive to language, but also includes the procedural rhetorics, socio-technical and material affordances of the game since these aspects are also a part of the way the game conveys ideas. I build upon Lakoff’s work in order to analyse what ideas are conveyed in regards to the climate crisis in *The Sims 4*, how these are framed, and what that implies for our understanding of the crisis.

I will gather my research material of *The Sims 4* by using several online game guides, and by using my own copy of *The Sims 4* where the guides do not provide enough detail. I have played (parts of) every expansion mentioned in this thesis, allowing me to experiment and get to know the simulation. All of the included illustrations are screenshots from my own game, which were taken in May and June 2022. *The Sims 4* series currently consists of 55 DLC’s, of which I will discuss *Laundry Day Stuff*, *Seasons*, and *Island Living* to contextualise *The Sims 4*’s engagement with sustainability before the dedicated *Eco Lifestyle* expansion pack released. Then I will use the *Eco Lifestyle*

¹⁶⁴ Lakoff, “Why it Matters How We Frame the Environment,” 71.

¹⁶⁵ Lakoff, *Don’t Think of an Elephant*, 14.

¹⁶⁶ Lakoff, *Don’t Think of an Elephant*, 14.

¹⁶⁷ Lakoff, *Don’t Think of an Elephant*, 38.

¹⁶⁸ Lakoff, *Don’t Think of an Elephant*, 15.

¹⁶⁹ Lakoff, *Don’t Think of an Elephant*, 16.

¹⁷⁰ Lakoff, *Don’t Think of an Elephant*, 38.

expansion as the main focus of this chapter due to the expansion's own focus on sustainability. I then discuss four new mechanics this pack introduces (Eco Footprint, Dumpster Diving, Civil Designer, Neighborhood Action Plans), because these contain major gameplay additions that change, expand, and nuance the rhetoric of the game.

Before I step into the actual analysis, there is one more consideration to take into account: using *The Sims 4* as a critical tool shapes the way we interact with these ideas. Just like how Lakoff demonstrates how language frames ideas, Stefan Werning demonstrates how tools characteristically frame and institutionalises the user's perception of the media content it processes.¹⁷¹ He explains that tools are manipulatable and shareable objects that shape the relationship between different stakeholders and meaningfully frame the purpose they are intended for.¹⁷² Werning further explains that tools shape the terms of our political participation.¹⁷³ Based on what a tool (dis)allows a user to do with the material, it encourages users to focus on specific aspects over others and envision specific ways of using the material.¹⁷⁴ For example, the fan Create-A-Career¹⁷⁵ tool allows modders to create their own careers, and thus encourages users to focus on the working life aspect of the game. This way of understanding a game approaches it as a tool composed of "highly fragile constellations of algorithms, mechanics built into user interfaces, and conventions that keep a user community sustainable, productive, and allow it to scale".¹⁷⁶ In other words, the focus will lie on its sociotechnical aspects. In order to contextualise these sociotechnical aspects, I will first provide a brief history of *The Sims 4*.

History of *The Sims 4*

The series of *The Sims* traces its origins back to 1989, when the original head of Maxis Studios Will Wright launched the game *SimCity*, an urban planning scenario game that became one of the best-selling games ever.¹⁷⁷ Its success helped develop new titles such as *SimLife*, *SimEarth*, and its two direct sequels *SimCity 2000* and *SimCity 3000*. Then, in February of 2000, the first title of *The Sims* was released. Where the previous games had been created as simulations of entire cities or civilizations (which is popularly referred to as a "God game"), *The Sims* scaled down that perspective to let the player direct the day-to-day life of tiny humans, in what Stephen Kline, Nick Dyer-Withford,

¹⁷¹ Werning, *Making Games*, 7-9.

¹⁷² Stefan Werning, *Making Games: The Politics and Poetics of Game Creation Tools* (London, Cambridge: The MIT Press, 2021), 19.

¹⁷³ Werning, *Making Games*, 12.

¹⁷⁴ Werning, *Making Games*, 19.

¹⁷⁵ "Welcome to the Create-A-Career Beta," Neia, July 19, 2017, <http://simneia.fr/home.html>.

¹⁷⁶ Werning, *Making Games*, 24.

¹⁷⁷ Kline et al., *Digital Play*, 269.

and Greig de Peuter identify to be a microcosm of affluent suburban middle-class North America.¹⁷⁸ Kline et al. argue that this game cannot be understood through just studying the interaction between the player and the game, but that “the moment of gameplay is constructed by and embedded in much larger circuits – technological, cultural, and marketing – that in turn interact with one another within the system of information capital.”¹⁷⁹ This perspective has stayed valuable for analysing *The Sims*’ successor as well, with Tanja Sihvonen applying it to analyse *The Sims 2*.¹⁸⁰ In this research, I will be applying this perspective to *The Sims 4*. *The Sims* was the first of the series to be developed and launched under a management team from EA, which had bought Maxis a few years prior in 1997.¹⁸¹ This led to *The Sims 2*, *The Sims 3*, *The Sims 4* and their various extra content packs. Therefore in the following section I will be diving into the history of EA in order to consider the larger circuits Kline et al. refer to.

EA: The Company Behind *The Sims*

As was already noted in the previous section, in order to gain a more nuanced understanding of this game, we need to look beyond just the interaction between the player and the game towards the “larger circuits – technological, cultural, and marketing – that in turn interact with one another within the system of information capital” that embed and construct their relationship.¹⁸² Plus, as López emphasised, we need to analyse “systemic structures that interact with and influence the production of the media text”.¹⁸³ Therefore it is important to look at the manufacturer of the game as well: Electronic Arts (EA). Although Maxis Studios is still generally referred to as the creator of *The Sims* franchise, the truth is a little more complicated. Although Maxis Studios been responsible for much of the development of the four main *Sims* titles, what exactly this studio name refers to has changed over the years. The studio was acquired by EA in 1997 (three years before the original *The Sims* game), and after a disastrous launch of *SimCity* in 2013, suffered a series of lay-offs that ultimately ended in the closing of the studio in 2015 (six months after the release of *The Sims 4*).¹⁸⁴ The brand name “Maxis” was the only thing that survived, until EA quietly announced two new studios under the Maxis name in 2019.¹⁸⁵ Although Maxis is thus an important contributor to *The Sims* franchise, EA is the head of the studio, and thus the main focus for this thesis.

¹⁷⁸ Kline et al., *Digital Play*, 270.

¹⁷⁹ Kline et al., *Digital Play*, 270.

¹⁸⁰ Sihvonen, *Players Unleashed!*, 28.

¹⁸¹ Kline et al., *Digital Play*, 271.

¹⁸² Kline et al., *Digital Play*, 270.

¹⁸³ López, *Ecomedia Literacy*, 15.

¹⁸⁴ Jason Schreier, “EA Shuts Down *SimCity* Developer Maxis,” Kotaku, March 4, 2015, <https://kotaku.com/ea-shuts-down-simcity-developer-maxis-1689454903>.

¹⁸⁵ Dustin Bailey, “The Sims developer Maxis is working on its first new IP in a decade,” PCGamesN, August 26, 2019, <https://www.pcgamesn.com/the-sims-4/maxis-new-game>.

The history of EA and the public's opinion of the company could be an entire thesis in itself, but it is safe to say that the company is not well liked. EA was voted to be 'The Worst Company in America' in both 2012 and 2013, 'winning' this competition against other companies such as Facebook, the Bank of America, and BP.¹⁸⁶ Not only was this due to the disaster of *SimCity*, but also due to the rise of intrusive in-game purchases, unfinished and rushed games, and EA's refusal to consider change.¹⁸⁷ Five years later the company was still ranked 5th on the list of most hated companies (with only Monsanto, Comcast, Wells Fargo, and The Trump Organization 'ahead' of them),¹⁸⁸ as their games were often seen as disappointing, full of technical glitches, lacking in originality, and only produced to "squeeze as much money as possible" out of their players.¹⁸⁹ Their decision to introduce loot boxes (boxes that contained random rewards and had to be purchased with real-life money) in *Star Wars: Battlefront 2* was so controversial that Belgium and The Netherlands both banned the game mechanic due to being gambling elements targeted at minors.¹⁹⁰ Not to mention that they have a reputation for shutting down studios, franchises, and treating their employees so badly that 'EA Spouse' has become an actual concept to analyse the excessive work ethos forced upon the game industry.¹⁹¹

Coming from this history, the company does not seem to be a likely candidate for the promotion of sustainable living and combatting the climate crisis. Still, EA defines environmental action as one of their six main priorities.¹⁹² They note three key areas: the reduction of their carbon footprint in the delivery of games and services, the management of energy and water usage at global offices and data centres, and reducing the environmental footprint of their workplace and supply chain.¹⁹³ In 2020 EA published their first yearly Impact Report, where they explained that they built a new governance structure where they identify "climate-related risks and opportunities" according to

¹⁸⁶ Anthony Taormina, "Electronic Arts Wins 'Worst Company in America' title for 2nd Year," GameRant, April 9, 2013, <https://gamerant.com/electronic-arts-worst-company-america/>.

¹⁸⁷ Max Nisen, "EA's Been Voted 'The Worst Company in America' Once Again," BusinessInsider, April 10, 2013, <https://www.businessinsider.com/ea-voted-worst-company-in-america-2013-4?international=true&r=US&IR=T>.

¹⁸⁸ Dalton Cooper, "Electronic Arts Ranks 5th on List of Most Hated Companies," GameRant, February 1, 2018, <https://gamerant.com/electronic-arts-most-hated-company-2018/>.

¹⁸⁹ John Saavedra, "The Perpetual Downward Spiral of EA: How They Descended Into A Hot Dumpster Fire of Failure," Ranker, February 15, 2018. <https://www.ranker.com/list/why-people-hate-ea/john-saavedra>.

¹⁹⁰ Wesley Win-Poole, "Now Belgium declares loot boxes gambling and therefore illegal," Eurogamer, April 27, 2018, <https://www.eurogamer.net/now-belgium-declares-loot-boxes-gambling-and-therefore-illegal>.

¹⁹¹ Nick Dyer-Withford and Greg de Peuter, "'EA Spouse' and the Crisis of Video Game Labour: Enjoyment, Exclusion, Exploitation, Exodus," *Canadian Journal of Communication* 31 (2006): 614.

¹⁹² "Protecting the Environment," EA, last accessed May 17, 2022, <https://www.ea.com/commitments/environment>.

¹⁹³ "Protecting the Environment," EA.

the TCFD Framework¹⁹⁴ and the World Resources Institute Greenhouse Gas (GHG)¹⁹⁵ Reporting Framework.¹⁹⁶ Additionally, EA set up a ‘Global Green Team’ in 2020 that was reported to have 500 members across their global offices,¹⁹⁷ and 600 in 2021.¹⁹⁸ In 2021, EA reported that the Global Green Team partnered with Employee Resource Groups (ERGs) to develop a speaker series for Earth Month “designed to educate and raise awareness regarding climate justice and the ways in which climate change has disproportionate impact on underrepresented communities.”¹⁹⁹ Although EA has no dedicated climate group, six out of their seven ERGs are dedicated to minority communities.²⁰⁰ Yet the focus on minority groups within environmental justice has been called into question, with Huber noting that, although important, this focus will not build a broad enough environmental movement to actually make an impact on the corporations hurting those minority groups.²⁰¹

Although EA has openly declared to strive for environmental action, their implementation of this conviction within the game remains dubious. In an interview with The Verge, producer George Pigula states that “the game is more of a storytelling tool than an educational tool”, and that the *Eco Lifestyle* expansion isn’t intended to “push the player down any path”.²⁰² However, even if EA does not want to explicitly label this game as educational, it is impossible to present a neutral environment. As further elaborated upon in the next section, *The Sims* simulates the ideology of late capitalism. This ideology is contained within its very rules, and then expressed towards the player in the form of gameplay.²⁰³ As a tool, the system is already predisposed towards commodity consumption. Plus, the title ‘*Eco Lifestyle*’ itself already sets an expectation about what kind of ideology is being promoted and what kind of story ‘we should live by’. Not wanting to commit to this ideology gives, in Sicart’s terms “the appearance of social critique and [the possibility to] retract it in the same moment”.²⁰⁴ Having this predisposition towards ecological living makes the game appear as an alternative way for EA to communicate their values in regards to the climate crisis.

¹⁹⁴ TCFD stands for “Task Force on Climate-Related Financial Disclosures” and is created by the United Nations to “develop consistent climate-related financial risk disclosures for use by companies, banks, and investors in providing information to stakeholders. For more information, see <https://www.unepfi.org/climate-change/tcfd/>.

¹⁹⁵ The GHG framework arose after the Paris Agreement to provide an accounting and reporting tool for direct and indirect emissions. For more information, see <https://www.wri.org/initiatives/greenhouse-gas-protocol>.

¹⁹⁶ Electronic Arts Inc., *EA Impact Report 2020* (Redwood City: Electronic Arts, 2020), 29.

¹⁹⁷ Electronic Arts Inc., *EA Impact Report 2020*, 30.

¹⁹⁸ Electronic Arts Inc., *EA Impact Report 2020*, 35.

¹⁹⁹ Electronic Arts Inc., *EA Impact Report 2020*, 35.

²⁰⁰ “People and Culture,” EA, last accessed May 18, 2022, <https://www.ea.com/commitments/people-and-culture>.

²⁰¹ Huber, “Ecological Politics for the Working Class.”

²⁰² Andrew Webster, “The Sims 4’s next expansion lets you live an eco-friendly life – or the opposite,” The Verge, May 22, 2020, <https://www.theverge.com/2020/5/22/21266488/the-sims-4-eco-lifestyle-expansion-interview>.

²⁰³ Sicart, *Family Values*, 10.

²⁰⁴ Kline et al., *Digital Play*, 277.

This ‘appearance of social critique’ seems to apply to EA’s wider environmental policies too. Although there’s no denying that within the context of their own company they have indeed moved forwards in terms of their environmental protection, there’s still a notable absence of EA when it comes to wider communal action. EA is, three years after its conception, still absent from the Playing for the Planet Alliance.²⁰⁵ Of course, a single alliance is not the standard to measure a company against. The alliance itself even started on shaky grounds when companies overwhelmingly pledged carbon offsets rather than carbon reduction,²⁰⁶ which is fortunately currently being addressed by adopting “decarbonisation as a new standard” as one of the five core areas moving forward.²⁰⁷ Yet EA’s absence in the largest alliance dedicated to greening the games industry does point to a wider lack of communal involvement. This is also in accordance with their Annual Impact reports from the last three years. There is no indication in any of those reports (or the publicly available 10-K forms²⁰⁸) that EA is involved in any environmental community or charity project outside of their own business. EA’s business focus extends to *The Sims* series itself. I have already noted that the game is predisposed towards commodity consumption, but the games go beyond that: they simulate capitalism itself.

The Sims 4: Simulated Capitalism

Gonzalo Frasca notes that video games model behavioural rules, and simulation games are inherently about legislation.²⁰⁹ As simulations grow, developers need to add more rules, and that “cannot be done without the designers conveying their particular view of how the system works.”²¹⁰ That means that every simulation game always has its own built-in ideological assumptions. Not every developer is as willing to bring these to the forefront to make a statement, since the games industry has also learned how to “give the appearance of social critique and retract it in the same moment”.²¹¹ Yet Sherry Turkle demonstrates that using simulations for players to analyse and question their ideological assumptions is a valuable tool.²¹² She notes that simulations can help players challenge the model’s built-in assumptions and can thus be employed as a means of consciousness raising.²¹³ This would take the cultural pervasiveness of simulation as a challenge to develop a more

²⁰⁵ “Members and Commitments,” Playing for the Planet, last accessed May 30, 2022.

²⁰⁶ Ivy Taylor, “Can game makers rise to meet the challenge of climate change?” Gamesindustry.biz, September 27, 2019, <https://www.gamesindustry.biz/articles/2019-09-27-can-game-makers-rise-to-the-challenge-of-climate-change>.

²⁰⁷ Playing for the Planet, *Playing for the Planet Annual Impact Report 2021*, 34.

²⁰⁸ A 10-K form is an annual report detailing a comprehensive summary of a company’s financial state.

²⁰⁹ Gonzalo Frasca, “Rethinking agency and immersion: video games as a means of consciousness-raising,” *Digital Creativity* 12, no. 3 (2001), 168-169.

²¹⁰ Frasca, “Rethinking agency and immersion,” 169.

²¹¹ Kline et al., *Digital Play*, 277.

²¹² Frasca, “Rethinking agency and immersion,” 169.

²¹³ Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet* (New York: Touchstone, 1995), 71.

sophisticated system. Turkle suggests this stance as a way to nuance the previously binary understanding of our relationship with simulations as either ‘simulation resignation’ (accepting simulations on your own terms) or ‘simulation denial’ (rejecting simulations to whatever degree possible).²¹⁴ In the context of this research, Turkle’s “more sophisticated system” can be created through the addition of (eco)mods, because these mods can challenge *The Sims 4*’s built-in assumptions, and by extension, capitalism itself.

That leads to wonder what it exactly is that *The Sims* series simulates. Kline et al. have already noted the original game to be a simulation of “suburban middle class North America,” but there is more. They note that the game is open-ended without specific winning or losing conditions, but certainly not devoid of structure. The structure in the game is provided by money. It is a structure not unlike our real world, where economy is the institution that determines ideology.²¹⁵ Kline et al. note that “the only obvious objectives are the acquisition of consumer goods and the enlargement of one’s own home.”²¹⁶ It builds up towards a life in which “commodity consumption is the *raison d’être*,” and a perfect consumer society is created.²¹⁷ Miguel Sicart notes that *The Sims* can be understood as an ideological tool of late capitalism, that it is “a flexible ideological surface that is patterned by a structure that contributes to the survival of the society it simulates”.²¹⁸ Where Kline et al. emphasised the commodity consumption, Sicart employs a Marxist reading to emphasise the aspects of happiness and social integration. As demonstrated through Sihvonen’s work in the introduction of this thesis, *The Sims* games are inherently social games. Using Sicart as a foundation to interpret Sihvonen’s argument demonstrates that not only objects are commodified, the social integration and happiness of the characters are as well.²¹⁹ Sicart concludes that the game is a simulation that helps ensure the domain of capitalism, and becomes an important part of the apparatus spreading this ideology.²²⁰ Which is problematic, because as discussed in Chapter One, capitalism might not have been the beginning of the mental models that helped cause the climate crisis, but it is the driving factor behind the current carbon economy. Especially since EA promotes *The Sims 4* as an open game that “gives you the power” and “the freedom to play with life,”²²¹ and any ideological steering would likely be interpreted as a part of the players’ self-expression. This capitalist ideology has been present within every *Sims* game so far, as the core mechanics remain unchanged.

²¹⁴ Turkle, *Life on the Screen*, 71.

²¹⁵ Miguel Sicart, “Family Values: Ideology, Computer Games & *The Sims*” (paper presented at the Digital Games Research Conference, Utrecht University, Utrecht, 4-6 November 2003), 5. <http://www.digra.org/wp-content/uploads/digital-library/05150.09529.pdf>.

²¹⁶ Kline et al., *Digital Play*, 276.

²¹⁷ Kline et al., *Digital Play*, 276-277.

²¹⁸ Sicart, “Family Values,” 5.

²¹⁹ Sicart, “Family Values,” 9.

²²⁰ Sicart, “Family Values,” 9.

²²¹ “The Sims 4,” EA, last accessed June 21, 2022, <https://www.ea.com/en-au/games/the-sims/the-sims-4>.

Yet it has also been suggested that *The Sims* can be used as an invitation to critically reflect on consumerism.²²² Kline et al. note that the first instalment openly acknowledges their consumerist ideologies, in a way that is so unabashed it could be interpreted as an ironic, tongue-in-cheek way to distance itself from the world-view it represents.²²³ Additionally, I argue that *The Sims'* capitalistic nature makes it an excellent tool for this ecogame research, because simulating capitalism provides a tool to try out tweaks and alternatives to this economic system through modding, and then share those with the community. In other words, by adopting Turkle's stance and challenging the model's built-in assumptions, we can challenge one of the processes behind the climate crisis, and potentially consider real-life alternatives. Additionally, because capitalism is interwoven with so many other problematic processes, *The Sims 4* could also function as a tool to touch upon those debates. Modifying games to challenge built-in assumptions has previously been done by researchers like Mikael Mattlin, who modified a game "infamous for its backstabbing and breaking of promises into a game that resolves in a mediated and negotiated peaceful manner".²²⁴ In doing so, he created new insight into game modding by demonstrating that modding can work as an educational tool.

There's an important consideration to take into account when critiquing capitalism: Fredric Jameson has identified that we are currently living in a period of 'late capitalism,' a period of capitalism where "any effort to contest the dominant ideology is frequently assumed, reabsorbed by capital itself."²²⁵ Jameson's conceptualisation of capitalism helps us understand capitalism as an ideological system that permeates all social and cultural layers of western societies. Plus, to keep this system running, it is able to embed dissident discourses into its own. Capitalism accepts superficial revolutions because they don't threaten the roles of economic power.²²⁶ Paulo Ruffino, a media scholar who studied the capitalism simulator *AdVenture Capitalist*, also acknowledges Jameson's understanding of late capitalism, and seeks an escape.²²⁷ He identifies that, like capitalism, the game does not have an actual specific built-in end, and that instead "[t]he escape route must be invented [by players] by creating a difference, an extraordinary event in the otherwise homogenous cycles of repetition within the incremental game."²²⁸ In other words, in order to truly challenge the system of late capitalism, we need to create something truly different.

²²² Kline et al., *Digital Play*, 277.

²²³ Kline et al., *Digital Play*, 277.

²²⁴ Mikael Mattlin, "Adapting the DIPLOMACY Board Game Concept for 21st Century International Relations Teaching," *Simulation & Gaming Vol 49*, no. 6 (2018): 747. DOI: 10.1177/1046878118788905

²²⁵ Sicart, "Family Values," 5.

²²⁶ Sicart, "Family Values," 5.

²²⁷ Paulo Ruffino, "The End of Capitalism: Disengaging From the Economic Imaginary of Incremental Games," *Games and Culture* 16, no. 2 (2019): 224. DOI: 10.1177/1555412019886242

²²⁸ Ruffino, "The End of Capitalism," 224.

The Sims 4 engages most explicitly with sustainability in *Eco Lifestyle*, but that does not mean that they haven't broached the topic before. Before I analyse *Eco Lifestyle* I will therefore first contextualise that by considering *The Sims 4*'s earlier employment of sustainable themes.

The Sims 4: Before Eco Lifestyle

When *The Sims 4* was first published by EA, it was not well received by the community.²²⁹ The game was missing a lot of features that were appreciated in *The Sims 3*, like toddlers, the open world, and terrain tools.²³⁰ Over time, new content was released that slowly build up the game, although discontent over missing features still remains.²³¹ Some of these new content releases also related to the themes of sustainability, long before the officially dedicated expansion pack *The Sims 4: Eco Lifestyle* was developed and published in 2020. Therefore I will be using a diachronic procedural approach to analyse *The Sims 4*: by looking into the changes in gameplay logics over time, I can create more insight into how *The Sims 4* as a discussion 'platform' has grown and changed.²³²

The Sims 4: Laundry Day Stuff

A small expansion that engages with sustainability is *The Sims 4: Laundry Day Stuff*. This expansion was released in January 2018, and was made through several rounds of community input. EA provided several options, and then the community picked the main topic (Eco living stuff),²³³ the main gameplay feature (laundry),²³⁴ and created the final selection of objects that would be included in the pack (by narrowing 68 suggestions down to 29 objects).²³⁵ *Laundry Day Stuff* introduced a fully functioning laundry system to *The Sims 4*, where clothes can pile up in a hamper, are washed, dried, and then stored. Players receive the choice between an eco-friendly electrical washer and dryer, or a hand board and clothes line. However, in this expansion there's an inherent tension that can best be

²²⁹ Marleyyy, "Why The Sims 4 Is A Major Disappointment (and Why You Might Not Want To Purchase It)," Reddit, September 2, 2014,

https://www.reddit.com/r/gaming/comments/2f9jm0/why_the_sims_4_is_a_major_disappointment_and_why/.

²³⁰ "89 Features Missing from the Sims 4," TS4News, August 12, 2014,

<https://ts4news.com/post/94541924952/89-features-missing-from-the-sims-4/>.

²³¹ Naus-BDF, "Things that are STILL missing after SIX years in the Sims 4 that were in ALL previous BASE GAMES," Reddit, August 29, 2020,

https://www.reddit.com/r/thesims/comments/iit1xu/things_that_are_still_missing_after_six_years_in/

²³² Werning, "Modding as a Strategy to (De)Legitimize Representations of Religion in the *Civilization* Game Franchise – A Diachronic Proceduralist Reading," 312.

²³³ SimGuru Graham, "You Chose the Eco Living Theme! Now Pick an Art Style," TheSims4.com, April 11, 2017, <https://www.ea.com/games/the-sims/the-sims-4/news/sims-4-community-pack-style>.

²³⁴ SimGuru Graham, "Stuff Pack Name & Icon Vote Results!" The Sims Forum, September 15, 2017, https://forums.thesims.com/en_US/discussion/925209/stuff-pack-name-icon-vote-results/p1.

²³⁵ SimGuru Graham, "Stuff Pack Object Vote Results," The Sims Forum, June 4, 2017, https://forums.thesims.com/en_US/discussion/919337/stuff-pack-object-vote-results.

described as a ‘pharmakon’: both the poison and its antidote.²³⁶ Before *Laundry Day Stuff*, there was no need for washers and dryers, and the debate regarding their related environmental impact. By introducing this to the game, EA adds another layer of complexity to the simulation, yet also introduces both the poison (possible water and electricity waste by unsustainable laundry practices) and the antidote (eco-friendly machines and devices). The washer is only described as an appliance that “automatically adjusts the machine’s settings to select the most efficient wash cycle possible,” but it never offers any insight into what that actually constitutes as efficient, leaving the player without any actual information and no insight into their own laundry practices. Meaning that it does not truly touch upon debates such as low-temperature washing, conscious use of laundry detergents, or wear and tear of clothes during long-term washing. In Lakoff’s terms, washing clothes is thus framed as a much simpler issue than what’s really at stake. Only the washer-dryer combination explicitly describes the added benefit to using the combination instead of the two separate machines, namely that “the moisture literally evaporates in the dryer and drains back into the washer for your next load” (see figure 3). In that sense I would argue that even though eco-friendliness and sustainability are touched upon in this pack, the actual engagement with the topic remains too superficial to count as educational.



Figure 2: The Washing Machine introduced in *Laundry Day Stuff*.



Figure 3: The Combination Machine introduced in *Laundry Day Stuff*.

The Sims 4: Seasons

In *The Sims 4: Seasons*,²³⁷ which is generally regarded as one of the most appreciated expansion packs in the community, EA introduced a functioning thermostat. *Seasons* was released in June 2018, and introduced a functioning weather system which allows sims to respond to different weather

²³⁶ Mark B. N. Hansen, “New Media,” in *Critical Terms for New Media Studies* ed. W. J. T. Mitchell and Mark Hansen (Chicago, London: The University of Chicago Press, 2010), 173.

²³⁷ Maxis, *The Sims 4: Seasons*, Electronic Arts, Microsoft Windows, MacOS, PlayStation 4, Xbox One, 2014.

conditions (like hot weather, cold weather, rainy days, or storms). The thermostat allows the player to adjust temperatures inside the sim home, which also affects the sim's utility bill and their mood. Although *Seasons*, which came out in 2018, could not yet link this to carbon emissions directly (a system introduced as the 'Eco Footprint' in 2020 with *Eco Lifestyle*), it did already help promote conscious use of thermostat by linking it to an economic and personal incentive. Later, after *Eco Lifestyle* was introduced, it was not linked to the Eco Footprint mechanic. *The Sims 4* thus did not frame this mechanic as having any impact on the climate, even though in 'real-life' thermostat use is often quoted in relation to gas usage and climate impact. Therefore the actual embedding within the new ecological gameplay *Eco Lifestyle* affords remains lacking, showing that these two expansion packs are more isolated expansions rather than content building each other up.

The Sims 4: Island Living

A third expansion worth mentioning is *The Sims 4: Island Living*. This expansion was released in June 2019, and added a new tropical world to the game. One of the islands in that world has suffered years of misuse and neglect, allowing for pollutions and waste to build up. The game encourages the player to clean up this island, and to restore the ecosystem. The player can speed up this work through the added Conservationist career, where the sim will both get paid for their efforts to conserve the island and can also unlock commands that allow for stronger conservationist efforts.²³⁸ This career has a hands-on branch, the Marine Biologist, and a political action branch, the Environmental Manager.²³⁹ The Marine Biologist is mostly active in clean-up work, in cleaning up trash, controlling invasive species, and surveying the ocean floor. These actions clean the island and visually improve nature (e.g. increased tree density, improved coral growth, and the appearance of butterflies). Meanwhile, while the Marine Biologist is involved in clean-up, the Environmental Manager has more preventive gameplay possibilities. Through the 'Consult on Policy' option the player is able to select a global policy (up to eight policies, one per 12 hours), allowing the player to make decisions such as making littering finable, fining overfishing, or supporting organic produce. At the end of the career branch, a sim becomes "Chief Sustainability Officer" under the slogan "Keep It Clean, Keep It Mean, Keep It Green!" This trajectory also requires a sim to write a grant application, and to work with governments and corporations (according to the in-game description of the career). This emphasis embeds the career within the needed realm of "politics, policymakers and legislation" as a driving force to help tackle the climate crisis.²⁴⁰

²³⁸ Triforcemeg, "Island Conservation," IGN, last updated July 19, 2019, https://www.ign.com/wikis/the-sims-4/Island_Consevation.

²³⁹ Carl Ratcliff, "The Sims 4 Conservationist Career," Carls Sims 4 Guide, June 21, 2019, <https://www.carls-sims-4-guide.com/careers/islandliving/conservationist/>.

²⁴⁰ Schendler, "Worrying About Your Carbon Footprint Is Exactly What Big Oil Wants You to Do," 1.

The Sims 4: Eco Lifestyle

When discussing the climate crisis and *The Sims 4*, the most obvious expansion to analyse is the expansion pack dedicated to sustainability: *The Sims 4: Eco Lifestyle*. As shown in the previous three sections, this theme was already considered in several previous expansions. It was then in this expansion that the theme was placed front and centre. EA identifies four key features of this expansion pack: sustainable living, collaborative community, change the world, and upcycled decor.²⁴¹ These four key features introduce many new gameplay elements into the game, including an Eco Footprint for your neighbourhood, dumpster diving, a new career, and communal voting plans. In the following sections, I will analyse these four gameplay mechanics in order to understand how *Eco Lifestyle* engages with sustainability.

Gameplay Mechanic 1: Eco Footprint

One of the mechanics introduced with the *Eco Lifestyle* pack is the 'Eco Footprint' of the different neighbourhoods. This mechanic shows if the player's neighbourhood is overall 'green', 'neutral,' or 'industrial'. The Eco Footprint is implemented throughout all residential worlds, even for the players who do not own the expansion pack. The Eco Footprint mechanic is thus what is referred to as a 'Base Game Update': a general addition also given out separately from the pack that introduces it. Players can affect their neighbourhood's footprint by conscious use of appliances, creating gardens, or using certain building materials. By introducing this mechanic, EA clearly draws upon an existing debate regarding sustainability, that of the ecological footprint. Drawing upon Lakoff's understanding of framing, it is vital to look into this debate and analyse the values that are actually being promoted through the reference towards this debate.

The term 'ecological footprint' was first pioneered by Mathis Wackernagel and William E. Rees through their book *Our Ecological Footprint: Reducing Human Impact on the Earth* in 1996.²⁴² Wackernagel and Rees open their book by emphasising that human life is tightly interwoven with nature, and that in order to live sustainably "we must ensure that we use the essential products and processes of nature no more quickly than they can be renewed, and that we discharge wastes no more quickly than they can be absorbed."²⁴³ They caution against reducing extractive sectors such as agriculture, forestry, and fisheries to their (relatively little) importance the Gross National Product (GNP) of a country, and warn that just to focus on human life in understanding ecosystems would

²⁴¹ "The Sims 4: Eco Lifestyle," EA, last accessed on April 22, 2022, <https://www.ea.com/en-gb/games/the-sims/the-sims-4/packs/expansion-packs/the-sims-4-eco-lifestyle?setLocale=en-gb>.

²⁴² Mathis Wackernagel and William E. Rees, *Our Ecological Footprint: Reducing Human Impact on the Earth* (Philadelphia: New Society Publishers, 1996).

²⁴³ Wackernagel and Rees, *Our Ecological Footprint*, 7.

betray “a narrow ecological understanding”.²⁴⁴ Therefore they conceptualised the ‘Ecological footprint analysis’ to help estimate the “resource consumption and waste assimilation requirements of a defined human population or economy in terms of a corresponding productive land area”.²⁴⁵ In other words, the ecological footprint helps us define “how much land is required to support any specified lifestyle indefinitely”.²⁴⁶ This calculation can be made for entire cities, but it can also refer to a single person. Wackernagel and Rees also note that there’s a global imbalance when it comes to the ecological footprint; a typical North American has a footprint three times the size of what’s sustainable (4-5 hectares), if everyone on the planet would live as a typical North American, we could need at least three planets.²⁴⁷ They also place a critical note on their model, noting that it is a simplification of events, and that it only takes carbon emissions into account, not other pollutions. Therefore, the ecological footprint actually even underestimates humanities impact on nature.²⁴⁸

In order to contextualise this term, it is important to position this against another popular term used within this debate: the carbon footprint. This term was popularised in 2000, when the oil company British Petroleum (BP) hired the marketing company Ogilvy & Mather to create an advertising campaign in order to push the idea that carbon pollution is the fault of individuals rather than that of major corporations like BP.²⁴⁹ This campaign launched the term into the everyday lexicon, and -in Lakoff’s terms- allowed BP to frame the debate of climate impact. This frame pushed the responsibility of carbon emissions onto the shoulders of individual consumers, and more importantly, away from known polluting companies such as BP. BP is still known as a major polluter, most infamously having leaked an estimated 4.9 million barrels of oil into the Gulf of Mexico in April 2010.²⁵⁰ This type of individual thinking spawned many calculators that encouraged their user to calculate their individual carbon footprints, for example those on major websites such as The New York Times,²⁵¹ the BBC,²⁵² and The Nature Conservancy.²⁵³ This impact shows that, in Lakoff’s terms, reactivating a frame strengthens it and repeatedly activating it even more so. The prevalence of this

²⁴⁴ Wackernagel and Rees, *Our Ecological Footprint*, 8.

²⁴⁵ Wackernagel and Rees, *Our Ecological Footprint*, 7.

²⁴⁶ Wackernagel and Rees, *Our Ecological Footprint*, 11.

²⁴⁷ This estimation was written by Wackernagel and Rees in 1996, the estimate for 2022 is that an average North-American has a footprint of 8.04 global hectares. Source: “Ecological Footprint by Country,” World Population Review, accessed May 20, 2022, <https://worldpopulationreview.com/country-rankings/ecological-footprint-by-country>.

²⁴⁸ Wackernagel and Rees, *Our Ecological Footprint*, 18.

²⁴⁹ Mark Kaufman, “The carbon footprint sham: A ‘successful, deceptive’ PR campaign,” Mashable, July 13, 2020, <https://mashable.com/feature/carbon-footprint-pr-campaign-sham>.

²⁵⁰ United States and Coast Guard, “On Scene Coordinator Report *Deepwater Horizon* Oil Spill, Submitted to the National Response Team September 2011”, 53. <https://repository.library.noaa.gov/view/noaa/283>.

²⁵¹ Veronica Penney, “Think You’re Making Good Climate Choices? Take This Mini-Quiz,” The New York Times, August 30, 2020, <https://www.nytimes.com/interactive/2020/08/30/climate/climate-footprint-quiz.html>.

²⁵² Nassos Stylianou, Clara Guibourg, and Helen Briggs, “Climate change food calculator: What’s your diet’s carbon footprint?” BBC, August 9, 2019, <https://www.bbc.com/news/science-environment-46459714>.

²⁵³ “Calculate Your Carbon Footprint,” The Nature Conservancy, last accessed May 16, 2022, <https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>.

type of thinking further demonstrates how difficult this idea is to challenge, because it has strengthened over time. This frame was already generally critiqued, for example by Joel Ross, Nitin Shantharam, and Bill Tomlinson who wrote in 2010 that footprint calculators tend to frame the issue as an individual matter, and neglect the interconnectivity and wider impact across the community.²⁵⁴ This critique is part of a larger societal issue within consumer culture, which can be understood through Tania Lewis and Emily Potter's sociological concept of "the ethical turn:" a shift within the framing of consumption discourses that emphasises that the responsibility for ethical consumption lies with privatized, informed individuals.²⁵⁵ Then, during the COVID-19 pandemic of 2020, society unexpectedly and unknowingly undertook a massive social experiment to test that hypothesis. The pandemic dramatically decreased individual carbon footprints, yet the general amount of "heat trapping carbon dioxide saturating the atmosphere" only slightly dropped.²⁵⁶ What this teaches us, is that pointing at individualistic behaviour -although sometimes useful- is not productive when considering major impacts.

When taking this knowledge to analyse the use of 'Ecological Footprint' in *The Sims 4*, it becomes clear that the game does not actually critically engage with the concept. As discussed before, *The Sims 4* can be viewed as an ideological tool of (late) capitalism, where consumerism and commodification play large roles. Taking this understanding one step further, it is important to acknowledge that *The Sims 4* presents a frictionless economy. This term was coined by Bill Gates, and is explained by Slavoj Žižek as a type of economy that is a "social fantasy," that presents a "wholly transparent, ethereal medium of exchange in which the last trace of material inertia vanishes".²⁵⁷ The friction this system disposes of refers to both the "material obstacles that sustain the entire process" and "traumatic social antagonisms, Power relations and so forth that brand the space of social exchange with a pathological twist".²⁵⁸

I argue that *The Sims 4* presents this social fantasy of frictionless economy to the player. Players are presented with a sim customisation system that includes a free wardrobe. This wardrobe is only accessible through a system that takes the player out of the game world and into a menu screen. Not only is this a literal detachment from the world, the clothes appear without being produced, will stay clean and whole forever (with *Laundry Day Stuff* installed a player gets a negative buff to notify them that their sim's clothes have become dirty, but no visual change is notable), and come in nearly unlimited supply, especially when the player expands the game through clothing

²⁵⁴ Joel Ross, Nitin Shantharam, and Bill Tomlinson, "Collaborative filtering and carbon footprint calculation," (paper presented at the 2010 IEEE International Symposium on Sustainable Systems and Technology, Arlington, 17-19 May 2010), DOI: [10.1109/ISSST.2010.5507742](https://doi.org/10.1109/ISSST.2010.5507742).

²⁵⁵ Tania Lewis and Emily Potter, *Ethical Consumption: A Critical Introduction* (London, New York: Routledge, 2011), 8.

²⁵⁶ Kaufman, "The carbon footprint sham: A 'successful, deceptive' PR campaign."

²⁵⁷ Slavoj Žižek, *The Universal Exception* (London: Bloomsbury, 2006), 181.

²⁵⁸ Žižek, *The Universal Exception*, 181.

mods. *Eco Lifestyle* includes clothes that look like they're repaired by patches, but this is not a gameplay mechanic and does not have any impact apart from being a decorative statement.²⁵⁹ This type of frictionless capitalism also applies to other aspects of the game, with general furniture being accessible through one gigantic catalogue where they are detached from their production, food and ingredients are bought through an interface accessible through the fridge or phone without any information about where it comes from, and waste disappears as soon as it is bought to the "Garbage Dump," which is a location that is inaccessible to the player where a sim vanishes to for a while to take out household trash, without any notice as to how it's processed afterwards. The *Eco Lifestyle* expansion does add some friction through the building materials. This expansion is the first to introduce labels to building materials, letting them impact the gameplay instead of just being aesthetic options.²⁶⁰ Although the materials themselves do not have any descriptions to explain them further than their brief titles allow, materials (wallpapers, windows, doors, roofings, etc.) are given a "+ Green Eco Footprint" or a "+ Industrial Footprint" to show how they impact the neighbourhood's footprint. Whereas the Eco Footprint mechanic is a base game update, the base game materials are often not affected by this new labelling system.

Despite using the term 'ecological footprint,' actual engagement with the concept thus remains fairly limited, mostly due to fact that engaging with this concept requires a level of complexity that has been removed from the simulation in favour of presenting a frictionless system. Most of the impact on the ecosystem the player can reduce therefore comes down to carbon emissions, which means that the game actually engages with the carbon footprint instead of the ecological footprint. This has the added danger of pushing the player towards a framework of individual responsibility, which has been proven through the pandemic as not actually useful in terms of making a massive positive impact, and does not help change underlying mental models. Plus, using the names of these different analyses interchangeably only obscures their differences more, and distances the term 'ecological footprint' from its climate science origins. In a Twitch livestream the developers do acknowledge that their Eco Footprint mechanic is designed to foster collaboration between neighbours of a specific neighbourhood, and that neighbours have to make a communal effort in building, working, and interacting together.²⁶¹ Yet the actual initial implementation was less ideal than promised, with many people initially reporting a recurring problem on the Sims forums,²⁶²

²⁵⁹ SimGuruGeorge, "The Sims 4 Eco Lifestyle Livestream," Twitch, May 20, 2020, <https://www.twitch.tv/videos/627750429>.

²⁶⁰ SimGuruGeorge, "The Sims 4 Eco Lifestyle Livestream."

²⁶¹ SimGuruGeorge, "The Sims 4 Eco Lifestyle Livestream."

²⁶² LeGardePourpre, "Industrial Eco Footprint : Mission Impossible," The Sims, June 6, 2020, https://forums.thesims.com/en_US/discussion/976886/industrial-eco-footprint-mission-impossible.

EA Bug Reports,²⁶³ and Reddit²⁶⁴ that the Eco Footprint quickly returns to neutral, even when actively trying for a green or industrial state.

Another important consideration that betrays that the game actually engages with the carbon footprint, is that the game measures impact through a scale of ‘green,’ ‘neutral,’ and ‘industrial’. These measurements are typical references to the carbon scale, where ‘carbon neutrality’ is an often echoed corporate goal.²⁶⁵ Whereas the Ecological Footprint, as originally conceptualised by Wackernagel and Rees, is measured in hectares of ecologically productive land required to sustain a certain population.²⁶⁶ Carbon neutrality does not contribute to ecological living, as it does not achieve any sort of systematic change.²⁶⁷ In short, carbon neutrality often involves ‘offset,’ a term defined by the Cambridge Dictionary as “to pay for things that will reduce carbon dioxide in order to reduce the damage caused by carbon dioxide that you produce”,²⁶⁸ rather than actual reduction of damage caused by the initial carbon emission. In order to achieve a change in thinking, the game would have to engage with the amount of land required to sustain the neighbourhood, and emphasise a collective responsibility.

Gameplay Mechanic 2: Dumpster Diving

Eco Lifestyle introduces dumpsters that are about twice the size of the game’s regular outdoor garbage bins. These dumpsters are placed throughout the world, and allow a sim to rummage through their content in order to look for reusable items. Two options included in the interactive menu are ‘Dive for Deals’ where a player could potentially find materials for crafting or broken household items (which they have to repair before they can use them), and ‘Dive for Meals’ where the player can find ingredients for cooking meals. By naming these trashcans “Dumpster” and including the option to “Dive” the game makes a clear reference to the phenomenon of dumpster diving.

Voluntary dumpster diving has arisen from an anarchist critique of consumerism.²⁶⁹ Sociologist Laurie Essig explains that it is part of the larger movement against global capitalism, and

²⁶³ KBFoodlover, “[FIXED] [ECO] Issues with Eco Footprint Changes,” EA Answers HQ, June 6, 2020, <https://answers.ea.com/t5/Bug-Reports/FIXED-ECO-Issues-with-Eco-Footprint-Changes/td-p/9180818>.

²⁶⁴ SelenophilicSapphic, “Whats with the eco footprint??,” Reddit, June 8, 2020, https://www.reddit.com/r/thesims/comments/gyy2ui/whats_with_the_eco_footprint/.

²⁶⁵ Auden Schendler, “Worrying About Your Carbon Footprint Is Exactly What Big Oil Wants You to Do,” The New York Times, August 31, 2021, <https://www.nytimes.com/2021/08/31/opinion/climate-change-carbon-neutral.html>.

²⁶⁶ Wackernagel and Rees, *Our Ecological Footprint*, 13.

²⁶⁷ Schendler, “Worrying About Your Carbon Footprint Is Exactly What Big Oil Wants You to Do.”

²⁶⁸ “Offset,” Cambridge Dictionary, last accessed June 8, 2022, <https://dictionary.cambridge.org/dictionary/english/offset>.

²⁶⁹ Jeff Shantz, “One Person’s Garbage... Another Person’s Treasure: Dumpster Diving, Freeganism, and Anarchy,” *Verb* 3, no. 1 (August 2005): 9.

an attempt to live “beyond the dictates of states and markets”.²⁷⁰ Essig describes that this movement is based on an incredibly idealistic faith that, by redirecting consumer capitalism’s ‘waste stream’ to those in need, dumpster divers are dismantling the system itself. By participating in this system, the divers live their lives in a way that “does not create any demand for goods and therefore their lives do nothing to propagate the very system they are protesting”.²⁷¹ In reality, it is not as sustainable as the practitioners Essig describes make it seem. Dumpster diving remains dependent upon capitalistic forms of supply, and therefore does not push for reform. Sociology professors Turo-Kimmo Lehtonen and Olli Pyyhtinen interviewed dumpster divers, and concluded that their interviewees were aware of this lack of reform. Instead they note that dumpster divers focus on “cultivating an ecologically sound and morally coherent lifestyle that is personally gratifying [rather] than directly confronting the state or directly confronting the state or the social structure”.²⁷²

Although the inclusion of this anti-capitalistic critique seems like a component worthy of any ecocritical game, it creates tension within *The Sims 4*. As discussed earlier, this game franchise is built on capitalistic ideals. In this case, Jameson’s insight that capitalism can embed dissident discourses that do not threaten the power relations is extremely relevant. *The Sims 4* sells this in origin anti-capitalistic critique back to the player in the form of gameplay mechanics, but they do this by detaching dumpster diving from the context of corporate critique. Jeff Shantz quotes several places where, when looking for food, dumpster divers can find an “abundance”: grocery stores, bakeries, and large franchises such as McDonald’s or Krispy Kreme.²⁷³ In other words, corporate dumpster bins that produce food for mass disposable consumerism. In order to always have fresh food ready to go, unsold day-old food has to be thrown out. Where dumpster diving tries to critique this mentality, it becomes impossible to do so within *The Sims 4*. In *Eco Lifestyle*, dumpsters are placed at seemingly random locations near roads, detaching them from their actual physical corporate locations (for example, next to one of those food chains) and thereby taking out the issue of who is actually responsible for producing excess waste.

Although dumpster diving itself is thus indeed anti-capitalistic, it does not threaten the people who produce excess waste, nor the system that produces the waste, but only uses the excess waste. The practice of dumpster diving allows for small-scale explorations of alternative resource systems, but does not create an incentive for the system to change because no actual power relations are threatened. Just like the inclusion of the ‘ecological footprint’ that actually resembled the carbon footprint, this mechanic of dumpster diving seems to promote a focus on individual

²⁷⁰ Essig 2002 look up original source in Shantz

²⁷¹ Laurie Essig, “Fine diving: Young anarchists with guts of steel raid dumpsters for edible “trash.” The idea? Divert waste to end wastefulness.” Salon, June 10, 2002, https://www.salon.com/2002/06/10/edible_trash/.

²⁷² Turo-Kimmo Lehtonen & Olli Pyyhtinen, “Living on the margins: dumpster fiving for food as a critical practice,” *Distinktion: Journal of Social Theory* 22, no 3 (February 2021): 460.

²⁷³ Shantz, “One Person’s Garbage...,” 12-16.

change rather than targeting systemic structures and the mental models that uphold them. Thus the critique becomes embedded in this capitalistic game, and sold back to the gamer as a gameplay mechanic.

Gameplay Mechanic 3: Civil Designer Career

Eco Lifestyle adds a new job option to the game: the ability to let your sim become a Civil Designer. The game splits this career into two branches, a Civil Planner who “improves their environment” through planning, and a Green Technician who “design[s] and construct[s] new gadgetry and processes to greenify and enrich Sims’ lives”.²⁷⁴ Both of these careers require the player to draft new plans, either Municipal Plans (Civil Planner) or Eco Inventions (Green Technician), which are then submitted for evaluation. The quality of these plans improves the sim’s wage, but the content of these plans are not expanded upon, nor do they impact the game. It means that, even though these plans are designed to ‘better’ the city, the actual description of what constitutes as ‘better’ remains vague and leaves the player without actionable plans. Just as what happened with *Laundry Day Stuff’s* washing machines. Eventually both of these career branches lead up to the “Eco-Matic Smog Vacuum,” a device that sucks smog out of the air. Once the tank is full, player have the option to dump it back into the air (not necessarily of their own neighbourhood), or into a trashcan/dumpster. This last option shows again that the waste system is insufficiently present within the game to engage with these types of sustainability discourses, as the sim character literally blows the dirty air in a trashcan to ‘dispose’ of it.

That the culmination of the career branches add up to a device (the Eco-Matic Smog Vacuum) that cleans the air in a way that’s currently still impossible in our real life, shows a vision that can be criticised as being technological deterministic. Technological determinism is the belief that technology is the main driver behind social change, and that our modern information society arises as a result of technological innovation.²⁷⁵ Society changes when new technologies are invented, by having to adapt and adjust to these new developments.²⁷⁶ From a technological deterministic perspective, technology is a key factor, or in its most radical version even a pre-requisite, for social change. Society itself is “defined both by means of technologies which it is able to create, and those which it decides to use and develop rather than others”.²⁷⁷ However, a word of caution is required, as these techno-futuristic perspectives could possibly lead to techno-utopian thinking. These ways of thinking risk “conjuring a naïve faith in the myth that a new technology will

²⁷⁴ SnarkyWitch, “The Sims 4 Eco Lifestyle: Civil Designer Career Overview,” SimsCommunity, June 9, 2020, <https://simscommunity.info/2020/06/09/the-sims-4-eco-lifestyle-civil-designer-career-overview/>.

²⁷⁵ Thomas Hauer, “Technological determinism and new media,” *International Journal of English, Literature, and Social Science (IJELS)* 2, no. 2 (April 2017): 1.

²⁷⁶ Hauer, “Technological determinism and new media,” 1.

²⁷⁷ Hauer, “Technological determinism and new media,” 1.

enable another (better) way of thinking”.²⁷⁸ Within this career, the Eco-Matic Smog Vacuum is the defining technological development. The gameplay of the Civil Designer career has no impact upon the world until the Eco-Matic Smog Vacuum is developed, and even then the Smog Vacuum has very little impact on the Eco Footprint. It is a device that defines itself by being a cleaning-up measure, something that does not actually promote sustainable living, as it still allows for the existence of heavy polluters in the first place. It therefore seems to promote the idea that we need to create better clean-up devices in order to live more sustainable, rather than tackling the polluters itself.

Although smog cleaning devices are useful in a world that is already (heavily) polluted, it does not impact the mental models that are placed at the core of this thesis. The device is useful for clean-up, which in ‘real life’ is considered helpful in heavily polluted places such as Beijing,²⁷⁹ but does not encourage the player to prevent carbon emissions. There is no incentive to help construct a long-term systemic solution, rather only a short-term small scale clean-up. Although that is partially a constraint of the simulation, because *The Sims 4* allows for simulating to the scale of several neighbourhoods, therefore making it difficult to tackle issues that have to be fixed through “politics, policymakers and legislation.”²⁸⁰ Therefore it is precisely crucial to keep the distinction between locality and individuality in mind. The perspective of locality can help us develop sustainable imaginaries in regards to housing, while the perspective of individuality has been proven not to be that impactful through the minor impact of COVID-19 on our carbon emissions.

Gameplay Mechanic 4: Neighborhood Action Plans (N.A.P.)

A fourth new gameplay mechanic in *Eco Lifestyle* capitalises upon this aspect of “politics, policymakers and legislation” by adding Neighborhood Action Plans (N.A.P.): communally chosen plans to implement changes in the neighbourhood. This mechanic, that is reminiscent of *Island Living’s* Global Policies, is accessible to both the player and non-player characters (NPCs). Players can vote on these plans through using their influence points, which are gained by engaging in positive social interactions. This relates back to what Sihvonen noted to be *The Sims’* inherent sociability. The NPCs in the game are not just there to provide the player with an opportunity to gain influence points, but are also active participants in the voting. Over the course of a weekend (Friday 8:00 until Monday 18:00) voting is opened to all inhabitants of the neighbourhood. Out of the twenty-one possible N.A.P.s, eight can be eligible for voting at any given time, and up to four can be active at the same time. Some of these move the neighbourhood towards a greener footprint (like Green

²⁷⁸ Su Ballard, Zita Joyce, and Lizzie Muller, “Editorial Essay,” *The Fiberculture Journal* 20 (2012): 2.

²⁷⁹ Kate Abbey-Lambertz, “A ‘Smog Vacuum’ Will Clean China’s Air, Turning Pollution into Jewelry,” Huffpost, September 29, 2016, https://www.huffpost.com/entry/smog-free-tower-beijing-air-pollution_n_57ed6e0ae4b0c2407cdcbaae.

²⁸⁰ Schendler, “Worrying About Your Carbon Footprint Is Exactly What Big Oil Wants You to Do,” 1.

Initiatives, Power Conservation, and Water Conservation), help sims gain skills and influence faster (like Foodies Unite!, and Fun Loving Community), or are just there for laughs (We Wear Bags). If the player sees an undesired N.A.P. being supported, they can attempt to repeal the action. This mechanic allows players to convince NPCs to change their vote. Although the first steps towards this type of gameplay has already been explored in modding (the “Politics Mod Pack” was released in 2015²⁸¹), this is now officially implemented within *The Sims 4*.

This system of Neighborhood Action Plans mimics a real-life political process and connects the inherent socialness of the game to the inherent socialness of political activism. But what then, does *The Sims 4* consider ecological action? The most obvious answer comes in form of the tutorial to *Eco Lifestyle*. The player is presented with two pop-ups: Green Neighborhood Action Plans and Profitable Action Plans (see figure 4). These seem to imply that green actions and profitable actions do not overlap, and so poses capitalist thought and ecological critique as inherently opposing principles. It should be noted that this tutorial nudges the player towards the greener side of the ecological footprint meter by not including action plans that worsen your sims’ neighbourhood. The Green Neighborhood Action Plans pop up suggests three plans to focus on: Green Initiatives, Eco-Friendly Appliances, and Clean Energy Production. I will therefore look into these three plans into more detail.

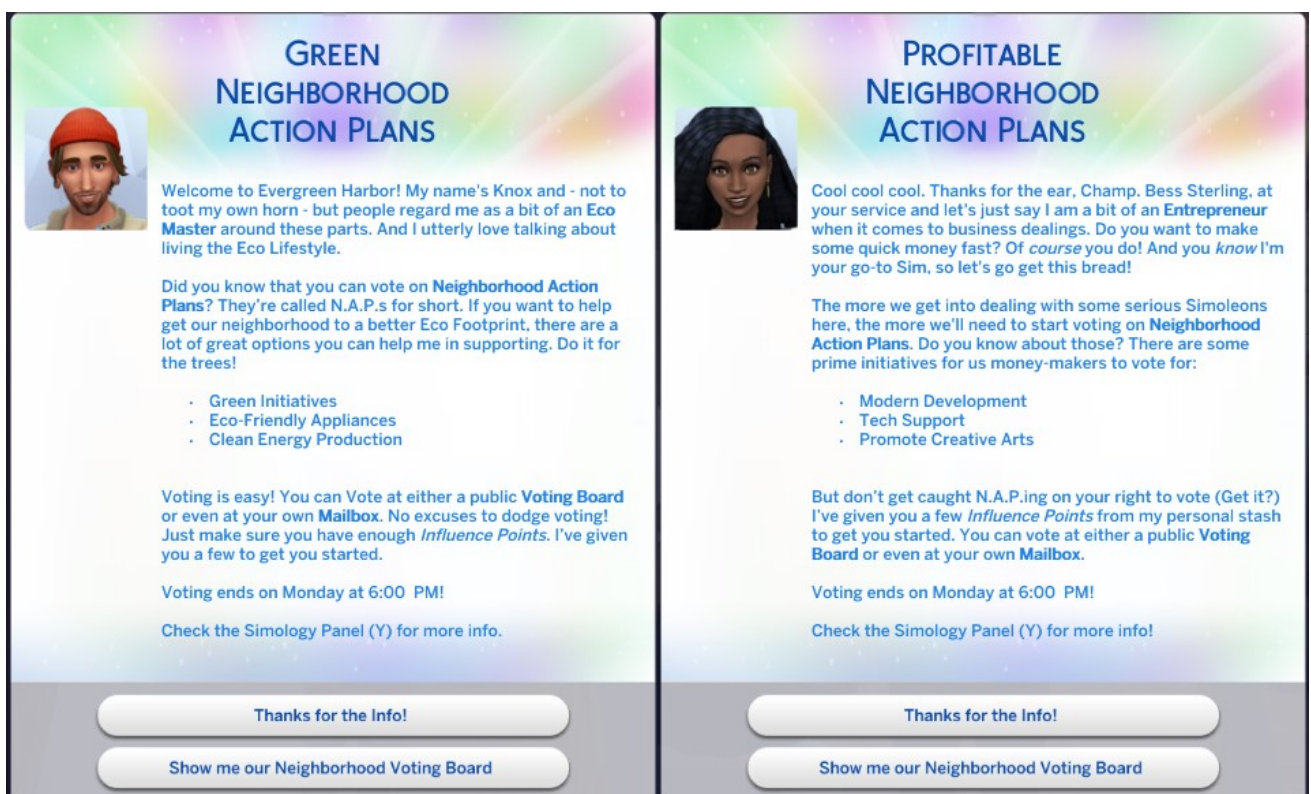


Figure 4: Two Tutorial Pop-ups for the player.

²⁸¹ Zerbu, “The Sims 4 Politics Mod Pack Now Available,” SimsCommunity, October 5, 2015, <https://simscommunity.info/2015/10/05/the-sims-4-politics-mod-pack-now-available/>.

N.A.P.: Green Initiatives

This N.A.P. is only available for the three neighbourhoods of the *Eco Lifestyle* expansion. Over the course of two in-game weeks, more plant life will spawn in the neighbourhood and trash vanishes, which then impacts the Eco Footprint meter positively. Utility bills are increased by 50% while this N.A.P. is active. This N.A.P. comments on ecological city design. One of the environmental issues this comments on, is the 'urban heat island effect'. As one of the first to report on this issue, meteorologist Luck Howard already identified this issue in 1833, and describes the effect that "air temperatures in densely build cities are higher than those in suburban rural areas".²⁸² Having greenery in urban spaces has shown to have a significant impact on reducing air temperatures in cities, due to reducing heated pavement areas and increasing areas of tree shading.²⁸³ Increased greenery also helps lower temperatures due to increased moisture retention, and decreased usage of air-conditioning (which also lowers energy consumption and costs).²⁸⁴ Without these added greeneries, temperatures in cities can be higher up to an increase of 10°C.²⁸⁵

Although this N.A.P. does not explicitly link this course of action to the cooling of dense urban spaces, it still promotes this initiative as a sustainable course of action. By implementing these designs, urban spaces would improve and be more habitable long-term. Yet this is also where Žižek's concept of frictionless economy returns, as *The Sims 4* is not simulated complexly enough to actually account for all of these positive impacts greenery provides. There is no component that simulates rainwater drainage, or reflected air temperature, or shows who is accountable for the actual planting and cleaning. There's a seemingly invisible service of an invisible municipality to actually implement the changes. These services aren't funded through existing taxes or subsidies, but rather a direct and large increase in the household bills. Relating this back to Ghosh's sustainable imaginaries, the sustainable imaginary this N.A.P. promotes is largely condensed to its aesthetic impact within the game, but still has the potential to open up aforementioned ecological issues and encourage real-life sustainable design.

Sometimes Green doesn't mean completely green, but at least a step towards it. It's time to blanket Port Promise with luscious plant life.

With this Action Plan in place, we can expect to see not only trees and bushes sprouting, but we'll also see Port Promise's Eco Footprint become more Green as well.

All it takes is a small donation from residents in the form a weekly bill increase. Simple!

Figure 5: Green Initiatives N.A.P. in-game description for the Port Promise neighborhood.

²⁸² Nyuk-Hien Wong and Yu Chen, "The Role of Urban Greenery in High-Density Cities," in *Designing High-Density Cities for Social & Environmental Sustainability* ed. Edward Ng (London, Sterling: earthscan, 2010), 227.

²⁸³ Jelena P. Đekić et al. "The Study of Effects of Greenery on Temperature Reduction in Urban Areas," *Thermal Science* 22, no. 4 (2018): 1. DOI:[10.2298/TSCI170530122D](https://doi.org/10.2298/TSCI170530122D).

²⁸⁴ Wong and Chen, "The Role of Urban Greenery in High-Density Cities," 227.

²⁸⁵ Wong and Chen, "The Role of Urban Greenery in High-Density Cities," 227.

N.A.P.: Eco Friendly Appliances

Having this N.A.P. active allows a sim to learn the handiness skill at twice the usual rate, and to gain influence points by repairing objects. The player also has to upgrade all of their appliances with “Eco Upgrade Parts” (the counterpart to the industrial upgrade parts “Fuel Cells”), or an inspector will raise their household bills.

The Eco Upgrade Parts and Fuel Cells are an addition to the pre-existing upgrade system of *The Sims 4*, which contains four types of upgrade parts (Common Upgrade Part, Electronic Upgrade Part, Kitchen Upgrade Part, Plumbing Upgrade Part). In order to get these parts, the player can choose to make them via the in-game Fabrication skill, try their luck through dumpster diving, or use the in-game cheat system to gain them instantly. Not every upgradable item can be upgraded with the Eco Upgrade Parts, but those that are upgradable tend to be water-based (sinks, bathtubs, showers, and hot tubs) or electricity-based (refrigerators, stoves, televisions, and computers).²⁸⁶ These appliances have two eco-labelled upgrades: the water-based appliances have the option to “Add H2O Siphoner using eco parts” and a “Water Recycler using eco parts,” and the electricity-based appliances have the option to add an “Energy-Efficient Device using eco parts” and a “Fuel Cell using eco parts”.

What’s notable about these upgrades, is that those that are labelled as “eco” are explicitly tied into the utility billing system. This could possibly be a more practical game design choice, as this is also the way the game ‘punishes’ the player for not implementing the changes required by the N.A.P.. In this sense, the upgrades themselves are mostly focussed on the consumption aspect of appliances. There are several upgrades possible that could be argued to be sustainable upgrades such as ‘Make Unbreakable’ and ‘Make Extra Reliable’ since they increase the lifespan of a product, but these are not labelled as ‘eco’ nor do they require the eco parts.

The influence point system adds more nuance to this N.A.P. by rewarding the handiness skill. This skill allows the player to repair, upgrade, or even build furniture. Repairing and upgrading furniture increases the longevity of objects, which can be read as a statement against planned obsolescence. Planned obsolescence, which is also known as built-in obsolescence, is a planning or design strategy created to limit a product’s useful life, turning it obsolete, unfashionable, or non-functional after a certain period of time.²⁸⁷ By making goods more fragile or difficult to repair, people are forced to buy replacements sooner. This strategy thus leads to increased consumption and is

Neighbors, I think we could all benefit from a good N.A.P. One that promotes even the smallest changes to help make a difference.

Together we can push to fix our neighborhood one appliance at a time. Let’s take action into our own hands by making Handiness skill and Influence easier to get by using green-upgraded appliances or by repairing any appliance.

Figure 6: Eco-Friendly Appliances N.A.P. in-game description.

²⁸⁶ Steph, “Let Sims 4 Upgrade You: How to Use Upgrade Parts,” SNOOTYSIMS, April 29, 2022, <https://snootysims.com/wiki/sims-4/let-sims-4-upgrade-you-how-to-use-upgrade-parts/>.

²⁸⁷ Julio L. Rivera and Amrine Lallmahomed, “Environmental implications of planned obsolescence and product lifetime: a literature review,” *International Journal of Sustainable Engineering* 9, no. 2 (2016): 119. <http://dx.doi.org/10.1080/19397038.2015.1099757>.

deployed to maximise economic output.²⁸⁸ The products' shorter lifespan also means that more waste is produced, which often ends up in landfills.²⁸⁹ Not only does this strategy create problems at the end of the product's life cycle, but some supply chains, like those of modern digital technologies, are heavily intertwined with violence.²⁹⁰ Actively repairing and upgrading the same object thus helps keeping it in circulation longer, and alleviates pressure from the supply chain and landfills. Since the appliances within *The Sims 4* are easily repairable and upgradable and do not quickly become non-functional, it can be argued that there is no planned obsolescence within the game. By rewarding the handiness skill and accelerating its acquisition this type of gameplay is emphasised and encouraged, creating a more sustainable usage of the sim's furniture.

N.A.P.: Clean Energy Production

The Clean Energy Production N.A.P. encourages the player to utilise a new gameplay mechanic introduced in *Eco Lifestyle*: the possibility to generate your household's own electricity and collect your own water. The game presents the player with two ways to do this: by using green utility generators that impact the Eco Footprint mechanic positively (e.g. solar panels, wind turbines, dew collectors) or by using industrial utility generators (e.g. power generators, atmospheric water generators). Although this mechanic in itself is not new since *The Sims 2* and *The Sims 3* also offered functional windmills and solar panels, it is the first time this feature is officially accessible for *The Sims 4*. These utility generators can be repaired, upgraded, and cleaned. They reduce the utility bill by being placed on a lot, and excess can be sold back to the game. Due to this update, the game also added more complexity to their utility system. Previously, players only paid for generic "bills" that were delivered to the lot once per week, but with the *Eco Lifestyle* expansion a base game update also followed that opened this system up into 'lot taxes,' 'power,' 'water,' 'other taxes,' and 'tax breaks & penalties.'

We have the luxury of living in a world that provides us with everything we need. We just need to learn how to harness that energy!

With the Clean Energy N.A.P. in place, members of the community will be rewarded with Influence for owning functional clean energy-producing objects like Solar Panels, Wind Turbines, and Dew Collectors.

Figure 7: Clean Energy Production N.A.P. In-game description.

The addition of green utilities was criticised by the community for not providing an actual gameplay challenge when it came to improving the neighbourhoods Eco Footprint.²⁹¹ This echoes a wider critique in the community that *The Sims 4* does not challenge its players in the same way that

²⁸⁸ Rivera and Lallmahomed, "Environmental implications of planned obsolescence and product lifetime," 119.

²⁸⁹ Rivera and Lallmahomed, "Environmental implications of planned obsolescence and product lifetime," 119.

²⁹⁰ Evelyn Wan, "Labour, mining, dispossession: on the performance of earth and the necropolitics of digital culture," *International Journal of Performance Arts and Digital Media* 15, no. 3 (2019): 252.

²⁹¹ Carl's Sim Guides, "The Sims is Destroying its Reputation with Some of Its Biggest Fans," YouTube, March 19, 2021, <https://youtu.be/kC2fda9k0yc?t=1>.

its predecessors did, and tends to hand its players easy victories.²⁹² Although the promotion of renewable energy is important, especially because we desperately need alternatives to our current petroculture, solar panels and wind turbines should be very carefully considered whether they should be included in an actual sustainable imaginary. These utility systems offer very powerful imagery, but their modern-day usage remains ambiguous. Solar panels have the potential to supply power at great access, greatly decreasing consumer cost through a phenomenon known as ‘solar value deflation,’ but showing a political problem of investors losing interest due to low profits.²⁹³ Furthermore, scaling up to mass produce solar panels actually poses a socioenvironmental threat, due to the difficulties in recycling them at the end of their life span. It is therefore that Hernández-López et al. warn that the long-term sustainability goal is “not to find a sustainable product [...] but to have a sustainable infrastructure for the development of such products”.²⁹⁴ The carbon cost of a windmill is significantly lesser than that of a solar panel (75%), but this type of renewable energy also comes with its own considerations like the required steel, aluminium, and epoxy resins required for their fabrication.²⁹⁵ When totalled up, these emissions are still far lower than any of the fossil fuels, and even slightly lower than solar and nuclear energy.²⁹⁶ Yet here is where Huggan’s insight that sustainability is always fundamentally interwoven with human rights is extremely relevant: windmills pollute through the radioactive uranium and thorium due to neodymium mining in China, and rely on child labour in the cobalt mines of the Democratic Republic of the Congo.²⁹⁷ Promoting windmills thus also requires fighting Ghosh’ ‘structures of organised violence’. Windmills and solar panels aren’t thus necessarily promoted because they are *good* alternatives, they are just *better* than the existing coal and oil structures.

This type of friction due to human rights violations is not part of *The Sims 4*, where the engagement remains limited to choosing how to power your lot and possibly generating a surplus. This surplus cannot be shared with your neighbours, only sold back into the grid. In terms of mentality, the game could benefit from adding a more collaborative gameplay where energy can be shared. As a sustainable imagery, promoting windmills to increase their popularity could possibly

²⁹² Carl’s Sim Guides, “It is too Easy: A New Attempt to Fix The Sims 4’s Difficulty.,” YouTube, November 4, 2021, <https://www.youtube.com/watch?v=Km2jJLVfLTY>.

²⁹³ James Temple, “The lurking threat to solar power’s growth,” MIT Technology Review, July 14, 2021, <https://www.technologyreview.com/2021/07/14/1028461/solar-value-deflation-california-climate-change/>.

²⁹⁴ Daniela-Abigail Hernández-López et al. “Does recycling solar panels make this renewable resource sustainable? Evidence supported by environmental, economic, and social dimensions,” *Sustainable Cities and Society* 77 (2022): 1. <https://doi.org/10.1016/j.scs.2021.103539>.

²⁹⁵ Christopher Helman, “How Green is Wind Power, Really? A New Report Tallies Up The Carbon Cost of Renewables,” Forbes, April 28, 2021, <https://www.forbes.com/sites/christopherhelman/2021/04/28/how-green-is-wind-power-really-a-new-report-tallies-up-the-carbon-cost-of-renewables/?sh=139831d873cd>.

²⁹⁶ Sara Peach, “What’s the carbon footprint of a wind turbine?,” Yale Climate Connections, June 30, 2021, <https://yaleclimateconnections.org/2021/06/whats-the-carbon-footprint-of-a-wind-turbine/>.

²⁹⁷ Act!onAid, *Human Rights in Wind Turbine Supply Chains: Towards a truly sustainable energy transition*, January 2018, 13.

create extra civilian incentive to place more of these in real life, but it would need to be paired with promoting their sustainable development. As a gameplay mechanic, adding the possibility to share surplus could help foster collaborative play. Pushing the player to favour these greener options over the industrial alternatives through a N.A.P. is a valuable contribution within the game, as it creates an incentive towards sustainable items.

Conclusion

The Sims series has shown different forms of engagement with sustainability over time. From its first steps with *Laundry Day*, to a full expansion pack dedicated to this cause through *Eco Lifestyle*. Yet there are many complexities and nuances that should be taken into account when considering this pack. Although the title implies a dedication to a specific ecological debate, the actual content engages somewhat dubiously with this cause.

First, I have demonstrated that the Eco Footprint mechanic is not what it seemed. Although the title of the mechanic refers to the ecological footprint, it actually engages with the carbon footprint. Two factors highlight this most clearly: first, the simulation of the *Sims* is not complex enough (too 'frictionless') to present the required level of detail needed to calculate an ecological footprint, and an even more telling second, the actual measurements used are those of the carbon footprint (neutrality) instead of the ecological footprint (square hectares of land). Second, the new dumpster diving mechanic also faces difficulties when considered from an ecological point of view. From a gameplay point of view, it could be fun to let a sim dig through a dumpster, but from an ecological point of view, the inclusion does not make a lot of sense. Although the practice itself could be personally rewarding, it requires an economic system that produces large amounts of excess waste and it does not provide an incentive for that system to change. Furthermore, detaching the physical location of the dumpsters from corporate settings (like the back of a chain restaurant) also detaches this gameplay element from its corporate critique. Third, the new Civil Designer career takes a first step into building a sustainable city through legislative action, but its actual enactment remains vague or presents a 'solution' based on clean-up rather than prevention. Fourth, the Neighborhood Action Plans build upon the Civil Designer's legislative aspect by mimicking real-life political processes. This addition thus addresses the "politics, policymakers and legislation" required to enact change. Although the N.A.P.s as a tool sometimes lack some of the detail to truly engage with the sustainable discourses they cite, the mechanic is still valuable to promote several attitudes required of sustainability (repairing, valuing urban greenery, and clean energy) and touch upon several debates they relate to (planned obsolescence, urban heat island effect, and the 'cleanness' of clean energy).

Returning to EA as the creator of this expansion pack shows that this somewhat dubious content is placed within the context of a morally dubious content creator. This game, as an alternative way of climate communication for a company that seems largely absent from community efforts to combat the climate crisis, does not seem to engage with the topic on a deep enough level to 'redeem' EA from its own ambiguous part in the climate crisis fight. Gameplay is often prioritised above true criticism, and this decision appears to have turned several features into a form of token activism to greenwash EA's public image. For example, the game contradicts EA's policies by placing an emphasis on communal action and rallying voters through the N.A.P. system, while EA itself remains absent from communal activities. Using *The Sims 4* as a critical climate communication tool would thus require a modder to be aware of the way EA has shaped this tool, that this adds biases, and an awareness of several differences in *what EA claims to be an 'eco lifestyle'* and *what actually is an 'eco lifestyle'*. Despite these complications *Eco Lifestyle* also plays into several strengths of *The Sims 4*, namely attempting to develop a visual style for ecological living and questioning the design of neighbourhoods. The game does this through the design of clothing and furniture, and by letting the player develop shared gardens or crafting spaces. As I will discuss in the following chapter, these strengths are also picked up by the modding community, who further nuance and develop these aspects of the simulation.

◇ Chapter Three ◇

The Sims 4's Ecomodding Discourse

Chapter Overview

In this chapter I will address selected ecomods created by the community. This chapter will be guided by the question: “How does the (modding) community of *The Sims 4* (re)frame climate themes in the game?”. In the previous chapter, I have analysed several of the textual fragments of *The Sims 4* that refer to sustainability. In this chapter, I will look at the way the modding community as a community of practice has used these assemblages of textual fragments in order to build upon, and intervene in, this ongoing discourse of sustainability. First, I will establish modding as a form of metagaming, and how this shifts the perspective from seeing *The Sims 4* as an object, to seeing the game as practice to think through and challenge its system. Then, I will provide a brief overview of the modding network addressing topics such as mod types, programming languages, and creation tools, and how the network shapes possible creations. Next I will move on to the patterns seen within *Sims 4* ecomodding by analysing ecomods through their three main categories: custom content (e.g. new items, recolours), lots (e.g. houses, retail spaces, communal spaces), and script mods (code-based changes). Last, I will revisit some of the most important insights of this chapter in the conclusion.

Research Method: Diachronic Proceduralism

The method I will employ in this chapter is diachronic proceduralism. This method takes as its basis the earlier mentioned method of proceduralism by Bogost, in which meaning in a game is derived from its “processes or rules”.²⁹⁸ Diachronic proceduralism adds onto this by taking as its focus the changes in procedural rhetoric and ‘evolution’ of a game(series) over time.²⁹⁹ This addition is necessary for this chapter, because existing proceduralist readings often focus on a single game,³⁰⁰ which shifts the focus away from the network in which the game exists. *The Sims 4* is part of a larger series that is currently still in development through additional downloadable content [DLC], and this changes the game over time. Diachronic proceduralism is a way to account for these changes of time, and analyse how this shifts the possible messages readable in this game.

²⁹⁸ Treanor et al. “Proceduralist Readings,” 116.

²⁹⁹ Werning, “Modding as a Strategy to (De)Legitimize Representations of Religion in the *Civilization* Game Franchise,” 312.

³⁰⁰ Werning, “Modding as a Strategy to (De)Legitimize Representations of Religion in the *Civilization* Game Franchise,” 312.

Jesper Juul conceptualises tracking the changing of design patterns in video games over time within a genre using match-3 games such as *Bejeweled*, *Wonders*, and *Candy Crush* as examples.³⁰¹ He explored this approach in order to “explore the multifaceted history of video games in a single framework”.³⁰² Werning then build upon this approach by shifting the focus from design patterns to procedural rhetoric and focussing on the evolution of a single game, rather than a genre.³⁰³ In doing this, he opens up the possibility to deep dive into a single game and uncovering findings that are only visible by tracking them over time. In this thesis, it helps me uncover in the ‘Ecomodding Patterns’ section of this chapter, that *The Sims 4* contradicts itself in regards to its stance towards tiny housings. Tiny housing was presented positively in January 2020 through the *Tiny Living* expansion, and later that year negatively in the June 2020 *Eco Lifestyle* expansion. Tracking a single game thus allows for a more comprehensive analysis than focussing on a single instalment of the game.

In order to perform a diachronic proceduralist analysis of *The Sims 4* mods, I have collected 187 *Sims 4* mods that engage with the topics of sustainability and ecological thinking. This list was made by consulting some of the largest *Sims* online archives such as The Sims Resource,³⁰⁴ ModTheSims,³⁰⁵ Nexus Mods,³⁰⁶ Sims4Modding,³⁰⁷ Sims 4 Mods.³⁰⁸ Besides archiving the mods’ titles and download links, I have also noted the mods’ authors to identify possible prominent authors within *Sims 4* ecomodding, the upload date to identify trends over time, and the amount of downloads to gain some indication to the mod’s potential reach. Popular search terms I have used include buzz words like “eco,” “recycle,” “upcycle,” “local,” “waste,” and “green.” The full list I composed is included in the attachments at the end of the thesis. By doing this, I create insight into what types of imaginaries and imageries the *Sims* modding community links to sustainability, how they utilise the official content given to them, and how this discourse has developed over time. This will show how the community, through the textual fragments given to them, visualises sustainability and how they use these visualisations to create a broader overall vision for the future.

³⁰¹ Jesper Juul, “Sailing the Endless River of Games: The case for Historical Design Patterns,” paper presented at the 1st International Joint Conference of DiGRA and FDG 2016.

<https://www.jesperjuul.net/text/endlessriverofgames/>.

³⁰² Juul, “Sailing the Endless River of Games.”

³⁰³ Werning, “Modding as a Strategy to (De)Legitimize Representations of Religion in the *Civilization* Game Franchise,” 312.

³⁰⁴ “Welcome to the Sims Resource,” The Sims Resource, last accessed June 2, 2022,

<https://www.thesimsresource.com/>.

³⁰⁵ “Mod The Sims,” Mod The Sims, last accessed June 2, 2022, <https://modthesims.info/>.

³⁰⁶ “The Sims 4,” Nexus Mods, last accessed June 2, 2022, <https://www.nexusmods.com/thesims4>.

³⁰⁷ “Sims 4 Mods,” Sims 4 Modding, last accessed June 2, 2022, <http://www.sims4modding.com/>.

³⁰⁸ “Sims 4 Mods,” The Sims 4 Mods, last accessed June 2, 2022, <https://modssims4.com/>.

Metagaming as Exploration

Modding is a form of metagaming. Explained briefly, metagames are defined by Stephanie Boluk and Patrick Lemieux as “games created with videogames”.³⁰⁹ These games range from popular mods to ironic parodies, and from fanfiction to forum discussions.³¹⁰ As a practice, metagaming functions as a broad discourse. It is “a way of playing, thinking, and making that transforms autonomous and abstract pieces of software into games and turns players into game designers”.³¹¹ Modding is an epistemic practice that transforms video games from a mass medium and cultural commodity into instruments, equipment, or tools,³¹² which can then be used to intervene in sensory and political economies.³¹³ This modding discourse unfolds over a longer period of time, and changes as new mechanics, contents, and their respective affordances are implemented within the game. In other words, analysing the modding discourse requires the previously mentioned diachronic procedural perspective. By using the framework of metagaming, I will shift the perspective from the game as an object, to the game as practice.³¹⁴ A practice players can utilise in order to think through the underlying system, and then challenge it.

This discourse reveals alternate histories of play that exist outside of the common monetary and demographic descriptions of gaming that often dominate the definitions of video gaming.³¹⁵ By chronologically mapping out this specific *Sims* discourse, I will create insight into these alternate play histories of this video game. This allows me to follow modding patterns over time, and to contextualise shifts in the discourse as more content is added to the franchise through new expansions. A metagame always emerges in the context of a specific practice of a historical community, and serve as a way to anchor a game in a specific time or space.³¹⁶ Where a video game itself is a mass medium and a cultural commodity, the metagame transforms it into a piece of equipment, tool, or instrument for a variety of different purposes (like cheating, trading, competing, or making).

One of the possible purposes that is opened up through metagaming, is the use of games to criticise and experiment like exploring ideas as a discursive or rhetorical operation. In other words, it’s a concrete way to explore López’ earlier mentioned “stories we live by” and then “propose [the]

³⁰⁹ Boluk and Lemieux, *Metagaming*, 9.

³¹⁰ Boluk and Lemieux, *Metagaming*, 9.

³¹¹ Boluk and Lemieux, *Metagaming*, 9.

³¹² Victoria McArthur and Robert J. Teather, “Serious Mods: A Case for Modding in Serious Games Pedagogy,” 2015 IEEE Games Entertainment Media Conference (GEM), Toronto, Canada, 14-16 October 2015, DOI: [10.1109/GEM.2015.7377224](https://doi.org/10.1109/GEM.2015.7377224).

³¹³ Boluk and Lemieux, *Metagaming*, 4.

³¹⁴ Werning, “Understanding and Communicating the Climate Crisis through Ecomodding.”

³¹⁵ Boluk and Lemieux, *Metagaming*, 9.

³¹⁶ Boluk and Lemieux, *Metagaming*, 11.

new ones” we need to “transform the paradigm underlying our current ecological crisis”.³¹⁷ This sentiment of using games beyond entertainment has been foreshadowed by other scholars as well, for example in Mary Flanagan’s ‘critical play’,³¹⁸ or Alexander Galloway’s “countergaming”.³¹⁹ In this case, modders employ *The Sims 4* as a way to experiment with, criticise, or explore ideas in regards to sustainability. This way of playing around with this simulation could then possibly impact real-life practices too.

The Sims’ Modding Scene

Video games that lend themselves to being modded, have what is referred to as a ‘modding scene’: collaborative internet networks that players can utilise in order to share both their creations and their resources with other gamers.³²⁰ Sims modders share their creations through large internet archives often dedicated to *The Sims* itself (e.g. The Sims Resource and Mod the Sims), but personal blogs (e.g. Tumblr, Patreon) are also utilised by larger content creators. The shared mods are – within *The Sims* community – generally divided into three main categories based on technical file types:³²¹ lot mods, scripting mods, and general mods. Lot mods refer to custom builds. Within the neighbourhoods of *The Sims 4*, there are spaces where a player is allowed to build and decorate. This customisable space is referred to as a ‘lot’. The player can build in these lots to create a residential space, communal area, stores, or other sites. Scripting mods refer to mods that change or add on to the existing coding of *The Sims 4*. This allows for new content such as custom interactions, animations, traits, or careers. Finally, general mods, which are also referred to as ‘custom content’ or ‘CC’, are mods that do not fall under the first two categories. These often include content such as new (static) objects, recolours, and physical customisation options for sims.

EA has long since supported modding for *The Sims* franchise. After the launch of the first *Sims* back in 2000, the *Sims* website already began offering free official extra downloadable content such as party balloons, a moose head, and the infamous virus-ridden guinea pig.³²² The game was designed through a custom programming language, Edith, which was designed with modification in mind to “permit anyone with minimal programming skills to extend the game”.³²³ This open attitude towards game modding stayed with the franchise over the years, with *The Sims 2* allowing for easier

³¹⁷ López, *Ecomedia Literacy*, 18.

³¹⁸ Mary Flanagan, *Critical Play: Radical Game Design* (Massachusetts: The MIT Press, 2009).

³¹⁹ Alexander Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis, London: University of Minnesota Press, 2006), 107.

³²⁰ Sihvonen, *Players Unleashed!*, 12.

³²¹ Different modtypes have different file extensions. General mods are distributed as “.package” files, lot mods through “.bpi” “.blueprint” or “.trayitem” files, and script mods as “.ts4script”.

³²² John Markoff, “Something is Killing the Sims, and It’s No Accident,” *The New York Times*, April 27, 2000, <https://www.nytimes.com/2000/04/27/technology/something-is-killing-the-sims-and-it-s-no-accident.html>.

³²³ Markoff, “Something is Killing the Sims, and It’s No Accident.”

distribution of custom content due to the .package file support (which is an extension still in use),³²⁴ and *The Sims 4* adding an in-game shared Gallery where players can share their creations within the game itself.³²⁵ *The Sims 4* is written in the coding language Python, which is known for placing a “strong emphasis on code readability and simplicity”.³²⁶ This approach to encourage modding has added “continuing interest and involvement” to the game,³²⁷ since it is a known marketing strategy that extends shelf-life and increases turnover expectations.³²⁸ In their 2022 Annual Report, EA reported that they plan to provide creation tools to the community, with the belief that “the future of entertainment is interactive” and that this strategy will “translate into sustained growth”.³²⁹

The modding community is characterised by many different community-created mod developing tools. Programmes like The Sims 4 Studio,³³⁰ Create-A-Career,³³¹ TS4 Morphmaker,³³² The Sims 4 Mod Constructor,³³³ and The Sims 4 Package Editor³³⁴ help provide a relatively easy access to mod creation by extracting XML files, meshes, textures, icons, or providing visual interfaces. The current lack of an official creation tool (like *Bethesda’s* Skyrim Creation Kit, or *Firaxis Games’* Sid Meier’s Civilization VI Development Tools) has been criticised by the community because it makes it more difficult to edit the Python scripts.³³⁵ These tools, and the lack of them, thus shape the terms of our (political) participation, and the relationship between different stakeholders.³³⁶ The lack of an official modding tool shifts the responsibility of creating new tools towards the community itself, creating a dependency on several dedicated modders. At the same time, because EA has not made their own tool, EA does not have the same ability to influence the possible affordances and constraints of modding their game. Still, modding remains a popular activity. To take two major modding sites as an example, Mod the Sims’ most popular mod (Wonderful Whims) has been viewed

³²⁴ “Game Engine,” SimsWiki, Last Accessed June 8, 2022, https://sims.fandom.com/wiki/Game_engine.

³²⁵ “The Sims 4, Available September 2, 2014,” EA, June 9, 2014, <https://ir.ea.com/press-releases/press-release-details/2014/The-Sims-4-Available-September-2-2014/default.aspx>.

³²⁶ Jamie Chan, *Learn Python in One Day and Learn It Well: Python for Beginners with Hands-on Project* (Scross Valley, CreateSpace Independent Publishing, 2005), 2.

³²⁷ Kline et al., *Digital Play*, 273-274.

³²⁸ Sihvonen, *Players Unleashed!*, 15.

³²⁹ Electronic Arts Inc., “2022 Form 10-K Annual Report,” Submitted to the United States Securities and Exchange Commission, 4.

³³⁰ “Home,” Sims 4 Studio, last accessed June 8, 2022, <https://sims4studio.com/>.

³³¹ Neia, “Welcome to the Create-A-Career Beta,” Create-A-Career, last accessed June 8, 2022, <http://simneia.fr/>.

³³² CmarNYC, “TS4 Morphmaker – updated to V4.4.1 on 3/22/2022,” Mod The Sims, June 4, 2018, <https://modthesims.info/d/613061/ts4-morphmaker-updated-to-v4-3-on-6-9-2020.html>.

³³³ Zerbu, “The Sims 4 Mod Constructor V4,” Tumblr, January 6, 2019, <https://zerbu.tumblr.com/post/181782526135/the-sims-4-mod-constructor-v4>.

³³⁴ Sims4Group, “The Sims 4: Package Editor,” Softonic, last accessed June 8, 2022, <https://the-sims-4-package-editor.en.softonic.com/>.

³³⁵ “June Hanabi, “The Sims 4 Modern Python Modding: Part 1 – Setup,” GitConnected, September 21, 2020, <https://levelup.gitconnected.com/the-sims-4-modern-python-modding-part-1-setup-83d1a100c5f6>.

³³⁶ Werning, *Making Games*, 8-12.

2.5 million times and downloaded 1.9 million times,³³⁷ and The Sims Resource's most popular mod (Skintone Set V3) has been downloaded 3.2 million times.³³⁸ This popularity creates many research opportunities, but not every aspect of the game is as open to modding as this popularity implies, which creates several research constraints.

Research Constraints

As such a popular activity, it is not surprising that ecological critique and sustainability are topics modders engage with. Customising video games can be an act of self-expression, and a way to adapt the original content to “countless needs and niches that the platform's original developers could not have possibly contemplated, much less had time to accommodate”.³³⁹ Although this is always paired with the fact that every tool has its own constraints, including both the modding tools and *The Sims 4* itself. In the following paragraphs I will share my findings of trends and topics the community has engaged with, but at the same time it's also important to acknowledge that there are constraints that will affect the findings. For example, the earlier discussed Neighborhood Action Plans show great political potential, but due to technical constraints these are very difficult to mod.³⁴⁰ Therefore it is unlikely that, at this time, any modding content relating to this mechanic moves beyond idea discussions on a forum. Although forum discussions could still be a valuable contribution, it has less outreach than it would have had if it had been accompanied by an actual mod. This is a noticeable constraint, because the N.A.P. system plays a prominent role in the *Eco Lifestyle* expansion. Less noticeable constraints are always difficult to encounter for, precisely because they are less noticeable. Still, by being open about my research methods and acknowledging constraints as I encounter them, I will try to account for as many as is possible within the scope of this thesis.

Ecomodding Patterns

EA has indirect control over several shifts and additions within the ecomodding conversation by introducing new gameplay affordances. These new additions are then picked up by modders, creating new aspects to the discourse, or accelerating existing trends. For example, the act of designing sustainable homes was present but not extremely popular, until *Eco Lifestyle* was

³³⁷ TURBODRIVER, “Wonderful Whims,” Mod The Sims, October 3, 2020, <https://modthesims.info/d/647895/wonderfulwhims.html>.

³³⁸ Ms Blue, “Skintone Set V3,” The Sims Resource, July 16, 2016, <https://www.thesimsresource.com/downloads/details/category/sims4-skintones/title/skintone-set-v3/id/1346781/>.

³³⁹ Werning, *Making Games: The Politics and Poetics of Game Creation*, 25.

³⁴⁰ SilentSpy0, “Neighborhood Action Plan Mod Ideas,” The Sims, June 17, 2020, https://forums.thesims.com/en_us/discussion/977552/neighborhood-action-plan-mod-ideas.

published and this type of ecological designing went through a steep increase (see the Ecomod Timeline in the attachments section). This is related to the fact that *The Sims 4* itself has changed over time, and the new content has changed the affordances of the system, or introduced aspects that modders picked up on afterwards. It was only after the *Seasons* expansion introduced the thermostat mechanic that modders picked up on this aspect of sustainable home design, creating multiple style options to turn the thermostat into a fashionable item. In that same sense, it was also due to *Eco Lifestyle* that a larger interest in sustainable clothing was created, with most mods exploring this topic being published after *Eco Lifestyle*.

It is also important that, as modding is an inherently social practice in which these mods belong to the same discourse, that they should not only be viewed as individual uploads, but as a network. One project that ran roughly four years (2015-2019) on Mod The Sims and then moved to Patreon, is aimed at creating new custom harvestable fruits and vegetables and currently consists of 108 new items.³⁴¹ The creator of this project, the Mod The Sims user 'icemunmun', also included several mods that add new recipes with these new harvestables. These recipes in turn are only possible due to the collaborative work of the group behind the username 'TheFoodGroup', who uploaded a mod that allowed for "custom food interactions".³⁴² Together, these mods comment on the ability to produce food locally, which is an argument often heard in sustainability discourses due to the environmental and social advantages of (peri-)urban agriculture over industrial agriculture.³⁴³ These mods demonstrate Turkle's "more sophisticated system" by nuancing the simulation by providing more depth to *The Sims 4*'s food system, adding the possibility of starting a home catering business, making vampire-friendly food, and giving a positive "Locally Sourced" buff for selling food from home-grown harvestables. Then this modding commentary could be expanded further by including Mod the Sims user 'c821118''s mod that allows for all food to be sold to a local market (which in turn requires a XML Injector mod by Mod The Sims user 'scumbumbo'), and The Sims Resource user 'Jarum Sims'' build of a farmers market to set up your own local foods shop. This modding conversation then expands beyond personal usage of locally produced foods, to include providing the community with local produce as well. Together these different users exemplify a small part of a modding network, where different complimentary mods function together to create a coherent experience.

In order to help make sense of this complicated network for an analysis, I have divided the following analysis into three sections based on mod types: general mods, lot mods, and script mods.

³⁴¹ Icemunmun, "Harvestables," icemunmun, last updated April 16, 2022, <https://icemunmun.in/harvestables/>.

³⁴² TheFoodGroup, "Custom Food Interactions (Update 12th JUNE, 2022)," Mod The Sims, January 20, 2016, <https://modthesims.info/download.php?t=571010>.

³⁴³ Elizabeth Nicholls, Adrian Ely, Linda Birkin, Parthiba Basu, Dave Goulson, "The contribution of small-scale food production in urban areas to the sustainable development goals: a review and case study," *Sustainability Science* 15 (2020): 1595.

This division will help me address the imagery of modded objects and lots, and how scripting challenges *The Sims 4*'s conception of the local community.

Sustainable General Mods: Imagery of Modded Objects

Due to the earlier discussed frictionless aspect of the system, especially decorative mods have been reduced to discussing sustainable living mostly in terms of its visual components. In doing this, these mods do raise the important question of what 'actual' sustainability looks like in terms of aesthetics. Which in turn frames the discussion of sustainable living into one of personal aesthetic preference, rather than one of morality or necessity. Early mods (*pre-Eco Lifestyle*) already introduce the look of recycled materials into the game (e.g. "7 Archi Tables," or "7 Wood Beds – Madura Serie," which were uploaded in 2015), utilising the aesthetics of recycled wood or patched fabrics. This same aesthetic was also deployed for *Eco Lifestyle*, as previously seen in their patched clothing designs, and also remained present within the modding community (e.g. "Car Roof Coffee Table," or "Marjolaine - Clothes Rack" both uploaded in 2020). Yet this pushes the narrative of sustainable aesthetic to the distinct aesthetics of a bricolage project,³⁴⁴ which needs to be a specific style the player connects with in order for them to adopt it within their own gaming sessions. Pushing this type of aesthetic style as the main 'look' of sustainability leaves out objects that, for example, are simply produced for such longevity that they remain in circulations decades later. I argue that pushing this bricolage imagery would thus present a too narrow understanding of what it means to look 'eco'. Although the objects within *The Sims 4* might be free of planned obsolescence -as seen in Chapter Two in the N.A.P. analysis- and might not have the same need for vintage or second hand objects, the 'real world' still struggles with this issue. This discrepancy between the simulation and our world exposes the procedural rhetoric of the system in a way that highlights where the simulation is unequipped to deal with this real world complexity. There are plenty of creations in the mod archives that resemble vintage or thrifted items, but the community does not often explicitly link these creations to the label of 'eco' or 'sustainable'. This means that, despite being valuable contributions to the actual ecomodding discourse happening within the community, they often exist within the margins as less noticeable options. These creations are not a very visible aspect of the shared imaginary, showing that being incorporated into the mainstream discourse can be difficult. It is therefore up to the individual browser of these archives to link these concepts of sustainability and vintage together, rather than finding them within the same existing discourse.

³⁴⁴ Bricolage is a term originally coined by Claude Levi-Strauss, and refers to a DIY project made with whatever was present at hand, or made with various different materials.

To return to Ghosh' sustainable imaginaries and our lack of actionable futures, these types of object mods are fitting to investigate what kind of aesthetics are (or should be) matched to these ways of thinking. I argue that, in order to develop sustainable imaginaries, we need sustainable imagery. There are different imageries that could be argued are adjacent to this developing sustainable imaginary, like cottagecore,³⁴⁵ solarpunk,³⁴⁶ science fiction utopia,³⁴⁷ and paganism³⁴⁸ that all place different emphasises on what the present or future should look like. *The Sims 4* has even capitalised upon these design trends like these as well, for example through *The Sims 4: Cottage Living* (cottagecore) and *The Sims 4: Realm of Magic* (wiccan paganism³⁴⁹). One of the advantages these established imaginaries have, is that it's easier to imagine larger areas built within these aesthetic styles. Think of Studio Ghibli's link to cottagecore,³⁵⁰ or *Star Trek's* science fiction utopian imaginary.³⁵¹ Fortunately, *Sims* modding also allows for exploring what larger areas built according to sustainable ideas could look like, through the ability to create lot mods.

³⁴⁵ Mason M. Waller, "The History, Drivers, and Social Issues of the Cottagecore Movement," WWU Honors College Senior Projects, 2022, 35.

³⁴⁶ Juan David Reina-Rozo, "Art, energy, and technology: the Solarpunk Movement," *International Journal of Engineering, Social Justice, and Peace* 8, no. 1 (2021): 50.

³⁴⁷ Corinne Gendron, Silvester Invanaj, Bernard Girard, and Marie-Luc Arpin, "Science-fiction literature as inspiration for social theorizing within sustainability research," *Journal of Cleaner Production* 164 (October 2017): 1553-1562.

³⁴⁸ Ly de Angeles, Emma Restall Orr, and Thom van Dooren, *Pagan Visions for a Sustainable Future* (Woodbury: Llewellyn Publications: 2005).

³⁴⁹ Cara Mia, "Sims "Realm of Magic" & Being A Witch/Pagan IRL, YouTube, September 7, 2019, <https://www.youtube.com/watch?v=yyNKC8pIVc4>.

³⁵⁰ Allison Stalberg, "Every Studio Ghibli Movie Ranked Least to Most Cottagecore," Screenrant, November 29, 2020, <https://screenrant.com/studio-ghibli-movie-ranked-cottagecore/>.

³⁵¹ Donncha Kavanagh, Kieran Keohane, and Carmen Kuhling, "Reading Star Trek: Imagining, Theorizing, and Reflecting on Organizational Discourse and Practice," in *Science Fiction and Organization* ed. Warren Smith, Matthew Higgins, Martin Parker, and Geoff Lightfoot (London, New York: Routledge, 2001), 130.

Sustainable Lot Mods: Imagery of Housing and Communal Spaces

Building lots is a popular *Sims* modding activity, both in and outside of the ecomodding discourse. *The Sims 4* facilitates this activity through their focus on building lots. The game presents several themed worlds to the player, each with several pre-build lots made by the developers and a few completely empty lots. These empty lots can immediately be decorated however the player wishes (the player could build a store, residential space, park, gym, etc.), and even the pre-build areas can be used as they are, adapted, or completely bulldozed. In this sense, the player is not just able to create a house or a neighbourhood, but redesign the worlds EA published. Within *The Sims* grouped lots are defined as a neighbourhood, and a group of neighbourhoods is a world (see figure 8). Tools of creation always “meaningfully constrain and inform the composition of digital games”,³⁵² and the lot creation is a very prominent way in which the *Sims* worlds are composed. The game presents a few clearly bounded spaces where players can input their own creative freedom, but at the same time constrains those activities to spaces the developers have deemed appropriate. Unlike *The Sims 3*, *The Sims 4* does not support custom world creation, placing further constraints on player creations. Two modders (Arnie³⁵³ and TwistedMexi³⁵⁴) are, at the time of writing, in the process of



Figure 8: The Willow Creek world. The white squares indicate the customisable lots, and the clusters show neighbourhoods.

³⁵² Werning, *Making Games*, 13.

³⁵³ Arnie, “Arnie’s Mods,” Patreon, October 31, 2021, <https://www.patreon.com/posts/58119687>.

³⁵⁴ TwistedMexi, “Create-A-World,” Patreon, September 24, 2021, <https://www.patreon.com/posts/create-world-faq-56556779>.

releasing community-created world building tools for *The Sims 4*. Through these tools, a player no longer needs to work within the constraints of EA's world designs, but could build an entire area themselves. This will allow a player to truly explore both how sustainable living functions and how it is visualised. In other words, this new tool widens the terms of participation to accommodate a new type of game modding. It allows for (re)creating a different, larger scale, design of lived spaces, adding new affordances to *The Sims 4*, and changes the composition of the game to remove boundaries.

One recurring design trend in *Sims* housing designing, is the creation of 'tiny homes' or 'container homes'. An important factor for the popularity of this trend is the fact that *Eco Lifestyle* introduced the ability to create a container house, and roughly six months before this expansion came out, *The Sims 4: Tiny Living* was published. Although this way of building was already present within the modding community, these two developments caused an increase in its popularity. Important recurrent themes within the discourse surrounding the tiny living movement in general, are consumption reduction and environmental issues.³⁵⁵ Tiny living buildings produce less greenhouse gas emissions, and are therefore experimented with in terms of reducing emissions in the housing sector.³⁵⁶ Yet tiny homes have also been connected to Lewis and Potter's moralisation of individual consumptive choices through the ethical turn, threatening to again shift the debate towards personal responsibility rather than that of the state.³⁵⁷ Tiny homes do challenge the consumerist attitude that reoccurs within the games. Previously in Chapter Two Kline et al. noted that "the enlargement of one's own home" was one of two obvious objectives in *The Sims*, the other being the acquisition of consumer goods, this trend thus goes against one of the core rhetorics of *The Sims* as a franchise. The fact that *Tiny Living* engages with this topic could then be read as another example of Jameson's observation that capitalist systems can embed dissident discourses that do not truly challenge the status quo. What does generate friction within this discourse, is that, through the addition of the container houses, *The Sims 4* seems to contradict itself in two ways. First, it is through the container houses itself. Container houses come as a set of two items: a wallpaper that gives a wall a distinctive container-like appearance and a container door. While the container door is tagged with a "Green Eco Footprint" the container wallpaper has an "Industrial Eco Footprint" tag. Second, through the lens of diachronic procedurality, the contrast with the earlier released tiny houses becomes visible. Whereas tiny houses were first framed in terms of being a sustainable choice, the

³⁵⁵ Nik Summers, "The socioeconomic concentration of intensive production interest: Lessons learned from the tiny home community," *Journal of Consumer Culture* 22, no. 2 (2022): 481.

³⁵⁶ R. H. Crawford and A. Stephan, "Tiny house, tiny footprint? The potential for tiny houses to reduce residential greenhouse gas emissions," paper presented at the IOP Conference Series: Earth and Environmental Science 2020, 4.

³⁵⁷ Megan Elizabeth Carras, "'Tiny House, Big Impact?': An Investigation Into the 'Rise' of the Tiny Home Lifestyle (THL) in the United States, PhD Diss. (University of St. Andrews, 2019), 157.

container houses are introduced as, and through the wallpaper most strongly associated with, the industrial unsustainable choice. In this sense, this type of tiny living is framed as unsustainable. This contrast further shows how meanings over time can shift and even contradict, and that meaning-making thus has to be studied in its wider context.

What tiny home mods have in common with general housing mods, is that they both seek to explore what type of aesthetics are connected to sustainable housing. The most dominant trend within the uploaded 'eco houses' is a style composed of clean, sleek modern designs combined with a connection to nature. These homes often feature some variations of wooden furniture, walls, or floorings, and often feature many houseplants. Since *Eco Lifestyle*, solar panels and wind turbines are also often included. Another recurring feature of ecological housing mods are the inclusion of a water element such as pools or ponds. Traditional pools do have "considerable water and energy consumptions with direct environmental impacts," but its environmental effects can be minimised to "assure a quality of life".³⁵⁸ *The Sims 4* only simulates pools in terms of its water consumption, not its ecological implications, and therefore this debate is largely ignored within the game. It does show, that including pools within a sustainable imagery must be done carefully. A possible way to do this is to capitalise upon the real life trend of creating natural swimming pools, which use less energy and cleaning materials, and have a distinct visual appearance due to their usage of aquatic plants as a filter.³⁵⁹ Together, all these design trends emphasise the earth and water aspects of nature.

A less dominant, but still intriguing aspect of the modding discourse, is to use the exact opposite imagery. By linking sustainable living to the aesthetics of nature, there will undoubtedly be people who do not connect with this imagery, and by extension possibly, this topic. By creating housing ("Old Factory") and community gardens ("NO CC – Old Factory") within lots designed as if they had been old factories, modders challenge the dominant imagery and comment on the repurposing of existing structures. By employing this steampunk-esque imagery they raise questions about how obsolete factories can still be employed towards sustainable goals. By adding this new conflicting interpretation to the games 'authoritative' argument, we can see the empowering effect of modding in exposing "the inequity built into traditional ecogame-based communication."³⁶⁰ Whereas the modernistic nature-themed housing design takes an affirmative stance towards EA's own visual aesthetics of sustainability, these steampunk-esque mods question it. Placing these factory-looking sustainable lots would also cause friction within the *Sims*' system, because all industrial looking decorations (which are the basis of the steampunk aesthetic) are immediately contributing to an Industrial Eco Footprint. This friction was already seen within EA's own design in

³⁵⁸ Oliveira et al., "Sustainability Challenges in Outdoor Swimming Pools," in *New Technologies in building and construction: towards sustainable development* (Singapore: Springer, 2022), 323.

³⁵⁹ Kristin Hunt, "Can Swimming Pools Be Sustainable?" GreenMatters, May 31, 2019, <https://www.greenmatters.com/home/2018/07/15/1fxq0w/sustainable-natural-swimming-pool>.

³⁶⁰ Werning, "Understanding and Communicating the Climate Crisis through Ecomodding," 13.

container housing, yet this modding style highlights it much more clearly. Especially because EA's industrial tag accounts only for aesthetics, meaning there is no distinction between a *working* factory, and an *abandoned, repurposed* one.

Sustainable Script Mods: A Sustainable Local Community

Apart from the previous example about modding locally produced food into the game, there are other ways that *Sims* modders have changed the coding of the game itself. Through scripting mods, modders tend to focus on increasing the complexity and functionality of the simulation. This includes creating new custom careers for sims (e.g. an oceanography career focussed on a clean and healthy underwater environment), new traits (e.g. the 'Eco-Friendly Trait' encouraging water management and gardening or the 'Sustainable Living Trait' encouraging wider resource management), or upgrading various utilities to more efficient usage (e.g. 'Classic Toilet/Sink Combo' where the sink's water is reused to flush the toilet). All of these examples use their own angles and nuances to contribute to the sustainability discourse. Several of these sustainability themed mods are also part of the critique that *The Sims 4* was missing many features already present within *The Sims 3*, because they are adaptations of features that were already present within *The Sims 3* (e.g. the 'Eco-Friendly Trait,' the 'Functional Canning Station,' and 'Candle Making'). These mods highlight a media genealogical perspective that a newer version of the game isn't necessarily 'better' or 'more developed,' and appreciated features and mechanics are sometimes cut from new iterations of the game. This leaves the game with a less nuanced rhetorical position, which is only put back into the game through the work of modders. Other mods tend to take existing objects within *The Sims 4*, and add increased functionality (e.g. the potting station, the laundry washtub). These mods capitalise on objects already within the game, and give these simulated items affordances a real-life counterpart would have. For example, by turning the decorative potting station into a functional object, the station becomes embedded within the gameplay itself and encourages players to work in their gardens.

Together, scripting mods tend to explore functionalities and ways of living that relate to the local community. Modders increase local home-made production, and add ways to use utility resources more sustainably. This challenges mass-market production, and by extension, the unsustainable production chains and corporate waste attached to these processes. Exploring production chains and corporate waste in *The Sims 4* remains difficult, because the game in its current form does not simulate enough friction. Meaning that, although alternatives to these systems can be incorporated within the simulation, the real-life pressure of *why* we need these alternatives remains ambiguous. Still, within the in-game context, exploring mechanics emphasising local production or utility management can create valued opportunities for new and engaging

gameplay. It demonstrates that designing engaging gameplay can co-exist a topic's engagement with sustainability. By capitalising on one of *The Sims 4*'s strengths, simulating local communities, modders combine engaging gameplay with the promotion of a strengthened local community as sustainable imaginary for the future.

Unfortunately, scripting mods are the most difficult to create, due to the required technological knowledge and the constraints of the modding tools themselves. Large scripting mods that rewrite large parts of the game (like "Lifetime Aspirations v.05"³⁶¹) or add major gameplay experiences (like the "Brookheights" open world³⁶², or the "Sims 4 Multiplayer Mod"³⁶³), are difficult to find, and those that address sustainability explicitly even more so. Besides the difficulties modding *The Sims 4*'s Python scripts, there are other obstacles in creating sustainable scripting mods. For example, due to their simulation of real-life politics, the N.A.P. mechanic shows great promise for sustainable scripting, yet this mechanic is not created in a modder-friendly way, making a modding tool impossible.³⁶⁴ If this type of modding were possible, then communal plans to address carbon-intensive processes, excess consumerism, or urbanisation could be created. Scripting mods therefore have to be carefully considered when linked to the discourse of sustainability, because some larger-scale ideas might not be feasible for unexperienced modders.

Conclusion

Through modding, *The Sims 4* can be used as a platform to talk about sustainability in a way that, as noted by Marc Andreessen, the "original developers could not have possibly contemplated, much less had time to accommodate".³⁶⁵ It is a way of rewriting the source material that allows the community to 'speak back' against the original developers and possibly encourage a multi-sided conversation.³⁶⁶ This allows the community to insert their own values and ideas, even when they do not match those of the original developer. Modding thus requires an active stance towards both the mechanics and dynamics of the game, and then opens them up for reconsideration and redesign. In other words, modding helps us question the assumptions behind arguments that appear without alternative to a regular player.³⁶⁷ It is this attitude that makes the practice so valuable for considering

³⁶¹ Ky-e, "Lifetime Aspirations v.05," Mod The Sims, October 27, 2020, <https://modthesims.info/d/648717/lifetime-aspirations-v-05.html>.

³⁶² Radek Wacha, "The Best Sims 4 Mods – 2021 Update," GamePressure, September 15, 2021, <https://www.gamepressure.com/editorials/best-sims-4-mods-2019/zb182-10>.

³⁶³ Sims4multiplayer, "Sims 4 Multiplayer Mod," Mod The Sims, June 29, 2019, <https://modthesims.info/d/629316/sims-4-multiplayer-mod.html>.

³⁶⁴ SilentSpy0, "Neighborhood Action Plan Mod Ideas," The Sims, June 17, 2020, https://forums.thesims.com/en_us/discussion/977552/neighborhood-action-plan-mod-ideas.

³⁶⁵ Werning, *Making Games*, 25.

³⁶⁶ Werning, "Understanding and Communicating the Climate Crisis through Ecomodding," 11.

³⁶⁷ Werning, "Understanding and Communicating the Climate Crisis through Ecomodding," 12.

new sustainable futures, because we need to redesign our own economic and social systems as well in order to move away from the problematic effects of (over)consumption. As a simulation tool that is mostly focused on simulating different types of neighbourhoods, this game lends itself to formulating new ways of structuring social spaces. By redesigning immediate lived space, and by giving the power to redesign that space to the people themselves instead of governmental organisations through *The Sims 4*, players can reconsider the values these spaces need to reflect.

The Sims 4 has 'commented' on the economic system by emphasizing local, non-mass production, and an increased appreciation of craftsmanship as imaginations against current capitalistic structures. This commentary was already present within the base game, but further expanded and nuanced in its expansions (for example, eleven expansion packs added additional harvestables). This was then also capitalised upon by the modders, who have used these underpinnings as a basis to create a home-grown foods project (icemunmun's harvestables) and added functionality to crafting devices (potting station, candle making). This type of modding has turned *The Sims 4* into a more sophisticated system, yet also reflects both Turkle's 'simulation resignation' and 'simulation denial.' The simulation is denied, because these mods help counter the consumerist values in *The Sims*, yet at the same time 'simulation resignation' is present because the counter was already (in a lesser way) present within the game. Through Turkle's insight to nuance this binary understanding through challenging built-in assumptions, we can read these mods as a sense of critique about the game's limited functionalities and engagement with local foods. *The Sims 4*'s original limited engagement with these functionalities could be read as a built-in assumption of EA that their players are not interested in exploring these systems (anymore). These mods challenge that assumption, and create a more sophisticated understanding of *The Sims 4* as a simulation that values local-non mass production and craftsmanship.

There are still several gaps within the ecomodding discourse that could benefit from a closer look, especially as more tools (both community-made and official) seem to be on the horizon. For example, implementing more of the radical critiques, such as Huber's call to understand climate action through the lens of class distinction.³⁶⁸ As Kline et al. described earlier, *The Sims* series simulates a "middle class North America," making class critique without modding inherently difficult. Since this means that the system is predisposed to simulating the middle class, it becomes a challenge to simulate the working class. For example, the lot system favours large detached houses typically associated with homeowners, not terraced houses. In turn, this makes the next step of contrasting the working class against the middle class to simulate Huber's working class politics difficult too. The corporate critique could also be highlighted more through modding. *The Sims* itself has mostly detached itself from these discourses (see the dumpster diving mechanic analysis of

³⁶⁸ Huber, "Ecological Politics for the Working Class."

Chapter Two, where *The Sims*' dumpsters are physically detached from their corporate locations), but modding could re-establish this friction within the game. For example, when the world creation tool is published, by recreating the infamous viral photo of the Amazon warehouse amidst the slums in Tijuana, Mexico and turning this into a playable experience.³⁶⁹ Additionally, as a critique of consumption, mods using the concept of 'degrowth' (consuming less and differently³⁷⁰) as basis could potentially be strong ecomods to criticise *The Sims*' origin in consumerism and promote alternatives to our current understanding of consumption. The community itself has also expressed desire for more negative consequences within the game, for example through the addition of extreme weather and natural disasters.³⁷¹ Although these examples are not yet within reach, there are other possible mods that could help re-establish friction in the game. In the following chapter, I will explore this possibility through my own design of two ecomods.

³⁶⁹ Lauren Kaori Gurley, "Amazon to Open \$21 Million State-of-the-Art Warehouse in Tijuana Slum," Vice, September 7, 2021, https://www.vice.com/en/article/pkb9qn/amazon-to-open-dollar21-million-state-of-the-art-warehouse-in-tijuana-slum?utm_source=VICE_Twitter&utm_medium=social.

³⁷⁰ Giorgos Kallis, *Degrowth* (Newcastle Upon Tyne: Agenda Publishing, 2018), 1.

³⁷¹ Savybaby93, "We NEED an Extreme Weather/Natural Disaster MOD," Reddit, February 26, 2021, https://www.reddit.com/r/Sims4/comments/lssw2h/we_need_an_extreme_weathernatural_disaster_mod/.

◇ Chapter Four ◇

Designing Ecomods for *The Sims 4*

Chapter Overview

Whereas the last chapter was focussed on analysing the modding discourse of *The Sims 4*, this chapter is built upon that knowledge to address relevant gaps within the discourse as well as explore the performative qualities of ecomodding as a critical civic practice. This is guided by the question: “How can ecomodding operate as a creative critical performative practice and help us develop ecological citizenship?” In this chapter, I applied an auto-ethnographical method in order to design two new ecomods: one based upon the criticisms of our current renewable energy discourse, and one to highlight the postcolonial criticism of sustainability within supply chains. This demonstrates that modding can touch upon deeper, structural issues within society, but also that the creation process itself can help think through these issues.

I have chosen to create the two ecomods to explore the carbon crisis’ link and dependency on petroculture (as discussed in Chapter One), and to challenge the frictionless aspect of the simulation (as discussed in Chapter Two). Whereas many of the ecomods previously discussed in Chapter Three have largely taken an affirmative stance towards the simulation by extending existing functionalities such as further developing the existing urban agriculture, and re-adding deleted functionalities from previous *Sims* games, these following two mods are based upon the idea of Turkles’ “simulation denial” in order to question and rewrite the logics present within the original simulation.³⁷² Contrary to the examples from Chapter Three, both of my two mods are informed by academic theory, bridging academic discourse with popular discourse through the form of easily accessible mods. These mods have therefore been designed with ‘spreadability’ in mind: increased chance that this content might circulate online.³⁷³ The mods connect to three of Jenkins, Ford, and Green’s suggestions for increased spreadability: they are relevant to multiple target groups (e.g. *Sims* players, *Phone Story* players, history enthusiasts), reusable, and part of an existing stream of material (e.g. Tesla and *Phone Story* are both already discussed online).³⁷⁴

³⁷² Turkle, *Life on the Screen*, 71.

³⁷³ Jenkins, Ford, and Green, *Spreadable Media*, 197.

³⁷⁴ Jenkins, Ford, and Green, *Spreadable Media*, 198.

Research Method: Autoethnography

The method I employ in order to design my two ecomods is autoethnography. Autoethnography is a “research method that uses personal experience (“auto”) to describe and interpret (“graphy”) cultural texts, experiences, beliefs, and practices (“ethno”)”.³⁷⁵ It exists at the intersection between autobiography and ethnography, and is a way of creating insider insight of cultural knowledge through participation.³⁷⁶ Autoethnographers Tony Adams, Carolyn Ellis, and Stacy Holman Jones identify five purposes of autoethnography. First, through autoethnography’s focus on personal experience, this method helps provide “alternatives to dominant, taken-for-granted, and harmful cultural scripts, stories, and stereotypes”.³⁷⁷ Second, this method helps “articulate insider knowledge of cultural experience,” which assists me in opening up the experience of designing mods.³⁷⁸ Third, autoethnography has a self-reflective component that helps show how researchers are “implicated by their observations and conclusions,” and encourages autoethnographers to “write against harmful ethnographic accounts made by others-especially cultural “outsiders”- who try to take advantage of, or irresponsibly regulate, other cultures”.³⁷⁹ This will help me reflect upon my own design decisions, and how my personal experience as a creator has shaped the two works I have produced. Fourth, autoethnography helps “describe moments of everyday experience that cannot be captured through more traditional research methods”.³⁸⁰ A more traditional research method would only help me analyse finished mods, leaving out both the actual experience of designing and the discarded draft versions. Taking an autoethnographic approach, on the other hand, enables me to share insights into how the modding design process itself can be a valuable teaching experience. The fifth and final purpose of autoethnography is its ability to help produce accessible texts, especially to audiences outside academic environments.³⁸¹ I employ this by designing two pieces of accessible content – two *Sims 4* mods – allowing *Sims 4* players to explore academic content they might not engage with otherwise.

Autoethnography has been criticised due to its similarity to journalism and biography writing and therefore not being ‘research’.³⁸² Martin Tolich provides four reasons why autoethnography is a valid research practice. First, “autoethnography transcends mere narration of self to engage in

³⁷⁵ Tony E. Adams, Carolyn Ellis, and Stacy Holman Jones, “Autoethnography,” in *The International Encyclopedia of Communication Research Methods* ed. Jörg Matthes, Christine Davis, and Robert Potter (Hoboken, Wiley-Blackwell: 2017), 1.

³⁷⁶ Adams, Ellis, and Jones, “Autoethnography,” 3.

³⁷⁷ Adams, Ellis, and Jones, “Autoethnography,” 3.

³⁷⁸ Adams, Ellis, and Jones, “Autoethnography,” 3.

³⁷⁹ Adams, Ellis, and Jones, “Autoethnography,” 4.

³⁸⁰ Adams, Ellis, and Jones, “Autoethnography,” 4.

³⁸¹ Adams, Ellis, and Jones, “Autoethnography,” 4.

³⁸² Martin Tolich, “A Critique of Current Practice: Ten Foundational Guidelines for Autoethnographers,” *Qualitative Health Research* 20, vol. 12 (2010): 1606.

cultural analysis and interpretation”.³⁸³ Second, autoethnography utilises situated ethics to gain informed consent, allowing for respectful inclusion of research participants.³⁸⁴ Third, autoethnography focusses on the “mundane or everyday”.³⁸⁵ This focus allows research to highlight “taken-for-granted” forms of behaviour and open the way to new possibilities”.³⁸⁶ Fourth, persons featured within autobiographic research are often friends and family members, not public figures. This allows for personal, even therapeutic, studies.³⁸⁷

Together, autoethnography allows me to write a personal account of what it means to create video games mods, and shows that making ecomods is a useful way to question and critique the built-in assumptions of a video game. In the next two sections I will apply autoethnography to develop two ecomods and share insights into my design decisions. Due to autoethnography’s personal nature, I will be able to share deliberate design motivations, as well as make a distinction with additional unintended consequences of these choices. First, I will show how I created an ecomod based on Nikola Tesla’s alternative wireless energy system, and next how I created an ecomod based on *Phone Story*’s criticisms of supply chain capitalism.³⁸⁸

³⁸³ Tolich, “A Critique of Current Practice,” 1606.

³⁸⁴ Tolich, “A Critique of Current Practice,” 1606.

³⁸⁵ Tolich, “A Critique of Current Practice,” 1606.

³⁸⁶ David Silverman, *A Very Short, Fairly Interesting and Reasonably Cheap Book About Qualitative Research* (London: Sage, 2013), 12.

³⁸⁷ Tolich, “A Critique of Current Practice,” 1606.

³⁸⁸ Wan, “Labour, mining, dispossession,” 250.

Mod 1: Tesla's Wardencllyffe Tower



Figure 9: Wardencllyffe and Nikola Tesla within *The Sims 4*.
Additional screenshots in attachments.

The first chapter of this thesis expanded upon underlying mental models of the climate crisis, and showed that the transition toward clean renewable energy is a “genuinely political issue concerning the organisation of power built on specific physical and chemical properties of dominant energy sources”.³⁸⁹ The politics of energy production and its infrastructural network have been a dominant aspect of (often capitalistic) developments within this field. In fact, these discourses have helped shape the current ways we conceive of our electrical grid. This first mod will therefore challenge this monetised understanding by employing a counterfactual historical perspective, and explore an alternative that has already been proposed in history: Nikola Tesla’s Wardencllyffe tower. Although never fully realised, the Wardencllyffe tower project provides an alternative imaginary to our current ways of understanding energy by offering a wireless, meterless system.

Counterfactual history is “a genre that normally focuses on a ‘what if’ scenario with regards to a specific historical event, person, place, period etc., and tries to imagine alternative outcomes to those inscribed in the historical record”.³⁹⁰ This approach has as “one of the critical benefits” that it “lays open [...] many of the questions regarding the ideological underpinnings that motivate historical thinking”.³⁹¹ This mod will bring considerations of the ideological underpinnings of the current energy system into *The Sims 4*. However, in order to contextualise this mod, it’s important to first briefly go

³⁸⁹ Cubitt, “Ecomedia Futures,” 6.

³⁹⁰ Samuel McCready, “Playing the Past and Alternative Futures: Counterfactual History in *Fallout 4*,” *Loading* 12, no 20 (2019): 17.

³⁹¹ McCready, “Playing the Past and Alternative Futures,” 19.

back to the dispute between the Direct Current (DC) and Alternating Current (AC) systems of electrical grids. In other words, the “War of the Currents” between Thomas Edison and Nikola Tesla.

The AC and DC systems have different strengths and applications, but also one important commonality: they both need wires to transmit electricity. This wire network enables monetisation of electricity through the use of meters, enabling the measuring of a person’s electricity usage and charging them accordingly. Whereas the original system of Edison’s DC is efficient for small-scale transmissions such as battery powered appliances,³⁹² Tesla’s new AC system allowed for larger scale consistent energy transmissions like supplying entire towns.³⁹³ This caused the “War of the Currents” between market leader Edison and the newcomer Tesla and eventually led to Tesla’s AC becoming the dominant form of energy transmitting. It was this background that led Tesla to build the Wardenclyffe facility to propose a new way of energy transmission, one that could challenge the monetisation of electricity: The World Wireless System.

The Wardenclyffe facility housed the beginnings of this World Wireless System, and was meant to be a demonstration of wireless transmission “on a small scale but sufficient to carry conviction”.³⁹⁴ Tesla explained The World Wireless System as a system that “makes possible not only the instantaneous and precise wireless transmission of any kind of signals, messages or characters, to all parts of the world, but also the inter-connection of the existing telegraph, telephone, and other signal stations without any change in their present equipment”.³⁹⁵ Had this type of renewable energy generation been fully realised, it would “immensely facilitate and cheapen the transmission of intelligence”,³⁹⁶ and have made the current electric grid largely obsolete.³⁹⁷ At the time, wireless consumption could not be metered, meaning that this type of electricity could not be measured and sold.³⁹⁸ The still unfinished tower was demolished in 1917, with a widely circulating report citing “war conditions” as the reason. Tesla contradicted this reason, noting that he would have been refunded if that were true.³⁹⁹

The World Wide Wireless system represents the idea of demonetising electricity, and brings in a new sustainable imaginary into *The Sims 4*. As seen in the ‘Simulated Capitalism’ section of Chapter Two, *The Sims 4* simulates problematic unsustainable capitalistic values such as

³⁹² Mike Winchell, *The Electric War: Edison, Tesla, Westinghouse, and the Race to Light the World* (New York: Henry Holt and Company, 2019), 18.

³⁹³ Winchell, *The Electric War*, 20.

³⁹⁴ Nikola Tesla, *My Inventions and Other Writings* (New York: Penguin Books, 2011), 68.

³⁹⁵ Tesla, *My Inventions and Other Writings*, 66.

³⁹⁶ Nikola Tesla, “The Transmission of Electric Energy Without Wires,” *Electrical World and Engineer*, March 5, 1904. Digitally archived at <https://teslauniverse.com/nikola-tesla/articles/transmission-electric-energy-without-wires>.

³⁹⁷ Michael Jaeger, “Tesla and wireless energy: the power that could have been,” *The Washington Times*, December 31, 2014, <https://www.washingtontimes.com/news/2014/dec/31/tesla-and-wireless-energy-power-could-have-been/>.

³⁹⁸ Jaeger, “Tesla and wireless energy: the power that could have been.”

³⁹⁹ Tesla, *My Inventions and Other Writings*, 69.

commodification and consumerism. Modding demonetised energy transmissions into *The Sims 4* goes against this dominant ideology, and allows for experimenting with a different electric system. At the same time, it brings attention to this alternative energy system among *Sims 4* players. By bringing Tesla's story into the game through modding, the player is invited to play out scenarios and explore the impact of this invention. *The Sims 4* thus provides an interactive platform to act out experimental scenarios where the player can, in a simplified manner, experience the impact of new technologies in society. This adds an extra interactive explorative dimension to Tesla's story and inventions, that cannot be found by engaging with Tesla's legacy by reading a book or watching a documentary about the subject.

This demonetised system is in line with Tesla's personal convictions, making him a fitting person to be included in this mod. Tesla invented his creations without a desire for profit, as Margaret Cheney notes in the *Tesla: Man out of Time* biography: "to [Tesla] the value of money consisted in what one did with it rather than in any intrinsic worth".⁴⁰⁰ The most notable example of this attitude is described as both an act of "unprecedented generosity" and full of "foolhardiness": to save the company of his friend George Westinghouse, he tore up a contract and relinquished a claim to millions of dollars.⁴⁰¹ These same anti-capitalist values underpinned the Wardenclyffe facility, as it is described as "philanthropic" and being able to beam "electricity to penniless Zulus or Pygmies".⁴⁰²

Doing away with the monetised energy grid is to a lesser extent already facilitated within *The Sims 4*. The game allows for some exploration of living 'Off The Grid' through their 'Lot Challenges' system, which are gameplay challenges that increase the difficulty of a specific lot. By activating this challenge, a player's household is cut off from the regular energy and water facilities, instead becoming reliant on their own ability to generate power and collect water. However, by framing living off the grid as a 'challenge' the game actually underscores that leaving the current grid is not a feasible option for many people. As seen in the previous chapter, the modding community did experiment with more efficient utility usage, but the grid remained unquestioned. Instead, this mod experiments with rethinking the grid itself.

The question remains then, how does this relate to Ghosh' crisis of imagination? After all, Ghosh notes a lack of *actionable* plans, and this plan was never fully enacted. This project promotes a different underlying paradigm, a mental model that rejects capitalism's desire for infinite profit and highlights that we need to look at the infrastructure of energy itself when considering sustainable alternatives. In the words of previously mentioned Hernández-López et al.: we need "a sustainable infrastructure for the development of [sustainable] products".⁴⁰³ This understanding has already

⁴⁰⁰ Margaret Cheney, *Tesla: Man Out of Time* (New York: Touchstone, 2001), 73.

⁴⁰¹ Cheney, *Tesla*, 74.

⁴⁰² Cheney, *Tesla*, 199.

⁴⁰³ Hernández-López et al. "Does recycling solar panels make this renewable resource sustainable?," 1.

been applied to the development of renewable energy, the most notable example being the Spatial Effect Generator (SEG).⁴⁰⁴ Although currently not fully sustainable (this device also requires neodymium for its magnets), this modern example helps us challenge our current understanding of sustainable energy generation. The SEG machine does this by being a clean energy generator that functions independently from external factors such as solar and wind presence, allowing it to provide a consistent amount of energy due to it being immune to weather fluctuations. The SEG could be interesting to recreate in a following ecomod, but for the sake of this thesis Tesla's world-wide energy system, famous story, historical significance, and visual recognisability make it a stronger candidate for a first ecomod.

One of the important takeaways from Ruffino's study of *AdVenture Capitalist* was the need to create 'something truly different' in order to challenge capitalist thinking, and that is what Wardencllyffe, even as a thought experiment, provides. Although the Wardencllyffe facility was never fully operational, it does question "assumptions behind arguments that appear without alternative,⁴⁰⁵ namely, the very foundations upon which we have based our energy system. This case study highlights, in Meadows' terms, the capitalistic mindset that underlies the discourse around our current energy system. Specifically, Ghosh' identification of *homo economicus* and how economic thinking has taken over the very ways of thinking about the world, while geopolitics and empire are regarded as secondary effects. As Cubitt said, the production of energy "links environmental issues with international relations and regional instability".⁴⁰⁶ It demonstrates how the United States has fought to keep control over the profits of "commercial power and the communications technologies on which it relies".⁴⁰⁷ By promoting this as *The Sims 4* fan content, the mod draws upon the organisational structure of the multitude, using *The Sims 4* fan community and Tesla's current internet fame to spread across the internet. Through this mod I raise Tesla's project as an example of Genus et al.'s "alternative energy imaginary," that presents a change in social practices.⁴⁰⁸ This change in social practice through this energy system constitutes a resistance of total monetization and primacy of profit, which is why using the multitude to promote this alternative is a fitting

⁴⁰⁴ "Spatial or Searl Effect Generator (SEG)," SEGMagnetics, last accessed June 20, 2022, <https://segmagnetics.com/seg/>.

⁴⁰⁵ Werning, "Understanding and Communicating the Climate Crisis through Ecomodding."

⁴⁰⁶ Cubitt, "Ecomedia Futures," 3.

⁴⁰⁷ Cubitt, "Ecomedia Futures," 3.

⁴⁰⁸ Audly Genus et al. "Alternative energy imaginaries: Implications for energy research, policy integration and the transformation of energy systems," *Energy Research & Social Science* 73 (2021): 2.

platform for this message, due to the multitude's own inherent ability to resist "the total monetization and primacy of profit".⁴⁰⁹ Building Wardenclyffe within *The Sims 4* furthermore allows us to explore a counterhistorical 'what-if' question by acting out a scenario based on the question "What if the Wireless Transmission System had been completed?"

The Wardenclyffe mod works through a combination of three components: a lot build to resemble the Wardenclyffe facility, a sim designed to look and roughly act like Nikola Tesla, and a scripting change to make all power free. The facility is constructed as two buildings: the warehouse that housed the main laboratory and the tower that produced the wireless transmissions. Although the tower itself was never completed and the existing photographs thus display only its metal skeleton, illustrations and sketches of the finished design remain (see figure 10). These were used as reference for *The Sims* build. As autoethnographer, this obstacle of not having a photograph of the completed tower drove me into archives, associated foundations, and memorial websites to find design and layout information, which were sources that in turn taught me more about the history of this project. Something as seemingly simple as building a laboratory within *The Sims 4* thus snowballed into a broader teaching experience of the history of energy.

To embed this lot within *The Sims*' gameplay, the laboratory is equipped with the requirements for a sim pursuing the 'scientist' career. The Tesla sim is following this career path, and I have given him the accompanying traits: Genius, Creative, Quick Learner, and Perfectionist. In order to assign the Tesla sim these traits, I had to dive into Tesla's personal history through documentaries and biographies to find references to his character and physical appearance not captured within existing photographs (such as eye colour and body language). Building a sim that imitates a real life person thus becomes a teaching moment about an influential historical figure.

The scripting component of this mod changes the XML script that calculates utilities by changing the base value of 'power' from 0.6 to 0, making power free for *all* lots within the game. Instead of an individual change, this is thus a local and communal change in regards to sustainable power production. This scripting change was made by using Sims 4 Studio to extract the XML files. Additionally, a side effect revealed itself during playtesting: devaluing power means that players that still want to generate their own power can no longer sell it back into the grid for profit. This

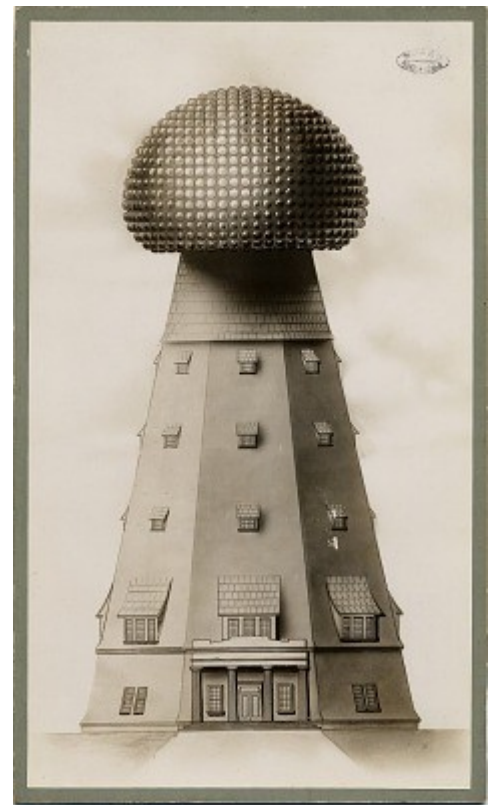


Figure 10: A sketch of the proposed finished Wardenclyffe tower.
Image credit: Smithsonian Online Virtual Archives.

⁴⁰⁹ Dyer-Withford and De Peuter, *Games of Empire*, 187-188.

shows that devaluating power does not only have an impact on production by mass manufacturers, but also households who use selling their surplus power as an additional source of income. From an autoethnographical perspective, this scripting change also provides an opportunity for a modder to learn more about the actual coding of the game, which highlights game rules that might not be apparent during gameplay. In order to change the base value of 'power', I had to familiarise myself with the entire utility XML script, which, among others, takes into account tax percentages of lots and concretely defines different tax brackets, off the grid property taxes, and N.A.P. bill increases. Reading the XML script demonstrates a constraint of Sims 4 Studio, because the tool does not provide any help reading code, meaning that I -and any modder following my path- have to draw upon my own knowledge of reading and understanding code. Approaching the game through the XML scripts does provide the advantage that these scripts explain the mechanics to a greater extent than the in-game information does. This means that modding a single value change from 0.6 to 0 helped me understand the underlying rules of the utility network, and, if other modders were to trace this path, the increased understanding of *The Sims 4's* coding this scripting change facilitates could possibly help them develop new creative sustainable energy mods.

Mod 2: Molleindustria's *Phone Story* within *The Sims 4*



Figure 11: Molleindustria's *Phone Story* as a playable *Sims 4* retail lot. Additional screenshots in attachments.

In 2011, serious game studio Molleindustria published a new game for smartphones: *Phone Story*.⁴¹⁰ Designed as a commentary on the unsustainable labour practices modern-day smartphone development is dependent on, *Phone Story* displays “a critical reflection on its own technological platform”.⁴¹¹ By forcing the player into the role of several actors within the violent supply chain of smartphones such as the armed guards overseeing child-labour mines and the paramedics trying to prevent factory workers attempting escape by suicide, Molleindustria forces the player to foreground their implicitness in these violent smartphone supply chains in an extreme way. The game was initially accepted for Apple’s App Store, but pulled within hours of its official release due to Apple stating guideline breaches.⁴¹² The game is still available on Google’s Play Store for €2,09, and the money it raises is donated to relevant charities and social projects such as affected Foxconn workers, China Labor Watch, and The Repair Association⁴¹³

Evelyn Wan demonstrates how *Phone Story* employs necropolitics and geontologies to exhibit how “these extractions operate within a material dimension of the empire of technology”.⁴¹⁴

⁴¹⁰ Molleindustria, *Phone Story*, Molleindustria, Andoid, iOS, Microsoft Windows, MacOS, 2011.

⁴¹¹ “Phone Story,” Molleindustria, last accessed June 24, 2022, <http://www.phonestory.org/>.

⁴¹² Matthew Handrahan, “Phone Story dev criticises App Store “regime of censorship”,” *gamesindustry.biz*, September 14, 2011, <https://www.gamesindustry.biz/articles/2011-09-14-phone-story-dev-criticises-app-store-regime-of-censorship>.

⁴¹³ Paolo Pedercini, “Phone Story 2019 Donation Update,” Molleindustria, June 24, 2019, <https://www.molleindustria.org/blog/phone-story-2019-donation-update/>.

⁴¹⁴ Wan, “Labour, mining, dispossession,” 251.

This perspective places an emphasis on the aspect of death within supply chain capitalism, and shows that “the immaterial wireless internet technologies that we are surrounded by are supported by material chains of human labour and exploitation, some of which are heavily tainted with violence”.⁴¹⁵ In doing this, she draws upon Dyer-Witheford and De Peuter’s understanding of empire and its postcolonial critique. Furthermore, *Phone Story* as case study adds a concrete, explicit example to this thesis of Ghosh’ previously discussed insight of addressing organised violence that sustains global power hierarchies.

In translating this mobile phone game to a *Sims 4* mod, there were several aspects of this game that had to be adapted. First and most obvious, the target platform is no longer the mobile phone, but the PC. This platform change is motivated because, as a *Sims* mod, *Phone Story* is no longer played on a phone. *The Sims 4* can be played on both PC and video game consoles, but modding is largely a PC only activity. Although access to the online gallery was finally given to console players in early 2020, console versions of the game are still restricted in terms of general mods.⁴¹⁶ Therefore the main focus of this adaptation is the PC platform, which is reflected in this lot by turning the store into a PC store.⁴¹⁷

Second, the direct mode of address that *Phone Story* employs cannot be recreated within the gameplay that the *Sims 4* affords. Instead of attempting to force this aspect, as an autoethnographer I have instead decided to design this mod to play to the strengths of this simulation. This allows me to think ‘through’ the rules and mechanics of *The Sims 4*, and what this means for the underlying subject matter. By making this design choice, autoethnography here helps demonstrate that within the act of translation lies critical engagement with existing serious games beyond ‘just’ playing them. Translation requires knowledge of the original game, the target game, and the relation between the two. Through the inclusion of the *Get to Work* expansion, this *Sims* lot becomes a functional electronics store and foregrounds *Phone Story*’s third level that criticises the sale of phones in first world countries. I have placed this emphasis for three reasons. First, as Kline et al. noted, *The Sims* simulates an “affluent suburban middle-class North America,” which lends itself to the context of product sales rather than production. Second, *the Sims*’ focus on consumerism lends itself to highlighting the consumerist aspect criticised in *Phone Story*, by allowing the player to be placed into the role of the salesman in a more detailed way than *Phone Story* allows. Third, due to the in Chapter Two identified frictionless aspect of *The Sims*’ simulation, evoking the context of outsourcing production to third-world countries is inherently difficult. As seen in Chapter Three, only small scale, locally produced goods lend themselves for *The Sims*’ gameplay design. This production discrepancy

⁴¹⁵ Wan, “Labour, mining, dispossession,” 252.

⁴¹⁶ Ken Reed, “Sims 4 PC & Console Versions Compared: Which is Better?” ScreenRant, February 12, 2021, <https://screenrant.com/sims-4-pc-console-difference-controls-graphics-mods/>.

⁴¹⁷ PCs, like mobile phones, are consumer electronics built with rare earth minerals. Meaning that, although some differences remain, the supply chain *Phone Story* criticises holds up for a modded PC version as well.

was largely accounted for by evoking environmental storytelling through the spatial design. Not only do the separate areas of the *Sims 4* lot mimic *Phone Story*'s designs, they also add a few new elements inherent to *The Sims*. By placing *Get to Work*'s child mannequins in the mines I refer to *Phone Story*'s critique of child labour. Then by placing gravestones and a scattering of red rugs beneath the factory combined with a mannequin on top of the building, I quote the story of suicidal workers. Additionally, to visually show friction of waste and greenwashing, I used cardboard boxes labelled with either a plant or a trashcan to further suggest a sense of coherency between the sections. Inside the factory the trashcan-labelled boxes are placed in abundance (in relation to the boxes with a plant label) in order to suggest that the system produces more waste than that there are products in circulation. The plant labelled boxes are then used to suggest a shipment of new products with a seemingly eco-friendly logo, to comment on how companies often greenwash their images towards their customers.

The third aspect that had to be adapted, was *Phone Story*'s visual design. The original 2D environments are connected in a thematic sense, not in a 'physically' shared 3D environment as the lots in *The Sims 4* are build. *Phone Story* can use this way of scene building to its advantage, because that means they can represent places geographically distant from another. Meaning that not only the 2D design had to be translated to 3D, but also the visual representation of distance had to be accounted for. In order to achieve this, the *Sims 4* lot was designed with continuous space in mind. Instead of a salesman in front of a store, the store itself becomes the playable space, which becomes the visible 'front stage' for the, in real life often invisible, 'back stage' where the supply chain here becomes visualised. First, the store stretches into the end of life recycling area, which opens up into the mine, and the lot finally ends in the factory. Then, in order to emphasise the cyclical process of manufacturing electronics, the factory and the recycling area are connected by two trains moving in opposite direction that suggest a circular motion. This begins the production cycle anew. The actual store is the smallest of the four sections, as a way to represent that the front stage, the part of the supply chain visible to first world customers, is just a small part of the entire, more hidden, chain. As a result, the player always has to play in the store with the supply chain visualised on the lot, forcing the supply chain into the foreground.

Together, adapting the platform, mode of address, and visual design highlight how adapting *Phone Story* into a *Sims 4* mod requires a creative critical attitude, and encourages reflection upon the affordances of *The Sims 4* and how it contrasts with the original game. This method is not limited to this specific case study, and could be employed to encourage similar *Sims* ecomods. Furthermore, the insights I've been able to share about the design process through my autoethnographic method have demonstrated that making ecomods requires and trains a critical stance towards videogames and allows a modder to experiment with sharing social commentary through a gaming platform.

Conclusion

In this chapter I have employed an auto-ethnographic method not only to demonstrate how modding can touch upon deeper, structural issues within society, but also to demonstrate how the creation process itself can help think through these issues. By opening up the creation process itself, I have highlighted the considerations, choices, and limitations a modder faces while working with the simulated rules of *The Sims 4*. These aspects would have been difficult to capture in a traditional analysis of a mod, because it requires more intricate knowledge of the design process that regular modders post and might not be apparent when only analysing finished works. Critical *design* requires a different approach to the simulation and its mechanics and dynamics than critical *play*.

Although both of my two ecomods are designed to be playable experiences already, the impact of two mods within the entire modding discourse may be minor. Therefore it is important that this design process can be upscaled from an individual creative practice to achieve a larger societal impact. Much of the infrastructure required for upscaling is already present, The Sims Resource and Mod The Sims are popular modding sites where creations can be uploaded, and the game has a large community dedicated to spreading news and discussing content. Although a dedicated ecomodding platform does not exist yet, the existing network could still be utilised by capitalising upon the existing trend of writing challenges. Challenges are goals set by the community themselves, and have a dedicated forum section,⁴¹⁸ circulate within dedicated community websites, are picked up by larger media websites such as XGN⁴¹⁹ and GameRant,⁴²⁰ and some even have their own dedicated websites.⁴²¹ They are another form of metagaming in which *Sims* players engage, each of these challenges often having a larger set of rules. As a brief example, the “Tiny Living Legacy Challenge” challenges players to play a family in a tiny living home for five generations.⁴²² This challenge moves the debate regarding tiny living beyond building tiny homes, and encourages a player to ‘experience’ the lifestyle and its possible (dis)advantages. In order to inspire more lots with similar criticisms as my two ecomods, issuing a building challenge would be low-threshold in terms of technical knowledge, and could be engaging for the community. Having a centralised place to share and discuss this type of content could then further be used as a platform to discuss and organise action for real-world counterparts.

⁴¹⁸ “The Sims 4 Challenges,” TheSims, last accessed July 10, 2022, https://forums.thesims.com/en_US/categories/the-sims-4-stories-and-legacies.

⁴¹⁹ Lizzy van der Heijden, “Dit zijn de leukste challenges voor de Sims 4,” XGN, June 21, 2020, <https://www.xgn.nl/artikel/dit-zijn-de-leukste-challenges-voor-de-sims-4>.

⁴²⁰ Nahda Nabiilah, “8 Fun Build Challenges In The Sims 4,” GameRant, June 20, 2022, <https://gamerant.com/sims-4-fun-build-challenges/>.

⁴²¹ “The Sims Legacy Challenge,” SimsLegacyChallenge, last accessed July 10, 2022, <https://simslegacychallenge.com/the-sims-4-legacy-challenge-rules/>.

⁴²² FrolickingGnomes and Siminicricket, “Tiny Living Legacy Challenge,” Google Drive, last accessed August 2, 2022, https://docs.google.com/document/d/1bPJK-9lKhQib-b3U5r9ha180RB_8NKpIKXe7w5mn47I/edit.

◇ Conclusion ◇

In the beginning of this thesis I posed the question: “How can ecomodding *The Sims 4* contribute to understanding and, possibly, changing the mental models that sustain the system responsible for the climate crisis?” I answered this question by employing four subquestions. First, I looked into causes of the climate crisis through the question, “What mental models are responsible for the climate crisis?”. Second, I analysed *The Sims 4* and EA through the question: “In what way do the alleged sustainable values of EA, as per the company’s corporate social responsibility rhetoric, reflect in the design and production context of *The Sims 4*?”. Third, I looked into *Sims 4* ecomodding patterns through the question: “How does the (modding) community of *The Sims 4* (re)frame climate themes in the game?”. Fourth, I created insight into the use of modding as an educational experience through the question: “How can ecomodding operate as a creative critical performative practice and help us develop ecological citizenship?”.

As a life simulator, *The Sims 4* has been able to touch upon many of the processes and debates linked to the climate crisis. It is impossible to touch upon all connected issues, but *The Sims* did show how several of these are entangled. The roots of the crisis are seen in varying degrees within this game. While modernity’s colonial origin is less apparent, the consumerist logics of capitalism are strongly present within the entire franchise. I have argued that that is precisely why using *The Sims* as a case study for exploring alternative systems makes sense, because this allows a player to tweak the ‘rules’ of capitalism in a very concrete way. This allows for exploring imaginaries that gradually move past the current hyper-capitalism, rather than attempting to create an entirely different but unfeasible socio-economic system. Using *The Sims* to address climate themes also makes sense because EA has already explicitly opened this debate through their own expansion *Eco Lifestyle*. This expansion had its strengths, such as promoting collective political action and reinstating the clean energy debate within *The Sims 4*, but also fell victim to individualism, the ethical turn, technological determinism, and the embedding of dissident discourses. The pack often favoured gameplay over critique, rather than seeking a co-existence between the two of them. Modders have challenged capitalist logics by emphasising non-mass local production, by exploring what sustainable housing and neighbourhoods look like, and by designed recycled furniture. As of yet, larger scripting mods are more difficult to make due to technological constraints, although both the community and EA are working on this aspect. To create insight into the experience of designing ecomods and highlight the anti-capitalist and postcolonial angle within the climate crisis *Sims 4* ecomodding discourse, I finalised this thesis’ inquiry by creating and contextualising two new ecomods.

Creating a shared sustainable imaginary is difficult, because there are so many angles that have to be considered in developing it and what constitutes as ‘an imaginary’ differs a lot depending on the definition. Even products and trends that seem sustainable at first glance can hide deeper problems. Furthermore, it requires addressing several difficult political issues, which is something large studios tend to shy away from because they fear alienating customers. Using elements already present within the game, modders have already criticised capitalism, but many of the frictions of capitalism are absent from the simulation due to simplification and abstraction. Without the friction of supply chains within the game, it’s hard to discuss decarbonising and decommodifying different sectors. For example, it’s difficult to discuss excess waste management when the game does not simulate more than household trash cans and generically placed dumpsters. Changing underlying mental models using *The Sims 4* as a critical tool would thus also require re-establishing that friction. On this basis, it would then also become easier to include the call to mobilise the working class, which in turn could be a springboard to mobilise *The Sims*’ fans. At the same time, it is also important to acknowledge where that friction comes from, and get to the root of several problems. ‘Capitalism’ as a root cause remains vague, when it has been acknowledged that a mere 20 corporations are responsible for a third of all carbon emissions since 1965,⁴²³ and 100 companies for 71% of all emissions since 1988.⁴²⁴ ‘Solving’ this immediate threat is a major undertaking, but only part of the work on the road to a sustainable future. We need to develop new frames, new ideas, new imageries, and new imaginaries. Visual exploration is what *The Sims 4* excels at, although there are still some accessibility and customisation issues such as the lack of a world creation function and *The Sims 4*’s predisposition towards detached houses. The ability to create custom content, recolour existing materials, and design new housing allows for challenging existing frames and bringing new ideas into the discourse such as natural pools and steampunk imagery.

As with any research project, I have not been able to touch upon every possible angle of this topic. That is why further research could pick up on the following three topics. First, a new angle into following research could be that of transitional justice. I have not been able to address this aspect because this thesis has addressed the search for sustainable imaginaries, while transitional justice could be used to address ethical and moral implications of transitioning into these sustainable futures once those goals are set. Sustainable imaginaries will help society set goals to work towards, but rethinking economic and social systems will require major change. For example, people in the working class who are dependent on the jobs provided by the oil industry will need to be relocated.

⁴²³ Matthew Taylor and Jonathan Watts, “Revealed: the 20 firms behind a third of all carbon emissions,” *The Guardian*, October 9, 2019, <https://www.theguardian.com/environment/2019/oct/09/revealed-20-firms-third-carbon-emissions>.

⁴²⁴ Huber, “Ecological Politics for the Working Class.”

Since sustainable imaginaries are emphasised as *actionable* plans, transitional justice could provide further insight into this aspect.

Second, I have not been able to address that modding is often regarded as a form of ‘playbour’ (playful labour) that creates value for the developers, while the modders themselves are often unpaid or only receive community donations. This trend is an example of the capitalist trend of the commodification of our leisure time. EA definitely profits off having an active community, which they acknowledged within their reports, and showcased on their social media.⁴²⁵ Although some modders have quietly been hired,⁴²⁶ the great majority is unpaid. Future research could pick up this phenomenon by contextualising it against EA’s recent controversial decision to ban all paid and early-access paid mods.⁴²⁷

Third, I have not been able to address that *The Sims*’ community is also known for often engaging in ‘dark play,’ a play style that is characterised by being problematic, subversive, controversial, deviant, or tasteless,⁴²⁸ which could be capitalised upon to create engaging narratives and spreadable content. In my research, I have focussed on upholding a positive impact on the climate, such as greening the Eco Footprint and addressing overconsumption. The angle of dark play could instead focus on the aspects that have a negative impact upon the (game) world, such as the industrial side of the Eco Footprint and mods that actually promote unsustainable living.

All in all, ecomodding might still be in its infancy, but it’s showing great promise as an alternative way to communicate the climate crisis’ urgency, possible solutions, and ideas regarding to new sustainable futures. *The Sims 4*’s players have shown an increasingly growing interest in this topic, and with the proper additional support this phenomenon could grow to become an organised movement dedicated to imagining and trying out new ways of living sustainably.

⁴²⁵ TheSims, “Happy 21st! 21 years, 21 pieces of content! Created for the community, by the community!” Instagram, February 25, 2021, <https://www.instagram.com/p/CLuXiciFHAJ/>.

⁴²⁶ Nightside-Rush, “Our first look at body hair! Finally!”, Reddit, June 30, 2022, https://www.reddit.com/r/Sims4/comments/voat2q/our_first_look_at_body_hair_finally/.

⁴²⁷ James Troughton, “The Sims 4 Bans Paid Mods,” TheGamer, August 2, 2022, <https://www.thegamer.com/the-sims-4-bans-paid-mods/>.

⁴²⁸ Jonas Linderoth and Torill Elvira Mortensen, “Dark Play: The Aesthetics of Controversial Playfulness,” in *The Dark Side of Game Play: Controversial Issues in Playful Environments* ed. Torill Elvira Mortensen, Jonas Linderoth, and Ashley ML Brown (New York, London: Routledge, 2015), 5.

Image Credit

Figure 1: López, Antonio. *Ecomedia Literacy: Integrating Ecology into Media Education*. New York, London: Routledge, 2021.

Figure 2: Screenshot of *The Sims 4*, taken by author.

Figure 3: Screenshot of *The Sims 4*, taken by author.

Figure 4: Screenshot of *The Sims 4*, taken by author.

Figure 5: Screenshot of *The Sims 4*, taken by author.

Figure 6: Screenshot of *The Sims 4*, taken by author.

Figure 7: Screenshot of *The Sims 4*, taken by author.

Figure 8: Screenshot of *The Sims 4*, taken by author.

Figure 9: Screenshot of *The Sims 4*, taken by author

Figure 10: [Illustration of Tesla's tower, Long Island Laboratory, New York], undated, Silver gelatin on paper. Smithsonian Institution, Washington. <https://sova.si.edu/details/NMAH.AC.0047#ref745>.

Figure 11: Screenshot of *The Sims 4*, taken by author.

Bibliography

Abbey-Lambertz, Kate. "A 'Smog Vacuum' Will Clean China's Air, Turning Pollution into Jewelry." *Huffpost*, September 29, 2016. https://www.huffpost.com/entry/smog-free-tower-beijing-air-pollution_n_57ed6e0ae4b0c2407cdcbaae.

Act!onAid. *Human Rights in Wind Turbine Supply Chains: Towards a truly sustainable energy transition*. January 2018.

Adams, Tony E., Carolyn Ellis, and Stacy Holman Jones. "Autoethnography." In *The International Encyclopedia of Communication Research Methods* edited by Jörg Matthes, Christine Davis, and Robert Potter (Hoboken, Wiley-Blackwell: 2017), 3.

Aleksandar Furtula Associated Press. "Road to Future: Dutch province unveils solar bicycle path." *abc News*, July 14, 2021. <https://abcnews.go.com/International/wireStory/road-future-dutch-province-unveils-solar-bicycle-path-78845107>.

Angeles, Ly de, Emma Restall Orr, and Thom van Dooren. *Pagan Visions for a Sustainable Future*. Woodbury: Llewellyn Publications: 2005.

Arnie. "Arnie's Mods." *Patreon*, October 31, 2021. <https://www.patreon.com/posts/58119687>.

Bailey, Dustin. "The Sims developer Maxis is working on its first new IP in a decade." *PCGamesn*, August 26, 2019. <https://www.pcgamesn.com/the-sims-4/maxis-new-game>.

Ballard, Su, Zita Joyce, and Lizzie Muller. "Editorial Essay." *The Fiberculture Journal* 20 (2012): 1-9.

- Bogost, Ian. *Persuasive Games: The Expressive Power of Video Games*. Cambridge, London: The MIT Press, 2007.
- Bohunicky, Kyle. "Ecomods: An Ecocritical Approach to Game Modification." *Ecozona* 8, no. 2. (2017): 72-87.
- Boluk Stephanie, and Patrick Lemieux. *Metagaming: Playing, Competing, Spectating, Cheating, Trading, Making, and Breaking Videogames*. Minneapolis, London: University of Minnesota Press, 2017.
- Cambridge Dictionary. "Offset." Last accessed June 8, 2022. <https://dictionary.cambridge.org/dictionary/english/offset>.
- Carl's Sim Guides. "It is too Easy: A New Attempt to Fix The Sims 4's Difficulty." YouTube, November 4, 2021. <https://www.youtube.com/watch?v=Km2jLVfLtY>.
- Carl's Sim Guides. "The Sims is Destroying its Reputation with Some of Its Biggest Fans." YouTube, March 19, 2021. <https://youtu.be/kC2fda9k0yc?t=1>.
- Carras, Megan Elizabeth. "'Tiny House, Big Impact?': An Investigation Into the 'Rise' of the Tiny Home Lifestyle (THL) in the United States, PhD Diss. University of St. Andrews, 2019.
- Chan, Jamie. *Learn Python in One Day and Learn It Well: Python for Beginners with Hands-on Project*. Sctoss Valley, CreateSpace Independent Publishing, 2005.
- Cheney, Margaret. *Tesla: Man Out of Time*. New York: Touchstone, 2001.
- CmarNYC. "TS4 Morphmaker – updated to V4.4.1 on 3/22/2022." Mod The Sims, June 4, 2018. <https://modthesims.info/d/613061/ts4-morphmaker-updated-to-v4-3-on-6-9-2020.html>.
- Cooper, Dalton. "Electronic Arts Ranks 5th on List of Most Hated Companies." GameRant, February 1, 2018. <https://gamerant.com/electronic-arts-most-hated-company-2018/>.
- Cortez, Arturo, Ashieda McKoy, and José Ramón Lizárraga. "The Future of Young Blacktivism, Aesthetics and Practices of Speculative Activism in Video Game Play." *Journal of Future Studies* 26, No. 3. (2022): 53-70.
- Crawford, R. H. and A. Stephan. "Tiny house, tiny footprint? The potential for tiny houses to reduce residential greenhouse gas emissions." Paper presented at the IOP Conference Series: Earth and Environmental Science 2020.
- Cubitt, Sean. "Ecomedia Futures," *International Journal of Media and Culture Politics* 10, No. 2 (June 2014): 1-9.
- Đekić, Jelena P., Petar B. Mitkoić, Milena M. Dinić Brankoivić, Milica Z. Igić, Petal S. Đekić, and Mihailo P. Mitković. "The Study of Effects of Greenery on Temperature Reduction in Urban Areas." *Thermal Science* 22, no. 4 (2018): 1-12. DOI:[10.2298/TSCI170530122D](https://doi.org/10.2298/TSCI170530122D).
- Dyer-Withford, Nick, and Greg de Peuter. "'EA Spouse' and the Crisis of Video Game Labour: Enjoyment, Exclusion, Exploitation, Exodus." *Canadian Journal of Communication* 31 (2006): 599-617.
- Dyer-Withford, Nick, and Greig de Peuter. *Games of Empire: Global Capitalism and Video Games*. Minneapolis: University of Minnesota Press, 2009.
- EA. "2021: A year Powered by Video Games." December 16, 2021. <https://www.ea.com/en-gb/news/2021-year-in-gaming>.

EA. "People and Culture." Last accessed May 18, 2022. <https://www.ea.com/commitments/people-and-culture>.

EA. "Protect Your Crown." February 2, 2022. <https://www.ea.com/nl-nl/games/the-sims/the-sims-4/news/protect-your-crown-february-2nd-2022>.

EA. "Protecting the Environment." Last accessed May 17, 2022. <https://www.ea.com/commitments/environment>.

EA. "The Sims 4, Available September 2, 2014." June 9, 2014. <https://ir.ea.com/press-releases/press-release-details/2014/The-Sims-4-Available-September-2-2014/default.aspx>.

EA. "The Sims 4." Last accessed June 21, 2022. <https://www.ea.com/en-au/games/the-sims/the-sims-4>.

EA. "The Sims 4: Eco Lifestyle." Last accessed on April 22, 2022. <https://www.ea.com/en-gb/games/the-sims/the-sims-4/packs/expansion-packs/the-sims-4-eco-lifestyle?setLocale=en-gb>.

Electronic Arts Inc. "2022 Form 10-K Annual Report." Submitted to the United States Securities and Exchange Commission.

Electronic Arts Inc. *EA Impact Report 2020*. Redwood City: Electronic Arts, 2020.

Essig, Laurie. "Fine diving: Young anarchists with guts of steel raid dumpsters for edible "trash." The idea? Divert waste to end wastefulness." *Salon*, June 10, 2002. https://www.salon.com/2002/06/10/edible_trash/.

Fandom Forward. "Help Turn Fans into Heroes." Last accessed January 12th 2022. <https://fandomforward.org/>.

Fernandez-Vara, Clara. *Introduction to Game Analysis*. New York, London: Routledge, 2019.

Flanagan, Mary. *Critical Play: Radical Game Design*. Massachusetts: The MIT Press, 2009.

Fleur, Abdah St, and Jennifer deWinter. "Unfiltered and True to Itself" How Content Creators Represent the Black Community in *The Sims 4*." *American Journal of Play* 13, No. 2/3 (Winter/Spring 2021): 297 – 319.

Florentin, Yaakov, David Pearlmutter, Baruch Givoni, and Erez Gal. "A life-cycle energy and carbon analysis of hemp-lime bio-composite building materials." *Energy and Buildings* 156 (December 2017): 293-305. <https://doi.org/10.1016/j.enbuild.2017.09.097>.

Frasca, Gonzalo. "Rethinking agency and immersion: video games as a means of consciousness-raising." *Digital Creativity* 12, no. 3 (2001), 167-174.

FrolickingGnomes and Siminicricket. "Tiny Living Legacy Challenge." Google Drive. Last accessed August 2, 2022. https://docs.google.com/document/d/1bPJK-9lKhQib-b3U5r9ha18ORB_8NKpIKXe7w5mn47l/edit.

Galloway, Alexander. *Gaming: Essays on Algorithmic Culture*. Minneapolis, London: University of Minnesota Press, 2006.

Gendron, Corinne, Silvester Invanaj, Bernard Girard, and Marie-Luc Arpin, "Science-fiction literature as inspiration for social theorizing within sustainability research." *Journal of Cleaner Production* 164 (October 2017): 1553-1562.

- Genus, Audly, Marfuga Iskandarova, Gary Goggins, Frances Fahy, and Senja Laakso. "Alternative energy imaginaries: Implications for energy research, policy integration and the transformation of energy systems." *Energy Research & Social Science* 73 (2021): 1-9.
<https://doi.org/10.1016/j.erss.2020.101898>
- Germaine Chloe, and Paul Wake. "Hacking at the Orchard: A Methodology for Games Imagining the Future." Paper presented at Ecogames Symposium, Utrecht, Netherlands, October 12-13 2021.
- Ghosh, Amitav. "Amitav Ghosh: where is the fiction about climate change?" *The Guardian*, October 28, 2016. <https://www.theguardian.com/books/2016/oct/28/amitav-ghosh-where-is-the-fiction-about-climate-change->.
- Ghosh, Amitav. *The Nutmeg's Curse: Parables for a Planet in Crisis*. London, Penguin Books, 2021.
- Goody, Jack. *Capitalism and Modernity: The Great Debate*. Cambridge, Malden: Polity Press, 2004.
- Guattari, Felix. *The Three Ecologies*. Translated by Ian Pindar and Paul Sutton. London, New Brunswick: The Athlone Press, 2000.
- Gurley, Lauren Kaori. "Amazon to Open \$21 Million State-of-the-Art Warehouse in Tijuana Slum." *Vice*, September 7, 2021. https://www.vice.com/en/article/pkb9qn/amazon-to-open-dollar21-million-state-of-the-art-warehouse-in-tijuana-slum?utm_source=VICE_Twitter&utm_medium=social.
- Hanabi, June. "The Sims 4 Modern Python Modding: Part 1 – Setup." *GitConnected*, September 21, 2020. <https://levelup.gitconnected.com/the-sims-4-modern-python-modding-part-1-setup-83d1a100c5f6>.
- Hansen, Mark B. N. "New Media." In *Critical Terms for New Media Studies*, edited by W. J. T. Mitchell and Mark Hansen, 172 – 185. Chicago, London: The University of Chicago Press, 2010.
- Hardt, Michael, and Antonio Negri. *Multitude: War and Democracy in the Age of Empire*. New York: The Penguin Press, 2004.
- Hauer, Thomas. "Technological determinism and new media." *International Journal of English, Literature, and Social Science (IJELS)* 2, no. 2 (April 2017): 1-4.
- Heijden, Lizzy van der. "Dit zijn de leukste challenges voor de Sims 4." *XGN*, June 21, 2020. <https://www.xgn.nl/artikel/dit-zijn-de-leukste-challenges-voor-de-sims-4>.
- Helman, Christopher. "How Green is Wind Power, Really? A New Report Tallies Up The Carbon Cost of Renewables." *Forbes*, April 28, 2021. <https://www.forbes.com/sites/christopherhelman/2021/04/28/how-green-is-wind-power-really-a-new-report-tallies-up-the-carbon-cost-of-renewables/?sh=139831d873cd>.
- Hernández-López, Daniela-Abigail, Rasikh Tariq, Amina El Mekaoui, A. Bassam, M. Vega De Lille, Luis J. Ricalde, and I. Riech. "Does recycling solar panels make this renewable resource sustainable? Evidence supported by environmental, economic, and social dimensions." *Sustainable Cities and Society* 77 (2022): 1-18. <https://doi.org/10.1016/j.scs.2021.103539>.
- Hinck, Ashley. "Ethical Frameworks and Ethical Modalities: Theorizing Communication and Citizenship in a Fluid World." *Communication Theory* 26 (2016): 1-20.
- Holzbaur, Ulrich D. "EcoGames – Simulation Games and Sustainable Development." *Sustainability in the Information Society: 15th International Symposium Informatics for Environmental Protection, Zurich 2001*, edited by Lorenz M. Hilty and Paul. W. Gilgen. Marburg: Metropolis Verlag, 2001.

- Huber, Matt T. "Ecological Politics for the Working Class." *Catalyst* 3, no. 1 (Spring 2019).
<https://catalyst-journal.com/2019/07/ecological-politics-for-the-working-class>.
- Huggan, Graham. "'Greening' Postcolonialism: Ecocritical Perspectives." *MFS Modern Fiction Studies* 50, no. 3 (Fall 2004): 701-733.
- Humble, Rod. "The Marriage." *Rod Games*. Last accessed 25 July, 2022.
<http://www.rodvik.com/rodgames/marriage.html>.
- Hunt, Kristin. "Can Swimming Pools Be Sustainable?" *GreenMatters*, May 31, 2019.
<https://www.greenmatters.com/home/2018/07/15/1fxq0w/sustainable-natural-swimming-pool>.
- Icemunmun. "Harvestables." *icemunmun*, last updated April 16, 2022.
<https://icemunmun.in/harvestables/>.
- Jaeger, Michael. "Tesla and wireless energy: the power that could have been." *The Washington Times*, December 31, 2014. <https://www.washingtontimes.com/news/2014/dec/31/tesla-and-wireless-energy-power-could-have-been/>.
- Jameson, Fredric. "Future City." *New Left Review* 21 (May/June 2003): 65-79.
- Jenkins, Henry. "Confronting the Challenges of Participatory Culture: Media Education for the 21st Century (Part One)." *HenryJenkins.org*, October 19, 2006,
http://henryjenkins.org/blog/2006/10/confronting_the_challenges_of.html.
- Jenkins, Henry, Sam Ford, and Joshua Green. *Spreadable Media: Creating Value and Meaning in a Networked Culture*. New York, London: New York University Press, 2013.
- Jenkins, Henry. *Textual Poachers: Television fans and participatory culture*. London, New York: Routledge, 1992.
- Jones, Shelly. "Simulated Ableism: *The Sims* and the Lack of Disability Representation." In *Women and Video Game Modding: Essays on Gender and the Digital Community*, edited by Bridget Whelan, 90-113. Jefferson: McFarland & Company, 2020.
- Jovan. "THE SIMS 5: EA's Director of Studios talks about the next generation Sims Game." *SimsCommunity*, April 30, 2021. <https://simscommunity.info/2021/04/30/the-sims-5-eas-director-of-studios-talks-about-the-next-generation-sims-game/>.
- Juul, Jesper. "Sailing the Endless River of Games: The case for Historical Design Patterns." Paper presented at the 1st International Joint Conference of DiGRA and FDG 2016.
<https://www.jesperjuul.net/text/endlessriverofgames/>.
- Kallis, Giorgos. *Degrowth*. Newcastle Upon Thyne: Agenda Publishing, 2018.
- Kaufman, Mark. "The carbon footprint sham: A 'successful, deceptive' PR campaign." *Mashable*, July 13, 2020. <https://mashable.com/feature/carbon-footprint-pr-campaign-sham>.
- Kavanagh, Donncha, Kieran Keohane, and Carmen Kuhling. "Reading Star Trek: Imagining, Theorizing, and Reflecting on Organizational Discourse and Practice." In *Science Fiction and Organization*, edited by Warren Smith, Matthew Higgins, Martin Parker, and Geoff Lightfoot, 125-142. London, New York: Routledge, 2001.
- KBFoodlover. "[FIXED] [ECO] Issues with Eco Footprint Changes." *EA Answers HQ*, June 6, 2020.
<https://answers.ea.com/t5/Bug-Reports/FIXED-ECO-Issues-with-Eco-Footprint-Changes/td-p/9180818>.

Kline, Stephen, Nick Dyer-Witheford, and Greig de Peuter. *Digital Play: The Interaction of Technology, Culture, and Marketing*. Montreal: McGill-Queen's University Press, 2003.

Ky-e. "Lifetime Aspirations v.05." Mod The Sims, October 27, 2020. <https://modthesims.info/d/648717/lifetime-aspirations-v-05.html>.

Lakoff, George. *Don't Think of an Elephant: know your values and frame the debate*. White River Junction: Chelsea Green Publishing, 2014.

Lakoff, George. "Why it Matters How We Frame the Environment." *Environmental Communication* 4, no. 1 (2010): 70-81.

Lantero, Allison. "The War of the Currents: AC vs. DC Power." Energy.gov, November 18, 2014. <https://www.energy.gov/articles/war-currents-ac-vs-dc-power>.

LeGardePourpre. "Industrial Eco Footprint : Mission Impossible." The Sims, June 6, 2020. https://forums.thesims.com/en_Us/discussion/976886/industrial-eco-footprint-mission-impossible.

Lehtonen, Turo-Kimmo and Olli Pyyhtinen. "Living on the margins: dumpster fiving for food as a critical practice." *Distinktion: Journal of Social Theory* 22, no. 3 (February 2021): 441-463.

Lewis, Tania, and Emily Potter. *Ethical Consumption: A Critical Introduction*. London, New York: Routledge, 2011.

Linderoth, Jonas, and Torill Elvira Mortensen. "Dark Play: The Aesthetics of Controversial Playfulness." In *The Dark Side of Game Play: Controversial Issues in Playful Environments* edited by Torill Elvira Mortensen, Jonas Linderoth, and Ashley ML Brown. New York, London: Routledge, 2015.

Longhurst, Noel and Jason Chilvers. "Mapping Diverse Visions of Energy Transitions: Co-producing Sociotechnical Imaginaries." *Sustainability Science* 14, no. 4 (June: 2019): 973-990.

López, Antonio. *Ecomedia Literacy: Integrating Ecology into Media Education*. New York, London: Routledge, 2021.

Markoff, John. "Something is Killing the Sims, and It's No Accident." The New York Times, April 27, 2000. <https://www.nytimes.com/2000/04/27/technology/something-is-killing-the-sims-and-it-s-no-accident.html>.

Marleyyy. "Why The Sims 4 Is A Major Disappointment (and Why You Might Not Want To Purchase It." Reddit, September 2, 2014. https://www.reddit.com/r/gaming/comments/2f9jm0/why_the_sims_4_is_a_major_disappointment_and_why/.

Mattlin, Mikael. "Adapting the DIPLOMACY Board Game Concept for 21st Century International Relations Teaching." *Simulation & Gaming* 49, no. 6 (2018): 735-750. DOI: 10.1177/1046878118788905

Maxis. *The Sims 4: Seasons*, Electronic Arts, Microsoft Windows, MacOS, PlayStation 4, Xbox One, 2014.

McArthur, Victoria, and Robert J. Teather. "Serious Mods: A Case for Modding in Serious Games Pedagogy." 2015 IEEE Games Entertainment Media Conference (GEM), Toronto, Canada, 14-16 October 2015. DOI: [10.1109/GEM.2015.7377224](https://doi.org/10.1109/GEM.2015.7377224).

McCready, Samuel. "Playing the Past and Alternative Futures: Counterfactual History in Fallout 4." *Loading* 12, no. 20 (2019): 15-34.

Meadows, Donella. "Leverage Points to Intervene in a System." The Donella Meadows Project: Academy for Systems Change, 1999. <https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>.

Meadows, Donella. *The Global Citizen*. Washington, Covelo: Island Press, 1991.

Mia, Cara. "Sims "Realm of Magic" & Being A Witch/Pagan IRL. YouTube, September 7, 2019. <https://www.youtube.com/watch?v=yyNKC8pIVc4>.

Mod the Sims. "Mod the Sims." Last accessed June 2, 2022. <https://modthesims.info/>.

Moore, Jason W. "The Capitalocene, Part I: On the nature and origins of our ecological crisis." *The Journal of Peasant Studies* 44, no. 3 (2017): 594-630. <https://doi.org/10.1080/03066150.2016.1235036>.

Moosdorff Carien, and Joost Vervoort. "How to push which button: Understanding the potential of climate games through the lens of social action theories." Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), 2021.

Morton, Timothy. *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis, London: University of Minnesota Press, 2013.

Ms Blue. "Skintone Set V3." The Sims Resource, July 16, 2016. <https://www.thesimsresource.com/downloads/details/category/sims4-skintones/title/skintone-set-v3/id/1346781/>.

Mukherjee, Souvik. *Videogames and Postcolonialism: Empire Plays Back*. Cham: Palgrave Macmillan, 2017.

MychQQQ. "Old Factory." The Sims Resource, June 25, 2021. <https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/old-factory/id/1549883/>.

Nabiilah, Nahda. "8 Fun Build Challenges In The Sims 4." GameRant, June 20, 2022. <https://gamerant.com/sims-4-fun-build-challenges/>.

Nasa. "The Effects of Climate Change." Last accessed January 11th 2022. <https://climate.nasa.gov/effects/>.

Naus-BDF. "Things that are STILL missing after SIX years in the Sims 4 that were in ALL previous BASE GAMES." Reddit, August 29, 2020. https://www.reddit.com/r/thesims/comments/iit1xu/things_that_are_still_missing_after_six_years_in/.

Navarro-Remesal, Victor. "Pixelated nature: ecocriticism, animals, moral consideration, and degrowth in videogames." *Logos* 26. No. 2 (2019): 13-26.

Neia. "Welcome to the Create-A-Career Beta." Create-A-Career, July 19, 2017. <http://simneia.fr/>.

Nexus Mods. "The Sims 4." Last accessed June 2, 2022. <https://www.nexusmods.com/thesims4>.

Nicholls, Elizabeth, Adrian Ely, Linda Birkin, Parthiba Basu, and Dave Goulson. "The contribution of small-scale food production in urban areas to the sustainable development goals: a review and case study." *Sustainability Science* 15 (2020): 1585-1599.

Nightside-Rush. "Our first look at body hair! Finally!!" Reddit, June 30, 2022. https://www.reddit.com/r/Sims4/comments/voat2q/our_first_look_at_body_hair_finally/.

Nisen, Max. "EA's Been Voted 'The Worst Company in America' Once Again." BusinessInsider, April 10, 2013. <https://www.businessinsider.com/ea-voted-worst-company-in-america-2013-4?international=true&r=US&IR=T>.

Oliveira Miguel José, Fátima Farinha, Armando Inverno, Jânio Monteiro, Cristiano Cabrita, and Adelino Venturinha. "Sustainability Challenges in Outdoor Swimming Pools." In *New Technologies in building and construction: towards sustainable development*, edited by David Bienvenido-Huertas and Juan Moyano-Campos, 321-335. Singapore: Springer, 2022.

Ölvecký, Miroslav, and Darja Gabriska. "Relationships Between Game Attributes and Cognitive Abilities." In *2018 16th International Conference on Emerging eLearning Technologies and Applications (ICETA)*. DOI: [10.1109/ICETA.2018.8572254](https://doi.org/10.1109/ICETA.2018.8572254).

Parham, John. *Green Media and Popular Culture: An Introduction*. London, New York: Palgrave Macmillan, 2016.

Paul Tassi. "EA Voted Worst Company in America, Again." Forbes, April 9, 2013. <https://www.forbes.com/sites/insertcoin/2013/04/09/ea-voted-worst-company-in-america-again/?sh=487539e57aeb>.

Peach, Sara. "What's the carbon footprint of a wind turbine?" Yale Climate Connections, June 30, 2021. <https://yaleclimateconnections.org/2021/06/whats-the-carbon-footprint-of-a-wind-turbine/>.

Pearce, Celia, and Artemesia. *Communities of Play: Emergent Cultures in Multiplayer Media*. Cambridge, London: The MIT Press, 2009.

Penney, Veronica. "Think You're Making Good Climate Choices? Take This Mini-Quiz." The New York Times, August 30, 2020. <https://www.nytimes.com/interactive/2020/08/30/climate/climate-footprint-quiz.html>.

Playing for the Planet. "Members and Commitments." Last accessed May 30, 2022. <https://playing4theplanet.org/members>.

Playing for the Planet. *Playing for the Planet Annual Impact Report 2021*. Nairobi: United Nations Environment Programme, 2022.

Plumbobkingdom. "NO CC – Old Factory (Community Garden)." Mod The Sims, September 3, 2021. <https://modthesims.info/d/660019/no-cc-old-factory-community-garden.html>.

Price, Ludovica. "The Sims: A Retrospective." *Intensities: The Journal of Cult Media* 7 (August 2014): 135-140.

Ratcliff, Carl. "The Sims 4 Conservationist Career." Carls Sims 4 Guide, June 21, 2019. <https://www.carls-sims-4-guide.com/careers/islandliving/conservationist/>.

Reina-Rozo, Juan David. "Art, energy, and technology: the Solarpunk Movement." *International Journal of Engineering, Social Justice, and Peace* 8, no. 1 (2021): 47-60.

Rivera, Julio L. and Amrine Lallmahomed. "Environmental implications of planned obsolescence and product lifetime: a literature review." *International Journal of Sustainable Engineering* 9, no. 2 (2016): 119-129. <http://dx.doi.org/10.1080/19397038.2015.1099757>.

Ross, Joel, Nitin Shantharam, and Bill Tomlinson. "Collaborative filtering and carbon footprint calculation." Paper presented at the 2010 IEEE International Symposium on Sustainable Systems and Technology, Arlington, 17-19 May 2010. DOI: [10.1109/ISSST.2010.5507742](https://doi.org/10.1109/ISSST.2010.5507742).

Ruffino, Paolo. "The End of Capitalism: Disengaging From the Economic Imaginary of Incremental Games." *Games and Culture* 16, no. 2 (2019): 208-227. DOI: 10.1177/1555412019886242

Saavedra, John. "The Perpetual Downward Spiral of EA: How They Descended Into A Hot Dumpster Fire of Failure." Ranker, February 15, 2018. <https://www.ranker.com/list/why-people-hate-ea/john-saavedra>.

Savybaby93. "We NEED an Extreme Weather/Natural Disaster MOD." Reddit, February 26, 2021. https://www.reddit.com/r/Sims4/comments/lsw2h/we_need_an_extreme_weathernatural_disaster_mod/.

Schendler, Auden. "Worrying About Your Carbon Footprint Is Exactly What Big Oil Wants You to Do." *The New York Times*, August 31, 2021. <https://www.nytimes.com/2021/08/31/opinion/climate-change-carbon-neutral.html>.

Schreier, Jason. "EA Shuts Down *SimCity* Developer Maxis." Kotaku, March 4, 2015. <https://kotaku.com/ea-shuts-down-simcity-developer-maxis-1689454903>.

SEGMagnetics. "Spatial or Searl Effect Generator (SEG)." Last accessed June 20, 2022. <https://segmagnetics.com/seg/>.

SelenophilicSapphic. "Whats with the eco footprint??" Reddit, June 8, 2020. https://www.reddit.com/r/thesims/comments/gyy2ui/whats_with_the_eco_footprint/.

Shantz, Jeff. "One Person's Garbage... Another Person's Treasure: Dumpster Diving, Freeganism, and Anarchy." *Verb* 3, no. 1 (August 2005): 9-19.

Sicart, Miguel. "Family Values: Ideology, Computer Games & *The Sims*." Paper presented at the Digital Games Research Conference, Utrecht University, Utrecht, 4-6 November 2003. <http://www.digra.org/wp-content/uploads/digital-library/05150.09529.pdf>.

Sihvonen, Tanja. *Players Unleashed! Modding The Sims and the Culture of Gaming*. Amsterdam: Amsterdam University Press, 2011.

SilentSpy0. "Neighborhood Action Plan Mod Ideas." *The Sims*, June 17, 2020. https://forums.thesims.com/en_us/discussion/977552/neighborhood-action-plan-mod-ideas.

SilentSpy0. "Neighborhood Action Plan Mod Ideas." *The Sims*, June 17, 2020. https://forums.thesims.com/en_us/discussion/977552/neighborhood-action-plan-mod-ideas.

Silverman, David. *A Very Short, Fairly Interesting and Reasonably Cheap Book About Qualitative Research*. London: Sage, 2013.

SimGuru Graham. "Stuff Pack Name & Icon Vote Results!" *The Sims Forum*, September 15, 2017, https://forums.thesims.com/en_US/discussion/925209/stuff-pack-name-icon-vote-results/p1.

SimGuru Graham. "Stuff Pack Object Vote Results." *The Sims Forum*, June 4, 2017. https://forums.thesims.com/en_US/discussion/919337/stuff-pack-object-vote-results.

SimGuru Graham. "You Chose the Eco Living Theme! Now Pick an Art Style." *TheSims4.com*, April 11, 2017. <https://www.ea.com/games/the-sims/the-sims-4/news/sims-4-community-pack-style>.

SimGuruGeorge. "The Sims 4 Eco Lifestyle Livestream." Twitch, May 20, 2020. <https://www.twitch.tv/videos/627750429>.

Sims 4 Modding. "Sims 4 Mods." Last accessed June 2, 2022. <http://www.sims4modding.com/>.

Sims4multiplayer. "Sims 4 Multiplayer Mod." Mod The Sims, June 29, 2019. <https://modthesims.info/d/629316/sims-4-multiplayer-mod.html>.

Sims 4 Studio. "Home." Last accessed June 8, 2022. <https://sims4studio.com/>.

Sims4Group. "The Sims 4: Package Editor." Softonic, last accessed June 8, 2022. <https://the-sims-4-package-editor.en.softonic.com/>.

SimsLegacyChallenge. "The Sims Legacy Challenge." Last accessed July 10, 2022. <https://simslegacychallenge.com/the-sims-4-legacy-challenge-rules/>.

SimsWiki. "Game Engine." Last Accessed June 8, 2022. https://sims.fandom.com/wiki/Game_engine.

SnarkyWitch. "The Sims 4 Eco Lifestyle: Civil Designer Career Overview." SimsCommunity, June 9, 2020. <https://simscommunity.info/2020/06/09/the-sims-4-eco-lifestyle-civil-designer-career-overview/>.

Stalberg, Allison. "Every Studio Ghibli Movie Ranked Least to Most Cottagecore." Screenrant, November 29, 2020. <https://screenrant.com/studio-ghibli-movie-ranked-cottagecore/>.

Stallwood, Kim. "Topsy: The Elephant We Must Never Forget." In *Animal Biography: re-framing animal lives*, edited by André Krebber and Mieke Rosher, 227-242. Cham: Palgrave MacMillan, 2018.

Steph. "Let Sims 4 Upgrade You: How to Use Upgrade Parts." SNOOTYSIMS, April 29, 2022. <https://snootysims.com/wiki/sims-4/let-sims-4-upgrade-you-how-to-use-upgrade-parts/>.

Stylianou, Nassos, Clara Guibourg, and Helen Briggs. "Climate change food calculator: What's your diet's carbon footprint?" BBC, August 9, 2019. <https://www.bbc.com/news/science-environment-46459714>.

Summers, Nik. "The socioeconomic concentration of intensive production interest: Lessons learned from the tiny home community." *Journal of Consumer Culture* 22, no. 2 (2022): 476-494.

Süngü, Ertuğrul. "Gender Representation and Diversity in Contemporary Video Games." In *Game User Experience And Player-Centered Design*, edited by Barbaros Bostan, 379-393. Cham: Springer, 2020.

Taormina, Anthony. "Electronic Arts Wins 'Worst Company in America' title for 2nd Year." GameRant, April 9, 2013. <https://gamerant.com/electronic-arts-worst-company-america/>.

Taylor, Ivy. "Can game makers rise to meet the challenge of climate change?" Gamesindustry.biz, September 27, 2019. <https://www.gamesindustry.biz/articles/2019-09-27-can-game-makers-rise-to-the-challenge-of-climate-change>.

Taylor, Matthew, and Jonathan Watts. "Revealed: the 20 firms behind a third of all carbon emissions." The Guardian, October 9, 2019. <https://www.theguardian.com/environment/2019/oct/09/revealed-20-firms-third-carbon-emissions>.

Temple, James. "The lurking threat to solar power's growth." MIT Technology Review, July 14, 2021. <https://www.technologyreview.com/2021/07/14/1028461/solar-value-deflation-california-climate-change/>.

Tesla, Nikola. "The Transmission of Electric Energy Without Wires." *Electrical World and Engineer*, March 5, 1904. Digitally archived at <https://teslauniverse.com/nikola-tesla/articles/transmission-electric-energy-without-wires>.

Tesla, Nikola. *My Inventions and Other Writings*. New York: Penguin Books, 2011.

The Environmental Humanities at UCLA. "About." Last accessed January 11th 2022. <http://environmental.humanities.ucla.edu/>.

TheFoodGroup. "Custom Food Interactions (Update 12th JUNE, 2022)." Mod The Sims, January 20, 2016. <https://modthesims.info/download.php?t=571010>.

The Nature Conservancy. "Calculate Your Carbon Footprint." Last accessed May 16, 2022. <https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>.

TheSims. "Happy 21st! 21 years, 21 pieces of content! Created for the community, by the community!" Instagram, February 25, 2021. <https://www.instagram.com/p/CLuXiciFHAJ/>.

The Sims. "The Sims 4 Challenges." Last accessed July 10, 2022. https://forums.thesims.com/en_US/categories/the-sims-4-stories-and-legacies.

The Sims. "Welcome to the Forum." Last accessed 11th January 2022. https://forums.thesims.com/en_US/.

The Sims 4 Mods. "Sims 4 Mods." Last accessed June 2, 2022. <https://modssims4.com/>.

The Sims Resource. "Welcome to the Sims Resource." Last accessed June 2, 2022. <https://www.thesimsresource.com/>.

Tolich, Martin. "A Critique of Current Practice: Ten Foundational Guidelines for Autoethnographers," *Qualitative Health Research* 20, vol. 12 (2010): 1599-1610.

Treanor, Mike, Bobby Schweizer, Ian Bogost, and Michael Mateas. "Proceduralist Readings: How to find meaning in games with graphical logics." Paper presented at the 6th International Conference on Foundations of Digital Games, 2011, 115-122.

Triforcemeg. "Island Conservation." IGN, last updated July 19, 2019. https://www.ign.com/wikis/the-sims-4/Island_Conservation.

Troughton, James. "The Sims 4 Bans Paid Mods." TheGamer, August 2, 2022. <https://www.thegamer.com/the-sims-4-bans-paid-mods/>.

TS4News. "89 Features Missing from the Sims 4." August 12, 2014. <https://ts4news.com/post/94541924952/89-features-missing-from-the-sims-4/>.

TURBODRIVER. "Wonderful Whims." Mod The Sims, October 3, 2020. <https://modthesims.info/d/647895/wonderfulwhims.html>.

Turkle, Sherry. *Life on the Screen: Identity in the Age of the Internet*. New York: Touchstone, 1995.

TwistedMexi. "Create-A-World." Patreon, September 24, 2021. <https://www.patreon.com/posts/create-world-faq-56556779>.

United States and Coast Guard. "On Scene Coordinator Report *Deepwater Horizon* Oil Spill, Submitted to the National Response Team September 2011." <https://repository.library.noaa.gov/view/noaa/283>.

Wacha, Radek. "The Best Sims 4 Mods – 2021 Update." GamePressure, September 15, 2021. <https://www.gamepressure.com/editorials/best-sims-4-mods-2019/zb182-10>.

Wackernagel, Mathis, and William E. Rees. *Our Ecological Footprint: Reducing Human Impact on the Earth*. Philadelphia: New Society Publishers, 1996.

- Waller, Mason M. "The History, Drivers, and Social Issues of the Cottagecore Movement." WWU Honors College Senior Projects, 2022, 1-46.
- Wan, Evelyn. "Labour, mining, dispossession: on the performance of earth and the necropolitics of digital culture." *International Journal of Performance Arts and Digital Media* 15, no. 3 (2019): 249-263.
- Webster, Andrew. "The Sims 4's next expansion lets you live an eco-friendly life – or the opposite." The Verge, May 22, 2020. <https://www.theverge.com/2020/5/22/21266488/the-sims-4-eco-lifestyle-expansion-interview>.
- Werning, Stefan. "Understanding and Communicating the Climate Crisis through Ecomodding." *Communication +1* 8, no. 1 (October 2021): 1-27.
- Werning, Stefan. *Making Games: The Politics and Poetics of Game Creation Tools*. London, Cambridge: The MIT Press, 2021.
- Werning, Stefan. "Modding as a Strategy to (De)Legitimize Representations of Religion in the Civilization Game Franchise – A Diachronic Proceduralist Reading." In *Discourses of (De)Legitimization: Participatory Culture in Digital Contexts*, edited by Andrew S. Ross and Damian J. Rivers. London, New York: Routledge, 2019.
- Wilkinson, Lee A. "Systems Theory." In *Encyclopedia of Child Behavior and Development* edited by Sam Goldstein and Jack A. Naglieri. Boston: Springer, 2011. 1466-1468.
- Wilson, Sheena, Adam Carlson, and Imre Szeman. *Petrocultures: Oil, Politics, Culture*. Montreal, Kingston: McGill-Queen's University Press, 2017.
- Winchell, Mike. *The Electric War: Edison, Tesla, Westinghouse, and the Race to Light the World*. New York: Henry Holt and Company, 2019.
- Win-Poole, Wesley. "Now Belgium declares loot boxes gambling and therefore illegal." Eurogamer, April 27, 2018. <https://www.eurogamer.net/now-belgium-declares-loot-boxes-gambling-and-therefore-illegal>.
- Wirman, Hanna. "Regional and Ethnic Diversity in *The Sims* Mods." In *Women and Video Game Modding: Essays on Gender and the Digital Community*, edited by Bridget Whelan 114-125. Jefferson: McFarland & Company, 2020.
- Wong, Nyuk-Hien, and Yu Chen. "The Role of Urban Greenery in High-Density Cities." In *Designing High-Density Cities for Social & Environmental Sustainability*, edited by Edward Ng, 227-262. London, Sterling: earthscan, 2010).
- World Population Review. "Ecological Footprint by Country." Accessed May 20, 2022. <https://worldpopulationreview.com/country-rankings/ecological-footprint-by-country>
- Zerbu. "The Sims 4 Mod Constructor V4." Tumblr, January 6, 2019. <https://zerbu.tumblr.com/post/181782526135/the-sims-4-mod-creator-v4>.
- Zerbu. "The Sims 4 Politics Mod Pack Now Available." SimsCommunity, October 5, 2015. <https://simscommunity.info/2015/10/05/the-sims-4-politics-mod-pack-now-available/>.
- Zhao, Yimu, Gerrett A. Meek, Benjamin G. Levine, and Richard R. Lunt. "Hear-Infrared Harvesting Transparent Luminescent Solar Concentrators." *Advanced Optical Materials* 2, No. 7 (July 2014): 1-6. <https://doi.org/10.1002/adom.201400103>.
- Žižek, Slavoj. *The Universal Exception*. London: Bloomsbury, 2006.

Attachments

Additional Screenshots: Wardencllyffe

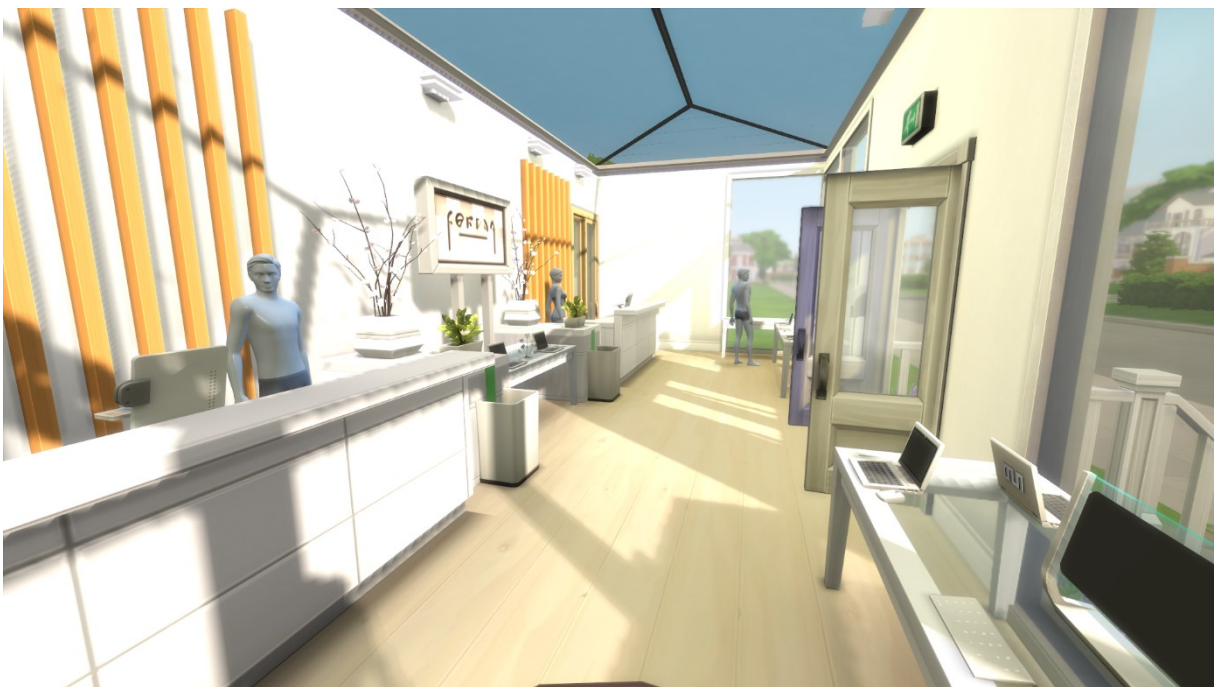


*Figure 2: Wardencllyffe interior.
Screenshot by author.*

Additional Screenshots: Molleindustria's *Phone Story*



*Figure 3: Lot Overview.
Screenshot by author.*



*Figure 4: The Store.
Screenshot by author.*



Figure 5: The Recycling area. Old electronics from the store are sent to be disposed of. Screenshot by author.



Figure 6: The Mines. Children mannequins and skeletons are present. Screenshot by author.



Figure 7: The Factory's First Level. Waste is piled up in excess. Screenshot by author.



Figure 8: The Factory's Second Level. Electronics are made under poor labour conditions. The front yard contains the gravestones of suicides.
Screenshot by author.



Figure 9: The Factory's Third Level. Corporate management overlooks the entire chain.
Screenshot by author.

General Ecomods

This ecomod list displays the list of ecomods thematically. For the chronological overview, please see the “Timeline” section.

Keywords	Mod Websites	Developer Tools
Recycle, trash, waste, eco, sustainable, sustainability, green, phone, car, local, renewable, sustain, thrift, vintage, second hand	The Sims Resource	Sims4Studio
	Sims4Modding	Create-A-Career
	ModTheSims	TS4 MorphMaker
	NexusMods	Sims 4 Package Editor
	Modssims4	XML Extractor
		Sim File Share

#	Title	Date	Author	# Downloads	Link
Miscellaneous					
1	Animated - Placeable Insects - Bee Swarm	22-may-16	Bakie	4.132	https://modthesims.info/d/642629/animated-placeable-insects-bee-swarm.html
2	Overgrown City Skyline	27-may-16	Bakie	2.555	https://modthesims.info/d/577596/overgrown-city-skyline-replacement.html
3	Outdoor Retreat Insect Spawners Unlocked	26-jul-16	Menaceman44	18.893	https://modthesims.info/d/580697/outdoor-retreat-insect-spawners-unlocked.html#epicons_gps_1
4	Animated - Placeable Insects - Jungle Butterflies	18-may-18	Bakie	22.984	https://modthesims.info/d/612239/animated-placeable-insects-jungle-butterflies.html
5	Political Causes Have Realistic Names	2-aug-19	DavidSims4	17.069	https://modthesims.info/d/630970/political-causes-have-realistic-names.html
6	Animated - Flowers + Bumblebees	20-mar-20	Bakie	21.136	https://modthesims.info/d/639423/animated-flowers-bumblebees.html
7	Animated - Placeable Insects - Butterflies IL	5-jun-20	Bakie	-	http://www.sims4modding.com/animated-placeable-insects-butterflies-il/
8	Bug Life Mod: All Bugged Out	30-jul-20	lot51	-	http://www.sims4modding.com/bug-life-mod-all-bugged-out/
9	Eco Dumpster Recolour	1-jan-22	Lulu The Cute Sim	333	https://modthesims.info/d/663443/eco-dumpster-recolor.html

Exterior Decorating Mods					
Trends: Recolours, Visual redesigns					
10	Forestgreen roof	17-nov-15	artrui	7.954	https://modthesims.info/d/567545/forestgreen-roof.html
11	Green ECO Roofing	13-apr-16	k-omu	7.214	https://www.thesimsresource.com/members/k-omu2/downloads/details/category/sims4-objects-buildmode-roofs/title/green-eco-roofing/id/1337186/
12	Green ECO flooring	13-apr-16	k-omu	6.607	https://www.thesimsresource.com/members/k-omu2/downloads/details/category/sims4-floors/title/green-eco-flooring/id/1337189/
13	Windmills - Eco Living Required	26-aug-20	sim_man123	7.429	https://www.thesimsresource.com/artists/sim_man123/downloads/details/category/sims4-sets-objects-garden/title/windmills-eco-living-required/id/1504019/
14	PVZ Sunflower (Solar Panel)	2-dec-20	FakePikachu	653	https://www.nexusmods.com/thesims4/mods/596
15	Classic Windmill - By Lahawana	6-aug-21	Lahawana		https://modthesims.info/d/659037/classic-windmill-by-lahawana.html
16	Australian Wheelie Bins	31-may-22	DazzaJay	198	https://modthesims.info/d/667695/australian-wheelie-bins.html

Interior Decorating Mods					
Trends: recycled & upcycled look, recolours, crafting equipment					
17	Go Green Recycle Bins	11-apr-15	mojo007	4.569	https://modthesims.info/d/552851/go-green-recycle-bins.html
18	ECO Green Vertical	19-apr-15	k-omu	9.212	https://www.thesimsresource.com/members/k-omu2/downloads/details/category/sims4-walls/title/eco-green-vertical/id/1293499/
19	10 Maxi LOL Sofas - volume 1	23-apr-15	Blackgryffin	5.365	https://modthesims.info/d/553776/10-maxi-lol-sofas-volume-1.html
20	7 Wood Beds - Madura Serie - volume 1	30-apr-15	Blackgryffin	8.730	https://modthesims.info/d/554309/7-wood-beds-madura-serie-volume-1.html
21	Win-Tec Model 98 Recycle Bin	30-apr-15	PSDuckie	972	https://modthesims.info/d/554087/win-tec-model-98-recycle-bin.html
22	Win-Tec Model 2000 Recycle Bin	6-jun-15	PSDuckie	3.283	https://modthesims.info/d/556601/win-tec-model-2000-recycle-bin.html
23	7 Archi Tables - volume 1	10-jun-15	Blackgryffin	16.526	https://modthesims.info/d/557103/7-archi-tables-volume-1.html
24	Fruit Farm Organic Jams (The Sims 4)	18-oct-16	one-billion-pixels	-	http://one-billion-pixels.blogspot.com/2016/10/fruit-farm-organic-jams-sims-4.html

25	ECO kitchen appliances	15-may-17	Severinka_	173.354	https://www.thesimsresource.com/downloads/details/category/sims4/id/1375645/
26	Craft Room	3-jan-18	soloriya	60.960	https://www.thesimsresource.com/artists/soloriya/downloads/details/category/sims4-sets-objects-miscellaneous/title/craft-room/id/1400520/
27	Craft Room Part 2	10-jan-18	soloriya	32.057	https://www.thesimsresource.com/artists/soloriya/downloads/details/category/sims4-sets-objects-miscellaneous/title/craft-room-part-2/id/1401244/
28	BAUBLE & Bandera Beauty Supplies	22-apr-18	RightHearted	62.080	https://www.thesimsresource.com/members/RightHearted/downloads/details/category/sims4-sets/title/bauble-bandera-beauty-supplies/id/1411860/
29	H&B Smart Thermostat	7-jul-18	littledica	100.748	https://modthesims.info/d/614771/h-amp-b-smart-thermostat.html
30	NEIDEN Thermostat	12-okt-18	RightHearted	226.304	https://www.thesimsresource.com/members/RightHearted/downloads/details/category/sims4-objects-furnishing-entertainment-miscellaneous/title/neiden-thermostat/id/1429153/
31	NANOCAN Wood Recolor ECO	7-dec-18	MyDeerlingStudios	4.531	https://www.thesimsresource.com/members/MyDeerlingStudios/downloads/details/category/sims4-objectrecolors-furnishing-appliances-miscellaneous/title/nanocan-wood-recolor-eco/id/1432948/
32	Marjolaine - Clothes Rack	20-jun-20	Syboubou	136.852	https://www.thesimsresource.com/members/Syboubou/downloads/details/category/sims4-objects-furnishing-storage-dressers/title/marjolaine-clothes-rack/id/1494820/
33	NEIDEN Paper Coffee Cup with Layers	19-nov-18	RightHearted	161.178	https://www.thesimsresource.com/members/RightHearted/downloads/details/category/sims4-objects-furnishing-decor-clutter/title/neiden-paper-coffee-cup-with-layers/id/1432757/
34	Car Roof Coffee Table	27-jun-20	Cyclonesue	14.190	https://www.thesimsresource.com/artists/Cyclonesue/downloads/details/category/sims4-objects-furnishing-surfaces-coffeetables/title/car-roof-coffee-table/id/1496398/
35	The Love Bug Love Seat	27-jun-20	Cyclonesue	17.917	https://www.thesimsresource.com/artists/Cyclonesue/downloads/details/category/sims4-objects-furnishing-comfort-sofasloveseats/title/the-love-bug-love-seat/id/1496396/
36	You Know the Drill Thermostat	2-jul-20	RAVASHEEN	97.739	https://www.thesimsresource.com/members/RAVASHEEN/downloads/details/category/sims4-objects-furnishing-electronics-miscellaneous/title/you-know-the-drill-thermostat/id/1496931/
37	The Sims 4 Eco Kitchen Stuff – Custom Stuff Pack	24-aug-20	littledica	494.356	http://www.sims4modding.com/the-sims-4-eco-kitchen-stuff-custom-stuff-pack/ https://modthesims.info/d/646477/the-sims-4-eco-kitchen-stuff-custom-stuff-pack-updated-01-06-21.html

Clothing Mods				
Trends: fake leather, printed messages				
38	Straight Leg Eco-Leather Pants	27-apr-20	Harmonia	17.277 https://www.thesimsresource.com/artists/Harmonia/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/straight-leg-eco-leather-pants/id/1412756/
39	Leather coat	10-may-19	Sims House	44.861 https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/leather-coat/id/1440956/
40	SimmieV Eco Clean Up Gear	12-may-20	SimmieV	1.270 https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-eco-clean-up-gear/id/1490057/
41	SimmieV Eco Living Polos	12-may-20	SimmieV	2.875 https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-eco-living-polos/id/1490138/
42	SimmieV Eco Living Teez	14-may-20	SimmieV	5.765 https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-eco-living-teez/id/1490140/
43	SimmieV CnD Eco Living Button Up	15-may-20	SimmieV	2.918 https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-cnd-eco-living-button-up/id/1490456/
44	SimmieV EcoLiving Suited for Solar	16-may-20	SimmieV	3.151 https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-ecoliving-suited-for-solar/id/1490642/
45	Women's wide pants made of eco leather	3-jul-20	Sims House	74.165 https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/women-s-wide-pants-made-of-eco-leather/id/1496629/
46	Women's overalls from eco leather	9-jul-20	Sims House	19.753 https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/women-s-overalls-from-eco-leather/id/1497741/
47	Coco-eco Jacket	19-jul-20	Nords	19.006 https://www.thesimsresource.com/members/Nords/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/coco-eco-jacket/id/1499237/
48	Women's eco leather jacket with a T-shirt	12-sep-20	Sims House	47.508 https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/women-s-eco-leather-jacket-with-a-t-shirt/id/1503673/
49	Women's Eco Suede Pants	12-nov-20	Sims House	38.474 https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadulthood-everyday/title/women-s-eco-suede-pants/id/1514169/

Lot Ecomods

Miscellaneous					
50	NO CC - ECO LIFESTYLE NEIGHBORHOOD - 5 Houses on 1 Lot	22-may-20	bradybrad7	3.935	https://modthesims.info/d/642456/no-cc-eco-lifestyle-neighborhood-5-houses-on-1-lot.html
51	Eco Living Community - no cc	11-may-21	A.lenna	1.413	https://www.thesimsresource.com/members/Alenna2/downloads/details/category/sims4-lots-residential/title/eco-living-community-no-cc/id/1541267/

Single Houses					
	Trends: Beige/brown/green colours, wood, tiny living, own power/water supply, plants				
52	Green Fresh Resident	15-oct-14	autaki	11.978	https://www.thesimsresource.com/artists/autaki/downloads/details/category/sims4-lots-residential/title/green-fresh-resident/id/1263332/
53	Eco Home 1	24-mar-15	evi	5.926	https://www.thesimsresource.com/artists/evi/downloads/details/category/sims4-lots-residential/title/eco-home-1/id/1289234/
54	ECO - modern I.	5-jul-15	Danuta720	9.239	https://www.thesimsresource.com/artists/Danuta720/downloads/details/category/sims4-lots-residential/title/eco-modern-i/id/1302720/
55	Eco Glass	5-aug-16	johnDu	7.095	https://www.thesimsresource.com/members/johnDu/downloads/details/category/sims4-lots-residential/title/eco-glass/id/1348772/
56	Ivyhills Cottage (and pond!!)	2-okt-16	purrfectionism	3.238	https://modthesims.info/d/583871/ivyhills-cottage-and-pond.html
57	Eco Modern	3-jun-17	MychQQQ	5.363	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-modern/id/1378055/
58	Eco Container House	21-jan-18	MychQQQ	10.310	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-container-house/id/1402523/
59	Eco Future	28-mar-18	Degera	3.568	https://www.thesimsresource.com/artists/Degera/downloads/details/category/sims4-lots-residential/title/eco-future/id/1409370/
60	Oasis Eco House 2	30-okt-18	MychQQQ	7.358	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/oasis-eco-house-2/id/1430782/
61	Atylla - Black eco Windenburg starter No CC, base game+GT	15-apr-20	GenkaiHaretsu	2.239	https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/atylla-black-eco-windenburg-starter-no-cc-base-game-gt/id/1485646/
62	Oceo Ecohome	19-apr-20	Orion's Belt	758	https://modthesims.info/d/640915/oceo-ecohome.html

63	Post-apo container house	9-may-20	GenkaiHaretsu	3.431	https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/post-apo-eco-container-house/id/1489654/
64	Aster House	10-may-20	Orion's Belt	3.711	https://modthesims.info/d/641980/aster-house.html
65	e-Vico House	15-may-20	Ineliz	5.357	https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/e-vico-house/id/1489997/
66	Eco Living Shell	27-may-20	LJaneP6	1.197	https://www.thesimsresource.com/members/LJaneP6/downloads/details/category/sims4-lots-residential/title/eco-living-shell/id/1492120/
67	Eco Solar Modern	27-may-20	tatiananeofitou	899	https://www.thesimsresource.com/members/tatiananeofitou/downloads/details/category/sims4-lots-residential/title/eco-solar-modern/id/1491883/
68	Eco Island Home	28-may-20	Summerr Plays	3.211	https://www.thesimsresource.com/members/Summerr_Plays/downloads/details/category/sims4-lots-residential/title/eco-island-home/id/1491749/
69	Fully Eco Estate	8-jun-20	Danuta720	4.866	https://www.thesimsresource.com/artists/Danuta720/downloads/details/category/sims4-lots-residential/title/fully-eco-estate/id/1494066/
70	Aniyah Sustainable Living	9-jun-20	ALGBuilds	1.832	https://www.thesimsresource.com/members/ALGBuilds/downloads/details/category/sims4-lots-residential/title/aniyah-sustainable-living/id/1494205/
71	Tiny Eco House	9-jun-20	MychQQQ	7.243	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/tiny-eco-house/id/1494191/
72	Eco Container	10-jun-20	MychQQQ	5.287	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-container/id/1494251/
73	Eco Lifestyle	11-jun-20	MychQQQ	7.526	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-lifestyle/id/1494351/
74	Eco starter v2	14-jun-20	GenkaiHaretsu	5.530	https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/eco-starter-v2/id/1494711/
75	Eco Modern	15-jun-20	GenkaiHaretsu	5.139	https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/eco-modern/id/1494712/
76	Single Lady's Modern Home	24-jun-20	simbunnyRT	2.893	https://modthesims.info/d/643858/single-lady-s-modern-eco-home-no-cc.html
77	Eco Modern Home - Nocc	30-jun-20	Sharon337	4.693	https://www.thesimsresource.com/members/sharon337/downloads/details/category/sims4-lots-residential/title/eco-modern-home-nocc/id/1496951/
78	Earthship Tier 2 Tiny House - No CC	1-jul-20	A.lenna	3.734	https://www.thesimsresource.com/members/Alenna2/downloads/details/category/sims4-lots-residential/title/earthship-tier-2-tiny-house-no-cc/id/1496237/
79	Eco Paradise	5-jul-20	MychQQQ	9.197	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-paradise/id/1497774/
80	Sustainable Eco Living	7-jul-20	auvastern	1.570	https://www.thesimsresource.com/members/auvastern/downloads/details/category/sims4-lots-residential/title/sustainable-eco-living/id/1496587/

81	Simply eco small	14-jul-20	Danuta720	3.282	https://www.thesimsresource.com/artists/Danuta720/downloads/details/category/sims4-lots-residential/title/simply-eco-small/id/1498790/
82	Eco Friendly Tiny Home	21-jul-20	MrValentina	618	https://modthesims.info/d/645031/eco-friendly-tiny-home.html
83	Mila tiny home - no cc	21-jul-20	melapples	10.039	https://www.thesimsresource.com/members/melapples/downloads/details/category/sims4-lots-residential/title/mila-tiny-home-no-cc/id/1499611/
84	Alicia Loft	25-jul-20	Ineliz	1.170	https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/alicia-loft/id/1498788/
85	Melissa bee farm house - no cc	4-aug-20	melapples	-	http://www.sims4modding.com/melissa-bee-farm-house-no-cc/
86	Mapleview	9-aug-20	LJaneP6	2.453	https://www.thesimsresource.com/members/LJaneP6/downloads/details/category/sims4-lots-residential/title/mapleview/id/1501825/
87	Modern Eco Living - 3BR/2.5BA	11-aug-20	RayanStar	4.271	https://modthesims.info/d/645977/modern-eco-living-3br-2-5ba.html
88	Eco Farm	14-aug-20	Ineliz	3.288	https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/eco-farm/id/1502342/
89	Everyday Eco	21-aug-20	Lhonna	4.964	https://www.thesimsresource.com/artists/Lhonna/downloads/details/category/sims4-lots-residential/title/everyday-eco/id/1503374/
90	Eco tiny living	7-sep-20	GenkaiHaretsu	2.150	https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/eco-tiny-living/id/1505500/
91	Elodie Loft	11-sep-20	Ineliz	3.210	https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/elodie-loft/id/1504795/
92	Modern Eco House	20-oct-20	MychQQQ	11.080	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/modern-eco-house/id/1511075/
93	Green Footprint	22-nov-20	sparky	1.741	https://www.thesimsresource.com/members/Sparky/downloads/details/category/sims4-lots-residential/title/green-footprint/id/1515789/
94	The Green Castle - A power-generating home for your Sims [NO CC]	5-dec-20	lolakret	734	https://modthesims.info/d/650240/the-green-castle-a-power-generating-home-for-your-sims-no-cc.html
95	Sims 4 // Tiny Eco House // no CC	4-mar-21	Flubs79	5.774	https://www.thesimsresource.com/members/Flubs79/downloads/details/category/sims4-lots-residential/title/sims-4-tiny-eco-house-no-cc/id/1530904/
96	Small Eco House	5-mar-21	simmer_adelaina	4.601	https://www.thesimsresource.com/members/simmer_adelaina/downloads/details/category/sims4-lots-residential/title/small-eco-house/id/1530923/
97	Gone Eco	10-mar-21	simmer_adelaina	4.191	https://www.thesimsresource.com/members/simmer_adelaina/downloads/details/category/sims4-lots-residential/title/gone-eco/id/1533531/
98	Eco Sky House	13-apr-21	MychQQQ	9.941	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-sky-house/id/1536894/
99	Old Factory	25-jun-21	MychQQQ	2.613	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/old-factory/id/1549883/

100	Ghostbusters Loft	26-jun-21	SIMSBYLINEA	1.561	https://www.thesimsresource.com/members/SIMSBYLINEA/downloads/details/category/sims4-lots-residential/title/ghostbusters-loft/id/1524844/
101	NO CC - Old Train Station Loft	31-aug-21	plumbobkingdom	2.358	https://modthesims.info/d/659901/no-cc-old-train-station-loft.html
102	NO CC - Eco House	20-aug-21	plumbobkingdom	3.876	https://modthesims.info/d/659535/no-cc-eco-house.html
103	NO CC - Plant Lover House	10-nov-21	plumbobkingdom	3.354	https://modthesims.info/d/662008/no-cc-plant-lover-house.html
104	Eco Friendly Wood House - no CC	18-nov-21	Flubs79	3.483	https://www.thesimsresource.com/downloads/details/category/sims4-lots-residential/title/eco-friendly-wood-house-no-cc/id/1572646/
105	NO CC - Modern Paradisiac Mansion	19-nov-21	plumbobkingdom	3.527	https://modthesims.info/d/662260/no-cc-modern-paradisiac-mansion.html
106	NO CC - Eco Modern House	30-nov-21	plumbobkingdom	3.084	https://modthesims.info/d/662633/no-cc-eco-modern-house.html
107	Eco house 1 bed 1 bath 30x20 nocc	18-feb-22	Barenziah	375	https://modthesims.info/d/664891/eco-house-1-bed-1-bath-30x20-nocc.html
108	NO CC- Modern Family House	18-feb-22	plumbobkingdom	2.079	https://modthesims.info/d/664915/no-cc-modern-family-house.html
109	Tartosa Eco House	28-feb-22	MychQQQ	8.698	https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/tartosa-eco-house/id/1588731/

Community Spaces					
	Trends: café's, shared gardens, repurposed spaces				
110	Suzumi Car Rental Center (Museum)	28-sep-14	nikokok	2.865	https://modthesims.info/d/536416/suzumi-car-rental-center-museum.html
111	Eco Cafe	28-nov-18	Lhonna	19.972	https://www.thesimsresource.com/artists/Lhonna/downloads/details/category/sims4-lots-community/title/eco-cafe/id/1433438/
112	Farmers Market 1	4-oct-19	Jaru Sims	3.743	https://www.thesimsresource.com/members/Jaru_Sims/downloads/details/category/sims4-lots-community/title/farmers-market-1/id/1462835/
113	The Beehive	20-jan-20	Xandralynn	5.557	https://www.thesimsresource.com/members/Xandralynn/downloads/details/category/sims4-lots-community/title/the-beehive/id/1475076/
114	Hope - Arts Center	11-aug-20	melapples	5.301	https://www.thesimsresource.com/members/melapples/downloads/details/category/sims4-lots-community/title/hope-arts-center/id/1502270/
115	NO CC - Old Factory (Community Garden)	3-sep-21	plumbobkingdom	1.996	https://modthesims.info/d/660019/no-cc-old-factory-community-garden.html
116	NO CC - Industrial Cafe	21-sep-21	plumbobkingdom	2.134	https://modthesims.info/d/660588/no-cc-industrial-cafe.html
117	NO CC - Starbucks Coffee Shop	12-nov-21	plumbobkingdom	4.799	https://modthesims.info/d/662068/no-cc-starbucks-coffee-shop.html

118	NO CC - Community Garden	16-nov-21	plumbobkingdom	2.126	https://modthesims.info/d/662192/no-cc-community-garden.html
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Scripting Ecomods

Miscellaneous					
119	Spring Harvest And Cookbook (update:13th May)	12-apr-15	icemunmun	70.939	https://modthesims.info/d/552325/spring-harvest-and-cookbook-update-13th-may.html
120	Custom Food Interactions (Update 13th March, 2022)	20-jan-16	TheFoodGroup	1.530.799	https://modthesims.info/d/571010/custom-food-interactions-update-13th-march-2022.html
121	Custom Drink Interactions (Update 13th March 2022)	4-nov-16	TheFoodGroup	536.785	https://modthesims.info/d/585189/custom-drink-interactions-update-13th-march-2022.html
122	Custom Food Meats - With Ingredients 2	11-mar-17	Leniad	41.038	https://modthesims.info/d/591603/custom-food-meats-with-ingredients-2.html
123	Functional Canning Station and Custom Canning Skill (Update 17th April 2019)	6-aug-17	icemunmun	1.020.286	https://modthesims.info/d/598557/functional-canning-station-and-custom-canning-skill-update-17th-april-2019.html
124	Candle Making - Base Game	4-apr-18	icemunmun	322.720	https://modthesims.info/d/608357/candle-making-base-game.html
125	Hunger bonus increase from harvestables [Updated 25th June 2018]	15-apr-18	icemunmun	17.185	https://modthesims.info/d/610591/hunger-bonus-increase-from-harvestables-updated-25th-june-2018.html
126	Orange Based Recipes - Orange chicken and Orange Mousse (Update - 2.06.21)	14-oct-18	icemunmun	217.735	https://modthesims.info/d/619161/orange-based-recipes-orange-chicken-and-orange-mousse-update-2-06-21.html
127	Sell to Local Market (1.77)	24-may-19	c821118	52.761	https://modthesims.info/d/627817/sell-to-local-market-1-77.html
128	Eco Lifestyle potting station made functional and decluttered	17-jul-20	Astrea Nevermore	9.075	http://www.sims4modding.com/eco-lifestyle-potting-station-made-functional-and-decluttered/
129	Basemental Eco Hacks	30-aug-20	Basemental	19.022	https://modthesims.info/d/645610/basemental-eco-hacks.html
130	vegetal meat cube can be sold on retail lots and storage on retail fridge Mod	7-jan-21	trendorina	1.954	https://modthesims.info/d/651171/vegetal-meat-cube-can-be-sold-on-retail-lots-and-storage-on-retail-fridge.html
131	Wheel of the Year - Default Holiday Replacements Mod	25-jan-21	Litherium	2.835	https://modthesims.info/d/651691/wheel-of-the-year-default-holiday-replacements.html
132	Dairy Cow Mod	11-feb-21	Mizore Yuki, PandaSama, Icemunmun	-	https://icemunmun.blogspot.com/2021/02/dairy-cow.html
133	Dairy Production Mod	1-jun-21	PiedPiper	-	https://modssims4.com/dairy-production-mod/

134	Harvestable Chicken Meat Plant	2-jun-21	icemunmun	-	https://www.patreon.com/posts/harvestable-meat-52007673
135	Forager's Delight Flower Bench - Functional Flower Bench	28-jul-21	chippedcupanddustybooks	-	https://chippedcupanddustybooks.tumblr.com/post/657981901769998336/foragers-delight-flower-bench-functional-flower

Careers					
Trends: political					
136	The Sims 4 Politics Mod Pack	5-oct-15	Zerbu	-	https://simscommunity.info/2015/10/05/the-sims-4-politics-mod-pack-now-available/
137	Oceanography Career (Updated for Island Island)	4-jul-18	xTheLittleCreator	91.407	https://modthesims.info/download.php?t=614525
138	International Relations	18-jan-21	adeepindigo	-	http://www.sims4modding.com/international-relations/

Traits					
Trends: Interactions with nature, reduced consumption					
139	Green Thumb Trait [Updated for Cats and Dogs]	24-oct-15	MissLogicielle	49.068	https://modthesims.info/d/566360/green-thumb-trait-updated-for-cats-and-dogs.html
140	Simple PlantSim Trait	25-may-16	jackboog21	39.286	https://modthesims.info/d/577349/simple-plantsim-trait.html
141	Eco-Friendly Trait (LAUNDRY DAY REQUIRED)	1-feb-18	duderocks	23.955	https://modthesims.info/d/606496/eco-friendly-trait-laundry-day-required.html
142	Mystic Trait Mod	20-jan-21	MissBee	15.761	https://modthesims.info/d/651665/mystic-trait.html
143	Better Lot Trait - Off the Grid BUNDLE	7-feb-22	BosseladyTV	559	https://modthesims.info/d/664563/better-lot-trait-off-the-grid-bundle.html
145	Birdwatcher Trait	8-feb-22	BosseladyTV	737	https://modthesims.info/d/664587/birdwatcher-trait.html
146	Sustainable Living Trait	10-mar-22	PurpleThistles	-	https://sims4.cc/download/sustainable-living-trait-by-purplethistles/

Utility Mods					
Trends: Responsible usage					
146	Off Grid Tiny Shower Toddler/Pet Tub Combo	8-feb-20	K9DB	33.580	https://modthesims.info/d/637913/updated-for-off-grid-shower-toddler-pet-tub-combo.html
147	Tiny Spa Toilet/Sink Combo	13-feb-20	K9DB	34.872	https://modthesims.info/d/638097/tiny-spa-toilet-sink-combo.html

148	Classic Toilet/Sink Combo	15-feb-20	K9DB	22.188	https://modthesims.info/d/637250/classic-toilet-sink-combo.html
149	Modern Toilet/Sink Combo	15-feb-20	K9DB	35.900	https://modthesims.info/d/637476/modern-toilet-sink-combo.html
150	Off Grid Toddler/Pet Washtub	15-feb-20	K9DB	41.380	https://modthesims.info/d/638157/off-grid-toddler-pet-washtub.html
151	Unlocked & Functional Water Pump	1-mrt-20	Qahne	-	http://www.sims4modding.com/unlocked-functional-water-pump/
152	Better ECO Power!	5-aug-20	gettp	18.218	https://modthesims.info/d/645519/better-eco-power.html
153	Better ECO Water!	7-aug-20	gettp	13.437	https://modthesims.info/d/645738/better-eco-water.html
154	Alter Eco Utility Set	22-feb-21	RAVASHEEN	38.227	https://www.thesimsresource.com/members/RAVASHEEN/downloads/details/category/sims4-sets-objects-decorative/title/alter-eco-utility-set/id/1528955/
155	Water Collection Well	6-mar-21	Teknikah	6.931	https://modthesims.info/d/653469/water-collection-well.html
156	Water Collection Buckets	6-mar-21	Teknikah	4.942	https://modthesims.info/d/653475/water-collection-buckets.html

Gardening Food Mods					
Trends: Self-sustainability, local gardening					
157	Harvestable Orange Tree	23-jan-16	plasticbox	60.832	https://modthesims.info/download.php?t=571128
158	Harvestable Olive Tree	2-feb-16	icemunmun	132.820	https://modthesims.info/d/571599/harvestable-olive-tree.html
159	Harvestable Peach Tree	15-mar-16	icemunmun	152.904	https://modthesims.info/d/574179/harvestable-peach-tree.html
160	Harvestable Blueberry Plant	17-apr-16	icemunmun	143.545	https://modthesims.info/d/575736/harvestable-blueberry-plant.html
161	Harvestable Raspberry Plant	18-apr-16	icemunmun	166.464	https://modthesims.info/d/575777/harvestable-raspberry-plant.html
162	Trio of Veggies – Custom Garlic, Parsnip and Cucumber	4-sep-16	icemunmun	351.426	https://modthesims.info/d/582692/trio-of-veggies-custom-garlic-parSNIP-and-cucumber.html
163	Harvestable Corn Stalk + Optional-Popcorn Popper requires Corn Override	5-mar-17	icemunmun	204.054	https://modthesims.info/d/591382/harvestable-corn-stalk-optional-popcorn-popper-requires-corn-override.html
	Harvestable Cocoa Bean	8-mar-17	icemunmun	272.304	https://modthesims.info/d/591506/harvestable-cocoa-bean.html
164	Harvestable Pumpkin Plant	11-mar-17	Leniad	25.932	https://modthesims.info/d/591628/harvestable-pumpkin-plant.html
165	Custom Harvestable Green Chili	26-mar-17	icemunmun	105.749	https://modthesims.info/d/592326/custom-harvestable-green-chili.html
166	Harvestable Vanilla Bean	5-apr-17	icemunmun	401.447	https://modthesims.info/d/592773/custom-harvestable-vanilla-bean.html
167	Harvestable Pistachio	9-may-17	icemunmun	101.603	https://modthesims.info/d/594321/custom-harvestable-pistachio.html
168	Functional Beekeeper Box (More Wax and Honey Update)	17-may-17	icemunmun	48.808	https://modthesims.info/d/594645/functional-beekeeper-box-more-wax-and-honey-update.html
169	Custom Harvestable ChickPea	30-jul-17	icemunmun	80.330	https://modthesims.info/d/598225/custom-harvestable-chickpea.html

170	Vampire Hearts – Harvestable Heart Tree and Edible Vampire Hearts (Update – 14 th Oct 2021)	28-aug-17	icemunmun	109.520	https://modthesims.info/d/599501/vampire-hearts-harvestable-heart-tree-and-edible-vampire-hearts-update-14th-oct-2021.html
171	Custom Harvestable Radish/Daikon	2-sep-17	icemunmun	70.650	https://modthesims.info/d/599701/custom-harvestable-radish-daikon.html
172	Harvestable Season fruit tress – Mango, Guava, Plum	24-oct-17	icemunmun	342.150	https://modthesims.info/d/602099/harvestable-season-fruit-tress-mango-guava-plum.html
173	The Pumpkin Project	29-oct-17	icemunmun	130.873	https://modthesims.info/d/602331/the-pumpkin-project.html
174	Harvestable Bell Pepper	8-dec-17	icemunmun	71.681	https://modthesims.info/d/604158/harvestable-bell-pepper.html
175	Harvestable Ginger and Peppermint	22-dec-17	icemunmun	265.475	https://modthesims.info/d/604766/harvestable-ginger-and-peppermint.html
176	Harvestable Broccoli, Yam and Spring Onion	3-feb-18	icemunmun	327.290	https://modthesims.info/d/606819/harvestable-broccoli-yam-and-spring-onion.html
177	Bunch of Roses – Harvestable Roses of Different Colours	13-feb-18	icemunmun	42.948	https://modthesims.info/d/607282/bunch-of-roses-harvestable-roses-of-different-colours.html
178	Harvestable Artichoke, Aubergine and Avocado	18-feb-18	icemunmun	321.271	https://modthesims.info/d/607585/harvestable-artichoke-aubergine-and-avocado.html
179	Harvestable Coconut	29-mar-18	icemunmun	88.983	https://modthesims.info/d/609763/harvestable-coconut.html
180	Harvestable Papaya & Pomelo	15-apr-18	icemunmun	134.894	https://modthesims.info/d/610629/harvestable-papaya-amp-pomelo.html
181	Harvestable Cauliflower and Leek	2-jul-18	icemunmun	159.610	https://modthesims.info/d/614495/harvestable-cauliflower-and-leek.html
182	Harvestable Orange	3-oct-18	icemunmun	100.654	https://modthesims.info/d/618698/harvestable-orange.html
183	Harvestable Cinnamon and Rosemary	23-dec-18	icemunmun	209.483	https://modthesims.info/d/621653/harvestable-cinnamon-and-rosemary.html
184	Harvestable Turnip	28-dec-19	icemunmun	12.073	https://modthesims.info/d/636389/harvestable-turnip.html
185	Wax From Season’s Beebox	29-apr-20	icemunmun	17.155	https://modthesims.info/d/626137/wax-from-season-s-beebox.html
186	Nasturtium And Pansy (Edible Flowers) – New Custom Harvestables	22-jul-21	RobinKLocksley	4.862	https://modthesims.info/d/658476/nasturtium-and-pansy-edible-flowers-new-custom-harvestables.html
187	Pulses Pack (Lentils & Butter Beans) – New Custom Harvestables	3-sep-21	RobinKLocksley	4.144	https://modthesims.info/d/659696/pulses-pack-lentils-amp-butter-beans-new-custom-harvestables.html

Ecomod Timeline

The following section displays the ecomods of the first section in chronological order and catalogues them on a timeline.

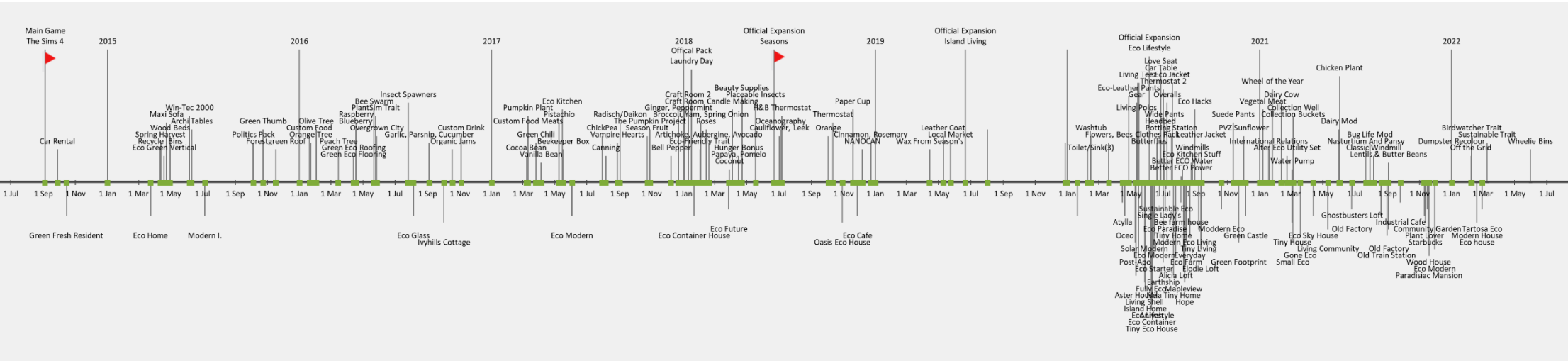


Figure 10: All gathered ecomods compiled upon a timeline.

Date	Title	Type	Link
2014			
4-9-2014	The Sims 4	Main Game	
28-9-2014	Car Rental		https://modthesims.info/d/536416/suzumi-car-rental-center-museum.html
15-10-2014	Green Fresh Resident		https://www.thesimsresource.com/artists/autaki/downloads/details/category/sims4-lots-residential/title/green-fresh-resident/id/1263332/
2015			
24-3-2015	Eco Home		https://www.thesimsresource.com/artists/evi/downloads/details/category/sims4-lots-residential/title/eco-home-1/id/1289234/
11-4-2015	Recycle Bins		https://modthesims.info/d/552851/go-green-recycle-bins.html
12-4-2015	Spring Harvest		https://modthesims.info/d/552325/spring-harvest-and-cookbook-update-13th-may.html
19-4-2015	Eco Green Vertical		https://www.thesimsresource.com/members/k-omu2/downloads/details/category/sims4-walls/title/eco-green-vertical/id/1293499/
23-4-2015	Maxi Sofa		https://modthesims.info/d/553776/10-maxi-lol-sofas-volume-1.html
30-4-2015	Wood Beds		https://modthesims.info/d/554309/7-wood-beds-madura-serie-volume-1.html
6-6-2015	Win-Tec 2000		https://modthesims.info/d/556601/win-tec-model-2000-recycle-bin.html
10-6-2015	Archi Tables		https://modthesims.info/d/557103/7-archi-tables-volume-1.html
5-7-2015	Modern I.		https://www.thesimsresource.com/artists/Danuta720/downloads/details/category/sims4-lots-residential/title/eco-modern-i/id/1302720/
5-10-2015	Politics Pack		https://simscommunity.info/2015/10/05/the-sims-4-politics-mod-pack-now-available/
24-10-2015	Green Thumb		https://modthesims.info/d/566360/green-thumb-trait-updated-for-cats-and-dogs.html
17-11-2015	Forestgreen Roof		https://modthesims.info/d/567545/forestgreen-roof.html
2016			

20-1-2016	Custom Food		https://modthesims.info/d/571010/custom-food-interactions-update-13th-march-2022.html
23-1-2016	Orange Tree		https://modthesims.info/download.php?t=571128
2-2-2016	Olive Tree		https://modthesims.info/d/571599/harvestable-olive-tree.html
15-3-2016	Peach Tree		https://modthesims.info/d/574179/harvestable-peach-tree.html
13-4-2016	Green Eco Flooring		https://www.thesimsresource.com/members/k-omu2/downloads/details/category/sims4-floors/title/green-eco-flooring/id/1337189/
13-4-2016	Green Eco Roofing		https://www.thesimsresource.com/members/k-omu2/downloads/details/category/sims4-objects-buildmode-roofs/title/green-eco-roofing/id/1337186/
17-4-2016	Blueberry		https://modthesims.info/d/575736/harvestable-blueberry-plant.html
18-4-2016	Raspberry		https://modthesims.info/d/575777/harvestable-raspberry-plant.html
22-5-2016	Bee Swarm		https://modthesims.info/d/642629/animated-placeable-insects-bee-swarm.html
25-5-2016	PlantSim Trait		https://modthesims.info/d/577349/simple-plantsim-trait.html
27-5-2016	Overgrown City		https://modthesims.info/d/577596/overgrown-city-skyline-replacement.html
26-7-2016	Insect Spawners		https://modthesims.info/d/580697/outdoor-retreat-insect-spawners-unlocked.html#epicons__gps_1
5-8-2016	Eco Glass		https://www.thesimsresource.com/members/johnDu/downloads/details/category/sims4-lots-residential/title/eco-glass/id/1348772/
4-9-2016	Garlic, Parsnip, Cucumber		https://modthesims.info/d/582692/trio-of-veggies-custom-garlic-parsnip-and-cucumber.html
2-10-2016	Ivyhills Cottage		https://modthesims.info/d/583871/ivyhills-cottage-and-pond.html
18-10-2016	Organic Jams		http://one-billion-pixels.blogspot.com/2016/10/fruit-farm-organic-jams-sims-4.html
4-11-2016	Custom Drink		https://modthesims.info/d/585189/custom-drink-interactions-update-13th-march-2022.html
2017			
8-3-2017	Cocoa Bean		https://modthesims.info/d/591506/harvestable-cocoa-bean.html
11-3-2017	Pumpkin Plant		https://modthesims.info/d/591628/harvestable-pumpkin-plant.html

11-3-2017	Custom Food Meats		https://modthesims.info/d/591603/custom-food-meats-with-ingredients-2.html
26-3-2017	Green Chili		https://modthesims.info/d/592326/custom-harvestable-green-chili.html
5-4-2017	Vanilla Bean		https://modthesims.info/d/592773/custom-harvestable-vanilla-bean.html
9-5-2017	Pistachio		https://modthesims.info/d/594321/custom-harvestable-pistachio.html
15-5-2017	Eco Kitchen		https://www.thesimsresource.com/downloads/details/category/sims4/id/1375645/
17-5-2017	Beekeeper Box		https://modthesims.info/d/594645/functional-beekeeper-box-more-wax-and-honey-update.html
3-6-2017	Eco Modern		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-modern/id/1378055/
30-7-2017	ChickPea		https://modthesims.info/d/598225/custom-harvestable-chickpea.html
6-8-2017	Canning		https://modthesims.info/d/598557/functional-canning-station-and-custom-canning-skill-update-17th-april-2019.html
28-8-2017	Vampire Hearts		https://modthesims.info/d/599501/vampire-hearts-harvestable-heart-tree-and-edible-vampire-hearts-update-14th-oct-2021.html
2-9-2017	Radisch/Daikon		https://modthesims.info/d/599701/custom-harvestable-radish-daikon.html
24-10-2017	Season Fruit		https://modthesims.info/d/602099/harvestable-season-fruit-tress-mango-guava-plum.html
29-10-2017	The Pumpkin Project		https://modthesims.info/d/602331/the-pumpkin-project.html
8-12-2017	Bell Pepper		https://modthesims.info/d/604158/harvestable-bell-pepper.html
22-12-2017	Ginger, Peppermint		https://modthesims.info/d/604766/harvestable-ginger-and-peppermint.html
2018			
3-1-2018	Craft Room		https://www.thesimsresource.com/artists/soloriya/downloads/details/category/sims4-sets-objects-miscellaneous/title/craft-room/id/1400520/
10-1-2018	Craft Room 2		https://www.thesimsresource.com/artists/soloriya/downloads/details/category/sims4-sets-objects-miscellaneous/title/craft-room-part-2/id/1401244/
16-1-2018	Laundry Day	Offical Pack	
21-1-2018	Eco Container House		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-container-house/id/1402523/

1-2-2018	Eco-Friendly Trait		https://modthesims.info/download.php?t=606496
3-2-2018	Broccoli, Yam, Spring Onion		https://modthesims.info/d/606819/harvestable-broccoli-yam-and-spring-onion.html
13-2-2018	Roses		https://modthesims.info/d/607282/bunch-of-roses-harvestable-roses-of-different-colours.html
18-2-2018	Artichoke, Aubergine, Avocado		https://modthesims.info/d/607585/harvestable-artichoke-aubergine-and-avocado.html
28-3-2018	Eco Future		https://www.thesimsresource.com/artists/Degera/downloads/details/category/sims4-lots-residential/title/eco-future/id/1409370/
29-3-2018	Coconut		https://modthesims.info/d/609763/harvestable-coconut.html
4-4-2018	Candle Making		https://modthesims.info/d/608357/candle-making-base-game.html
15-4-2018	Papaya, Pomelo		https://modthesims.info/d/610629/harvestable-papaya-amp-pomelo.html
15-4-2018	Hunger Bonus		https://modthesims.info/d/610591/hunger-bonus-increase-from-harvestables-updated-25th-june-2018.html
22-4-2018	Beauty Supplies		https://www.thesimsresource.com/members/RightHearted/downloads/details/category/sims4-sets/title/bauble-bandera-beauty-supplies/id/1411860/
18-5-2018	Placeable Insects		https://modthesims.info/d/612239/animated-placeable-insects-jungle-butterflies.html
22-6-2018	Seasons	Official Expansion	
2-7-2018	Cauliflower, Leek		https://modthesims.info/d/614495/harvestable-cauliflower-and-leek.html
4-7-2018	Oceanography		https://modthesims.info/download.php?t=614525
7-7-2018	H&B Thermostat		https://modthesims.info/d/614771/h-amp-b-smart-thermostat.html
3-10-2018	Orange		https://modthesims.info/d/618698/harvestable-orange.html
12-10-2018	Thermostat		https://www.thesimsresource.com/members/RightHearted/downloads/details/category/sims4-objects-furnishing-entertainment-miscellaneous/title/neiden-thermostat/id/1429153/
30-10-2018	Oasis Eco House		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/oasis-eco-house-2/id/1430782/
19-11-2018	Paper Cup		https://www.thesimsresource.com/members/RightHearted/downloads/details/category/sims4-objects-furnishing-decor-clutter/title/neiden-paper-coffee-cup-with-layers/id/1432757/
28-11-2018	Eco Cafe		https://www.thesimsresource.com/artists/Lhonna/downloads/details/category/sims4-lots-community/title/eco-cafe/id/1433438/

7-12-2018	NANOCAN		https://www.thesimsresource.com/members/MyDeerlingStudios/downloads/details/category/sims4-objectrecolors-furnishing-appliances-miscellaneous/title/nanocan-wood-recolor-eco/id/1432948/
23-12-2018	Cinnamon, Rosemary		https://modthesims.info/d/621653/harvestable-cinnamon-and-rosemary.html
2019			
14-4-2019	Wax From Season's		https://modthesims.info/d/626137/wax-from-season-s-beebox.html
10-5-2019	Leather Coat		https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/leather-coat/id/1440956/
24-5-2019	Local Market		https://modthesims.info/d/627817/sell-to-local-market-1-77.html
21-6-2019	Island Living	Official Expansion	
2-8-2019	Political Causes		https://modthesims.info/d/630970/political-causes-have-realistic-names.html
28-12-2019	Turnip		https://modthesims.info/d/636389/harvestable-turnip.html
2020			
20-1-2020	The Beehive		https://www.thesimsresource.com/members/Xandralynn/downloads/details/category/sims4-lots-community/title/the-beehive/id/1475076/
8-2-2020	Tiny Shower		https://modthesims.info/d/637913/updated-for-off-grid-shower-toddler-pet-tub-combo.html
15-2-2020	Toilet/Sink(3)		https://modthesims.info/d/637476/modern-toilet-sink-combo.html
15-2-2020	Washtub		https://modthesims.info/d/638157/off-grid-toddler-pet-washtub.html
20-3-2020	Flowers, Bees		https://modthesims.info/d/639423/animated-flowers-bumblebees.html
15-4-2020	Atylla		https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/atylla-black-eco-windenbug-starter-no-cc-base-game-gt/id/1485646/
19-4-2020	Oceo		https://modthesims.info/d/640915/oceo-ecohome.html
27-4-2020	Eco-Leather Pants		https://www.thesimsresource.com/artists/Harmonia/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/straight-leg-eco-leather-pants/id/1412756/
9-5-2020	Post-Apo		https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/post-apo-eco-container-house/id/1489654/

10-5-2020	Aster House		
12-5-2020	Living Polos		https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-eco-living-polos/id/1490138/
12-5-2020	Gear		https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-eco-clean-up-gear/id/1490057/
14-5-2020	Living Teez		https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-eco-living-teez/id/1490140/
15-5-2020	e-Vico		https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/e-vico-house/id/1489997/
15-5-2020	Button Up		https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-cnd-eco-living-button-up/id/1490456/
16-5-2020	EcoLiving		https://www.thesimsresource.com/members/SimmieV/downloads/details/category/sims4-clothing-male-teenadulthood-everyday/title/simmiev-ecoliving-suited-for-solar/id/1490642/
22-5-2020	Eco Neighbourhood		http://www.sims4modding.com/eco-lifestyle-neighborhood-5-houses-on-1-lot-no-cc/
27-5-2020	Solar Modern		https://www.thesimsresource.com/members/tatiananeofitou/downloads/details/category/sims4-lots-residential/title/eco-solar-modern/id/1491883/
27-5-2020	Living Shell		https://www.thesimsresource.com/members/LJaneP6/downloads/details/category/sims4-lots-residential/title/eco-living-shell/id/1492120/
28-5-2020	Island Home		https://www.thesimsresource.com/members/Summerr_Plays/downloads/details/category/sims4-lots-residential/title/eco-island-home/id/1491749/
5-6-2020	Eco Lifestyle	Official Expansion	
5-6-2020	Butterflies		http://www.sims4modding.com/animated-placeable-insects-butterflies-il/
8-6-2020	Fully Eco		https://www.thesimsresource.com/artists/Danuta720/downloads/details/category/sims4-lots-residential/title/fully-eco-estate/id/1494066/
9-6-2020	Tiny Eco House		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/tiny-eco-house/id/1494191/
9-6-2020	Aniyah		https://www.thesimsresource.com/members/ALGbuilds/downloads/details/category/sims4-lots-residential/title/aniyah-sustainable-living/id/1494205/
10-6-2020	Eco Container		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-container/id/1494251/
11-6-2020	Eco Lifestyle		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-lifestyle/id/1494351/

14-6-2020	Eco Starter		https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/eco-starter-v2/id/1494711/
15-6-2020	Eco Modern		https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/eco-modern/id/1494712/
20-6-2020	Clothes Rack		https://www.thesimsresource.com/members/Syboubou/downloads/details/category/sims4-objects-furnishing-storage-dressers/title/marjolaine-clothes-rack/id/1494820/
24-6-2020	Single Lady's		https://modthesims.info/d/643858/single-lady-s-modern-eco-home-no-cc.html
26-6-2020	Headbed		https://www.thesimsresource.com/members/Syboubou/downloads/details/category/sims4-objects-furnishing-decor-miscellaneous/title/marjolaine-headbed/id/1494552/
27-6-2020	Love Seat		https://www.thesimsresource.com/artists/Cyclonesue/downloads/details/category/sims4-objects-furnishing-comfort-sofasloveseats/title/the-love-bug-love-seat/id/1496396/
27-6-2020	Car Table		https://www.thesimsresource.com/artists/Cyclonesue/downloads/details/category/sims4-objects-furnishing-surfaces-coffeetables/title/car-roof-coffee-table/id/1496398/
1-7-2020	Earthship		https://www.thesimsresource.com/members/Alenna2/downloads/details/category/sims4-lots-residential/title/earthship-tier-2-tiny-house-no-cc/id/1496237/
2-7-2020	Thermostat 2		https://www.thesimsresource.com/members/RAVASHEEN/downloads/details/category/sims4-objects-furnishing-electronics-miscellaneous/title/you-know-the-drill-thermostat/id/1496931/
3-7-2020	Wide Pants		https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/women-s-wide-pants-made-of-eco-leather/id/1496629/
5-7-2020	Eco Paradise		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-paradise/id/1497774/
7-7-2020	Sustainable Eco		https://www.thesimsresource.com/members/auvastern/downloads/details/category/sims4-lots-residential/title/sustainable-eco-living/id/1496587/
9-7-2020	Overalls		https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/women-s-overalls-from-eco-leather/id/1497741/
17-7-2020	Potting Station		http://www.sims4modding.com/eco-lifestyle-potting-station-made-functional-and-decluttered/
19-7-2020	Eco Jacket		https://www.thesimsresource.com/members/Nords/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/coco-eco-jacket/id/1499237/
21-7-2020	Tiny Home		https://modthesims.info/d/645031/eco-friendly-tiny-home.html
21-7-2020	Mila Tiny Home		https://www.thesimsresource.com/members/melapples/downloads/details/category/sims4-lots-residential/title/mila-tiny-home-no-cc/id/1499611/
25-7-2020	Alicia Loft		https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/alicia-loft/id/1498788/

4-8-2020	Bee farm house		http://www.sims4modding.com/melissa-bee-farm-house-no-cc/
5-8-2020	Better ECO Power		https://modthesims.info/d/645519/better-eco-power.html
7-8-2020	Better ECO Water		https://modthesims.info/d/645738/better-eco-water.html
9-8-2020	Mapleview		https://www.thesimsresource.com/members/LJaneP6/downloads/details/category/sims4-lots-residential/title/mapleview/id/1501825/
11-8-2020	Modern Eco Living		https://modthesims.info/d/645977/modern-eco-living-3br-2-5ba.html
11-8-2020	Hope		https://www.thesimsresource.com/members/melapples/downloads/details/category/sims4-lots-community/title/hope-arts-center/id/1502270/
14-8-2020	Eco Farm		https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/eco-farm/id/1502342/
21-8-2020	Everyday		https://www.thesimsresource.com/artists/Lhonna/downloads/details/category/sims4-lots-residential/title/everyday-eco/id/1503374/
24-8-2020	Eco Kitchen Stuff		http://www.sims4modding.com/the-sims-4-eco-kitchen-stuff-custom-stuff-pack/
26-8-2020	Windmills		https://www.thesimsresource.com/artists/sim_man123/downloads/details/category/sims4-sets-objects-garden/title/windmills-eco-living-required/id/1504019/
30-8-2020	Eco Hacks		https://modthesims.info/d/645610/basemental-eco-hacks.html
7-9-2020	Tiny Living		https://www.thesimsresource.com/members/GenkaiHaretsu/downloads/details/category/sims4-lots-residential/title/eco-tiny-living/id/1505500/
11-9-2020	Elodie Loft		https://www.thesimsresource.com/artists/Ineliz/downloads/details/category/sims4-lots-residential/title/elodie-loft/id/1504795/
12-9-2020	Leather Jacket		https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/women-s-eco-leather-jacket-with-a-t-shirt/id/1503673/
20-10-2020	Modmodern Eco		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/modern-eco-house/id/1511075/
12-11-2020	Suede Pants		https://www.thesimsresource.com/members/Sims_House/downloads/details/category/sims4-clothing-female-teenadultelder-everyday/title/women-s-eco-leather-jacket-with-a-t-shirt/id/1503673/
22-11-2020	Green Footprint		https://www.thesimsresource.com/members/Sparky/downloads/details/category/sims4-lots-residential/title/green-footprint/id/1515789/
2-12-2020	PVZ Sunflower		https://www.nexusmods.com/thesims4/mods/596

5-12-2020	Green Castle		https://modthesims.info/d/650240/the-green-castle-a-power-generating-home-for-your-sims-no-cc.html
2021			
7-1-2021	Vegetal Meat		https://modthesims.info/d/651171/vegetal-meat-cube-can-be-sold-on-retail-lots-and-storage-on-retail-fridge.html
18-1-2021	International Relations		http://www.sims4modding.com/international-relations/
20-1-2021	Mystic Trait		https://modthesims.info/d/651665/mystic-trait.html
25-1-2021	Wheel of the Year		https://modthesims.info/d/651691/wheel-of-the-year-default-holiday-replacements.html
11-2-2021	Dairy Cow		https://icemunmun.blogspot.com/2021/02/dairy-cow.html
22-2-2021	Alter Eco Utility Set		https://www.thesimsresource.com/members/RAVASHEEN/downloads/details/category/sims4-sets-objects-decorative/title/alter-eco-utility-set/id/1528955/
4-3-2021	Water Pump		http://www.sims4modding.com/unlocked-functional-water-pump/
4-3-2021	Tiny House		https://www.thesimsresource.com/members/Flubs79/downloads/details/category/sims4-lots-residential/title/sims-4-tiny-eco-house-no-cc/id/1530904/
5-3-2021	Small Eco		https://www.thesimsresource.com/members/simmer_adelaina/downloads/details/category/sims4-lots-residential/title/small-eco-house/id/1530923/
6-3-2021	Collection Well		https://modthesims.info/d/653469/water-collection-well.html
6-3-2021	Collection Buckets		https://modthesims.info/d/653475/water-collection-buckets.html
19-3-2021	Gone Eco		https://www.thesimsresource.com/members/simmer_adelaina/downloads/details/category/sims4-lots-residential/title/gone-eco/id/1533531/
13-4-2021	Eco Sky House		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/eco-sky-house/id/1536894/
11-5-2021	Living Community		https://www.thesimsresource.com/members/Alenna2/downloads/details/category/sims4-lots-residential/title/eco-living-community-no-cc/id/1541267/
1-6-2021	Dairy Mod		https://modssims4.com/dairy-production-mod/
2-6-2021	Chicken Plant		https://www.patreon.com/posts/harvestable-meat-52007673
25-6-2021	Old Factory		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/old-factory/id/1549883/

26-6-2021	Ghostbusters Loft		https://www.thesimsresource.com/members/SIMSBYLINEA/downloads/details/category/sims4-lots-residential/title/ghostbusters-loft/id/1524844/
22-7-2021	Nasturtium And Pansy		https://modthesims.info/d/658476/nasturtium-and-pansy-edible-flowers-new-custom-harvestables.html
30-7-2021	Bug Life Mod		http://www.sims4modding.com/bug-life-mod-all-bugged-out/
6-8-2021	Classic Windmill		https://modthesims.info/d/659037/classic-windmill-by-lahawana.html
20-8-2021	Eco House		https://modthesims.info/d/659535/no-cc-eco-house.html
31-8-2021	Old Train Station		https://modthesims.info/d/659901/no-cc-old-train-station-loft.html
3-9-2021	Lentils & Butter Beans		https://modthesims.info/d/659696/pulses-pack-lentils-amp-butter-beans-new-custom-harvestables.html
3-9-2021	Old Factory		https://modthesims.info/d/660019/no-cc-old-factory-community-garden.html
26-9-2021	Industrial Cafe		https://modthesims.info/d/660588/no-cc-industrial-cafe.html
10-11-2021	Plant Lover		https://modthesims.info/d/662008/no-cc-plant-lover-house.html
12-11-2021	Starbucks		https://modthesims.info/d/662068/no-cc-starbucks-coffee-shop.html
16-11-2021	Community Garden		https://modthesims.info/d/662192/no-cc-community-garden.html
18-11-2021	Wood House		https://www.thesimsresource.com/downloads/details/category/sims4-lots-residential/title/eco-friendly-wood-house-no-cc/id/1572646/
19-11-2021	Paradisiac Mansion		https://modthesims.info/d/662260/no-cc-modern-paradisiac-mansion.html
30-11-2021	Eco Modern		https://modthesims.info/d/662633/no-cc-eco-modern-house.html
2022			
1-1-2022	Dumpster Recolour		https://modthesims.info/d/663443/eco-dumpster-recolor.html
7-2-2022	Off the Grid		https://modthesims.info/d/664563/better-lot-trait-off-the-grid-bundle.html
8-2-2022	Birdwatcher Trait		https://modthesims.info/d/664587/birdwatcher-trait.html
18-2-2022	Modern House		https://modthesims.info/d/664915/no-cc-modern-family-house.html

18-2-2022	Eco house		https://modthesims.info/d/664891/eco-house-1-bed-1-bath-30x20-nocc.html
28-2-2022	Tartosa Eco		https://www.thesimsresource.com/artists/MychQQQ/downloads/details/category/sims4-lots-residential/title/tartosa-eco-house/id/1588731/
10-3-2022	Sustainable Trait		https://sims4.cc/download/sustainable-living-trait-by-purplethistles/
31-5-2022	Wheelie Bins		https://modthesims.info/d/667695/australian-wheelie-bins.html