

Ember, Chapter 2.1: Redesign (based on version 1.0.52)^{*}

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Introduction: Ethics and Ember

In the emerging hacker culture of the early 1960s, Ted Nelson, a graduate student at Harvard, began work on a computerized information management system that would later become known as “Project Xanadu”. The project promised amazing abilities. It was designed to provide definitive copies of documents that would be preserved in perpetuity, which could be referenced in other documents by quotations or references, so that the original source document of a passage could always easily be found. This aimed to provide an indefinitely scalable computerized collective memory for the preservation of humanity’s history and knowledge. This monumental project, despite significant corporate backing, was not a success.¹ I’d like to look at why it failed — but we’ll get back to that later.

There are a large number of works of great cultural importance. They have touched on a number of meaningful subjects, but several subjects have stood out particularly for me: ethics, rights, prejudice and bigotry, and theology. These are

^{*}The text here is outdated; this document is for discussing document design rather than the document text.

¹Wolf, Gary. “The Curse of Xanadu”.

elements of society that play important roles, influencing the ways people live and experience their daily lives.

When you look at life from a perspective of fundamentals, there are a few things that are necessary: food, water, and shelter. Without these basic elements, humans would not survive very long. If one is hard working and clever, one can provide these things for one's self, by living off the land. When humans start to live together in communities, things become more complicated; medical care and education become important. The goals of a community are to make life more secure and predictable for the community's members, and to reduce the hardships associated with "primitive" living (living without the support systems of a complex society). But with those goals comes a problem: how are those goals to be effectively implemented? Through the development of strategies such as specialization of individuals' abilities and the creation of technological solutions, these challenges can be met.

As more people start living together, though, they will almost inevitably come into conflict. What can be done when the individual's interests conflict with those of the society? What about conflicts between individuals? To deal with these issues, laws and a justice system can be put into place. An economy or labor-sharing strategy can aid in the exchange of services and goods, to avoid conflicts over these matters. A free market economy is helpful to a society, because it redirects the energies of greed and uses them as a force for technological development.

Philosophical discourse becomes important in many areas, such as the resolution of the conflicts and challenges of a complex society, and the research into understanding the world around us. This discourse leads to the development of more complex technology drawing on the ideas of the society, then leading to debates about ethics, to scientific investigation about the nature of our world, and to the development of ways to understand and accept who we are, such as religion and science.

Ideas, knowledge, and art become economically motivated, and so copyright and patent laws are established to encourage and protect innovation in these areas. The wide availability of information becomes increasingly relevant, and information technology and distribution systems such as books and computers are developed. Support infrastructures are created and strengthened, to protect society against threats both external and internal, such as disease, crime, terrorism, civil unrest, and war.

I would like to attempt to improve on the existing systems that have developed for solving these problems. I would like to undertake this project in an incremental, scalable manner, rather than creating a complex system that would need to be implemented all at once to be effective. That way, small improvements could be made without attempting to undertake the insurmountable task of improving larger components of society at once. This incremental development would allow for the strengths of the existing systems to persist, as well.

The many texts I have studied have helped me understand better how I could go about achieving these goals, and have provided interesting and valuable insights about what I believe. In many cases, it is difficult or impossible to prove to the satisfaction of a large number of people what the ideal systems are for society; in such cases I can only at once stand by my own beliefs and also accept that other valid solutions and reasonings can exist as well.

The most important thing I think I will achieve, which has both shaped and been shaped by my experience of study, is the incremental development of improved and redeveloped societal structure and infrastructure. To this end, I have gathered a number of disparate elements of the project under the name of “Ember”, for ease of reference; these diverse objectives I believe have the potential to improve the general standard of living. At the same time, it is important to ensure that the Ember project does not fall into the same pitfalls that befell Project Xanadu, despite their many parallels and similarities.

Project Xanadu and Ember are both projects with lofty goals, born out of

a Nietzschean rage at the status quo, aiming to radically transform and reshape various aspects of society for the better. They are both ambitious, and championed by someone without a thorough understanding of the technological and economic realities and limitations of the world around them. They both are driven by grand ideas, with little thought given to short term practical implementation and utility of those ideas. They both have the potential to absorb vast amounts of investment without return. My hope is that by assessing and strategizing around these similar aspects, and understanding the ways in which they relate to Project Xanadu's failure to produce, such a catastrophe can be avoided by Ember.

Ember is a multifaceted project to develop a scalable environment for building an effective society. The goal of the project is to create a system to enable efficacy, efficiency, and justice within society, by creating a social structure that would work to create an efficient opt-in society within the framework of the diverse and valuable existing societies. The plan for the project is to pursue these goals by developing individual components that each provide an integral part of the whole societal system. My current proposal is comprised of several components, including a coordination organization, a philosophy of ethics, a nonprofit standards-driven services collective, a computing environment, a reference collection of the most important knowledge, a library of great cultural works, a spiritual framework, and a multimedia artwork.

The four subjects that will prove integral in the effective development of the Ember project that I would principally like to discuss in this paper and which have been of most import to my journey of learning are ethics, rights, prejudice and bigotry, and theology.

Ethics are one of the central aspects of a complex society, with an understanding of what is "justice" being necessary for the establishment of effective justice systems, and an understanding of what is ethically acceptable scientific research and technological development being necessary for a society to respect the dignity

of the world.

In the Zimbardo prison experiment, we saw an influential and famous experiment that was ethically very dubious, and likely had lasting effects on the research participants. Is such research justified? This is a hard case to make, as the benefits derived from the Zimbardo experiment have been doubtful at best due to the poorly undertaken nature of the research. However, could such research that damages the participants be considered ethical in any scenario? Could it, perhaps, but only with the full understanding and consent of the participants? It seems likely that the nature of such an experiment is fundamentally harmful in such a way that it would be best to attempt to gain the knowledge through other, more ethical research methods if at all possible before trying such research techniques. By no means should such research practices as those seen in Zimbardo be standard or generally accepted within the scientific community.

Some scientific research is seen as harming the public interest for other reasons, such as Galileo Galilei's assertions of a heliocentric planetary model, which were regarded as heresy by the Catholic church, which was the dominant social force in determining matters of ethics and morality in Europe at that time. This is a matter of ethics, as opposed to a matter purely of science, as the scientific results were considered to be evil. However, it seems that Galileo's research has done no lasting harm, considering that it has become widely accepted and is no longer a matter of significant contention. Perhaps this acceptance is because the issue with Galileo's research is the results he found, while with Zimbardo's it is the ethics of the manner in which the research was undertaken.

Rights are an important social issue. In *Mrs. Dalloway*, by Virginia Woolf, we encountered the debate about what rights should be protected in the thorny instance of an individual with mental challenges. One can consider whether Septimus Warren Smith had the right to not be controlled by Holmes and Bradshaw. Referring to Septimus, Woolf writes: "Lately he had become excited suddenly for no reason (and both Dr. Holmes and Sir William Bradshaw said excitement

was the worst thing for him)”—². Does not Septimus have the right to exist without being bothered, regardless of whether it is considered the best thing for him? He does no one else any harm by being as he is, and is not disrupting society in any way, except inasmuch as it may perhaps reduce his ability to contribute to it. And even that seems that it may be excusable in light of the value of one’s right to liberty, much as one could make such an argument for the legitimization of a right to suicide.

Likewise, is involuntary confinement of someone who is not a threat to society moral or ethical? Does it violate the tradition of *habeas corpus*? “Worshipping proportion, Sir William not only prospered himself but made England prosper, secluded her lunatics, forbade childbirth, penalised despair, made it impossible for the unfit to propagate their views until they, too, shared his sense of proportion”³. Does Bradshaw have any right whatsoever to impose such restraints, to place such barriers upon freedom of expression and action? Perhaps one could argue that the mentally incompetent are incapable by nature of exercising these rights appropriately and effectively, and thus should not be afforded them. Nevertheless, even such disabled and tragically affected individuals still likely have the right to have their desires and conscience and feelings paid respect and honored by the society around them. They are, presumably, individuals with their own emotions, realities, and conceptions of the world, thus deserving the same respect afforded to the healthy in any just and non-oppressive society. These are important social issues to consider and address in the development of an evolving societal system.

Bigotry, hatred, racism, prejudice, and oppression are critical issues to address in the modern society, with tragedies such as slavery, genocide, and wartime racism persisting strongly into the present. An understanding needs to be built and lessons learned from history about how these elements can be addressed ef-

²Woolf, Virginia. *Mrs. Dalloway*. p. 140.

³*Ibid.* p. 99

fectively and thoroughly, protecting the rights of all. In *The Souls of Black Folk*, by prominent author W. E. B. Du Bois, racism is a prominent theme that is discussed. It is written that “the South believed an educated Negro to be a dangerous Negro”⁴. Du Bois considered this assessment by the South to have some validity, because of the role of education in bringing forth “dissatisfaction and discontent”⁵. The recent development of feminist philosophies such as those seen in Virginia Woolf’s and Adrienne Rich’s work is clearly a step in the right direction, helping to sway the pendulum away from injustice, continuing along the path boldly set by the civil rights movement in the 1960s. However, racism and racial violence still persist, as evidenced and highlighted by the recent racial tension surrounding police brutality.

Theology plays an important role in society, providing a way for individuals to understand their role in that society and in the world. Occam’s Razor is a famous statement to the effect that “No more things should be presumed to exist...”⁶ than are needed to explain the observations about which a collective truth has been established through consensus. Despite the seeming rationality of that statement, I nevertheless often choose to believe things on faith, despite being unable to prove them through scientific observation and logic. I come to these conclusions frequently as ways to best explain the parts of the world around me that I do not understand scientifically, but nevertheless seem to observe on a daily basis and believe to be real: life, emotions, and other similarly difficult-to-quantify elements of the world around us. By considering the world and drawing my own conclusions, I can create my own worldview, as real to me as the perceptions that are established through consensus and scientific reasoning.

The Music of Life presents a model of life that can be mistakenly argued to be unscientific, because it does not explain many of the vagaries of the way life and the way one’s personality and other traits that make one an individual come about.

⁴Du Bois, W. E. B. *The Souls of Black Folk*, p. 24

⁵*Ibid.*

⁶Haddon, Mark. *The Curious Incident of the Dog in the Night-Time*, p. 90.

This model indicates that these traits are not coded in one's genes, but originate otherwise. This model is scientifically reasonable, though, since the systems by which these traits develop and function are not fully or thoroughly understood, and are likely not completely determined quanta that can be effectively evaluated by measuring systems. Perhaps it is not possible to understand these traits at all. Perhaps one wishes genes might provide the definitive coding for an organism, providing a thorough way to comprehend the way that organism evolves and develops. However, this is not the way genes work.

I believe that God has created a sort of fettered omniscience for Himself, and has taken away His direct influence over the world and given living things the capacity for moral self-direction. This aspect of the world's traits has been implemented in what has been recognized as the theory of the uncertainty principle in quantum mechanics, according to which nothing can be predicted with absolute certainty. Traditional thinking would seem to hold that through a comprehensive understanding of all the positions and vectors in a closed system, all of the states of that situation — past, present, and future — can be known simultaneously. Yet the observer effect leads to the situation that the most basic particles of matter are unable to be observed or predicted, because any observation will inevitably change their state, thus contributing to the chaos inherent in the uncertainty principle. In a lecture on quantum mechanics, the speaker discussed the idea of determinism: I believe that these maxims of unpredictability lead to the effective disintegration of multi-scale determinism, while it does seem to remain effective and in effect in the world on our scale. This unpredictability enables the world to exist as it does with true moral sovereignty, without the consequential ethical nihilism of the philosophies of fate or predestination.

Gnosticism is a group of belief systems sharing certain core tenets, particularly the focus on the development of *sophia* (wisdom) to attain *gnosis* (knowledge) and on the rejection of some elements of the physical world in the endeavor to attain ascendance into the spiritual. It shares common themes and elements with many

Christian and other belief systems. In the Gnostic Gospel according to Mary Magdalene, it is written “There is no sin, but it is you who make sin when you do the things that are like the nature of adultery, which is called sin.”⁷ This sentence emphasizes the Gnostic nature of the text, in its equating of sin with adultery providing a connection to the traditional Gnostic focus on the rejection of elements of the physical in the interest of the finding of knowledge through wisdom. While it would be hard to prove concretely that things like adultery are bad, that badness can nevertheless be understood: it is a truth that can be taken on faith, it can be understood through the collective wisdom of society, or it can be felt in one’s heart.

Present in my mind is the world presented by Francis Bacon in *The New Atlantis*. While it isn’t presented as a dystopia in his novel, and seems that Bacon considers such an environment to be ideal, in light of the experiences of society nowadays approaching its traits in some ways, it raises frightening questions. For instance, what should the role be of surveillance in a society? In Bensalem, the society presented in the book, surveillance is present. And yet, surveillance today can seem frightening, considering the potential for its abuse. How should safeguards be put in place to simultaneously enable effective surveillance, while curtailing its abuse?

Considering these elements in the process of creating a system for alternative society development is clearly a vital part of the process. Failure to do so can produce a system which is unjust, incompetent, and inefficient. By avoiding this failure, the system developed can embody its principle objectives of creating an efficient, effective, and just society. The concepts that in the many great texts of civilizations provide invaluable insights for the development of the Ember project.

⁷Gospel according to Mary Magdalene. Chapter 4, verse 26.

Redesign commentary

The previous version of this text was “typeset” only in the very loosest sense of the term, simply by dumping it into a word processing app, and justifying it. Because word processing apps need to render text quickly for interactive editing, the results are suboptimal: justifying text nicely is a hard problem, and requires more complex algorithms than can be practically implemented for interactive editing. For instance, spacing between words in carelessly typeset text is frequently excessive, and there are often rivers (groups of spaces in consecutive lines nearby each other) that make the page inelegant. For this redesign, I have typeset the document using L^AT_EX, a computerized typesetting and layout program with significantly better algorithms than word processors usually have. It is able to provide a superior layout because it does not attempt to provide an accurate preview interactively when editing, and instead taking the time needed to carefully typeset the document in a separate step from document authoring. Thus, the first change I made to the document was to use a real typesetting system.

The second change I made was to the typeface. The previous version was set using Times New Roman, which is a serviceable, classic, widely beloved typeface. However, I personally find faces based on the work of Renaissance typographer Nicholas Jenson to be more elegant and at least equally readable, and so I used one for this document. (There is a bit of an issue with this version of the italic face, as the baseline doesn’t match that of the Roman face; I haven’t gotten around to fixing that yet, making things look a bit *jarring* when set in italics.⁸)

Third, I moved the citations from parentheticals into footnotes. I don’t think what I had (the entire citation embedded right in the text) was based on any style guide⁹, and it didn’t look very good. I’d generally prefer Chicago-style endnotes with in-text author-date parentheticals, but simple footnotes are also perfectly

⁸I don’t understand yet how the baseline works in FontForge (my typeface authoring app of choice), so my need to research and learn about that is currently preventing fixing this issue.

⁹and even if it were I wouldn’t approve of it

acceptable and the difference is simply a matter of personal preference; since they were quicker to implement in this case (embarrassingly, it's been long enough that I have forgotten how to use LyX's automatic bibliographies), I used them instead.¹⁰

¹⁰This would not be a problem if I had, ahem, not procrastinated, ahem, ahem.