Understanding Humanity's Climate Change and Sustainability Problems and Methods for Adaption and Solution

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Introduction

Today, humanity is facing an increasing wall of, seemingly, insurmountable global problems. However, the combined teachings of David Christian, Jared Diamond, and Yuval Noah Harari help us to understand how humanity can overcome these vast problems. Cristian offers us a broader perspective of the world by exploring the history of the universe, its fragility, and its increasing complexity. Diamond shows us the key reasons for the failures of past societies and the insights that we can gain from them to solve our problems today. Harari explains the complexities of humanity itself and the fictional realities that we, humans, have not only created but can change as well. Together, these three individuals provide the perspectives and wisdom necessary to put together solutions to solve the climate change and sustainability problems facing humanity today.

Understanding our Climate and Sustainability Problems

David Christian

"I've always been a fan of writers who try to connect the dots and make sense of the sweep of history. Probably no one has done [this] better than David Christian in his Big History lectures." This endorsement by Bill Gates directly echoes my thoughts on the teachings of David Christian that we have explored this semester. The Big History Project has provided me and thousands of students around the world with a well thought out course for understanding history, history from a perspective quite dissimilar from the history traditionally taught in our schools. Throughout my educational career, my history courses have, largely, focused on the pertinent parts of human history especially in the context of the United States, Europe, and religion. A key point here is that my studies have, primarily, focused around *human* history. Considering the history prior to humans, these topics have mostly been taken up by my science courses but have focused little on progressions through time and rather on the physical, biological, and chemical changes in our universe during static time periods. In short, connections between the sciences and the history of our universe in our education careers have been few and far between.

David Christian, with the help of Bill Gates, has taken on the challenge to change this. They have identified a fundamental problem in our current educational systems; that is, they argue that we are missing an important perspective that all people should understand, "Big History". Throughout the semester, we have followed David's Big History course which is put together in a format of interconnected thresholds. Each threshold in the history of our universe is described by a time of increasing complexity caused by a few key ingredients coming together at a time with just the right conditions; as we have learned, these miraculous events cause new properties to emerge in our universe. David explains that complexity is far rarer than simplicity

and that these thresholds of increasing complexity can be an excellent way of understanding the development of the universe (Big History Project, 2011). I have found this to be an incredible way to tie together years of courses in science, history, and social studies.

This new, interconnected and broad perspective has vastly helped me to better understand the climate and sustainability problems that face humanity today. It isn't until one takes this far-reaching perspective, viewing all of history, that one can understand the fragility our world. As seen in the Big History course, complexity is increasing at an accelerating rate, largely, due to mankind. The earth has gone through several mass extinctions and many vastly different climate cycles. The problems of climate change and our sustainability are unique problems for humanity, but the earth and the universe will, certainly, survive far beyond humanity's grasp.

Jared Diamond

Another key thought leader that we got to know this semester is Jared Diamond. The key teachings of Diamond that we looked at focused on understanding why societies collapse. Considering this in the context of our environmental and sustainability problems was quite interesting as there are many important insights that we can gain from the follies of our ancestors. Diamond's research broke down the collapse of past societies into four categories. The first of which pertains to collapses that resulted from societies failing to anticipate problems before they arose. In today's context, it seems that this will most likely not be the reason for the demise of mankind. Human's have become incredibly aware due to our ability for collective learning and storytelling, and we have quite the comprehensive list of risks facing us today. Thus, this scenario seems unlikely but should act as a reminder that societies should be hyper-aware of their ever-changing surroundings. The second category explains that societies can

collapse due to their failure to see a problem that has already arrived (Diamond, 2005). The idea of creeping normalcy can be especially relevant in the context of climate change. Much of the world's population may not see the Earth's climate changing due to its slow and incremental nature, just as a child doesn't notice him or herself growing taller. However, I also find this category to be an unlikely scenario for humanity's eventual demise as we have identified many risks that are excellent contenders for the end of humanity as we know it.

The next two categories that Diamond explains as reasons for the collapse of societies are much more relevant to today and directly coincide with the climate and sustainability problems that humanity faces. Firstly, societies have collapsed when people have failed to work together on an identified problem. Diamond identified this as, historically, the most common reason for failure. We, humans, have identified all the problems that we believe could lead to our collapse (GCF, 2018); the list is comprehensive, so we think. However, many of these problems require all the world's nations, or at least the major ones, to come together to solve them. Diamond has helped me to understand that problems, like climate change, will need major global collaboration to solve. Further, the final reason for the societal collapses that Diamond identifies is the failure to solve a problem even when everyone collaborates (Diamond, 2005). This scenario is the second of which that is more likely than the others to bring about humanity's departure. Rapidly changing global climate due to ever-increasing positive feedback loops, super volcanic eruptions, or out of control super artificial intelligence are all scenarios that could be beyond the control of our current technology and human ability to adapt to. These grim scenarios, certainly, could occur, but there are steps that humanity can take to lessen the probabilities of their occurrence.

Yuval Noah Harari

The final major figure that we looked at this semester was Yuval Noah Harari. “Harari concerns himself with a shorter time frame, the last 70,000 years of human history…He sets out to explain how we, Homo Sapiens, came to dominate the Earth and what may lie ahead for our species.” Here, we find Bill Gates, again, describing the work of a man that has come to prominence for his incredible work in teaching others about our important history. Harari describes to us that humans have not always been as great as we are today; Sapiens didn’t reach the top of the food chain until about 100,000 years ago. Moreover, for other species, making it to the top of the food chain happened over millions of years, but for humans, everything happened much more quickly. This led to great fear and anxiety deeply instilled in humans that can still be seen today. 70,000 years ago, the cognitive revolution happened, and humans developed complex language and storytelling ability that allowed us to have thriving communities and collaborate unlike any other species before (Harari, 2015). As briefly covered by David Christian, humans developed collective learning leading to the creation of a new intersubjective reality, a reality that made religion, empire, and money possible (Big History Project, 2011; Harari, 2015).

Harari’s teaching put our climate and sustainability problems into an interesting perspective. Most things that human’s care about today are part of a fictional reality. What we care most about, money, corporations, religions, nations, do not exist in the physical world and did not exist at all for most of the Earth’s history. This incredibly sobering perspective is very important to understand when considering the solutions for our problems; this idea is key for the mindset shift that must occur should our societies wish to survive the greatest obstacles mankind has yet to face.

Understanding our Ability to Adapt to and Solve These Problems

Throughout this course, we have explored Big History and how humans along with our climate and sustainability problems fit into a much larger picture. David Christian showed us the history of the universe and its fragility. He put humanity into a vastly larger perspective, one of a formidable 14-billion-year-old universe. However, Harari showed us that humans are the most complex and intelligent organisms that have ever existed, and Diamond taught us about our ancestors and the ways we can learn from their failures. The teachings of David Christian, Jared Diamond, and Yuval Noah Harari have shown me how special and fragile humanity truly is. From their teachings, I understand that humanity must commence a major shift in our views of the world, collaborate globally, and prepare for the unknown if we wish to solve our climate and sustainability problems.

Global Ideological Shift

When considering the teachings of Harari, it becomes especially prevalent that today's human society must gain a deeper understanding of our drives and nature. Humans are one of the millions of species of the world and we, humans, have only been here for a mere moment of Earth's existence. Harari brings about this idea that all animals on earth experience an objective reality of our natural environment around us. All animals also experience a subjective reality consisting of our own views of the world including our emotions and thoughts. However, humans and humans alone have created a vastly complex intersubjective reality. Our nations, religions, governments, and companies are all ideas of collective thought (Harari, 2015). It is this key understanding that today's humans must understand; most things we care about, we created,

and we can change. Our most ingrained values routed around the progression of society must change.

In Harari's book, *Sapiens*, he describes that, in the 18th century, a European story emerged that acquiring new knowledge and forward progress were the key goals for human society, no matter the cost (Harari, 2015). Looking deeper, this can be seen in all of society today, especially within the entrenched values of capitalism. Capitalism has been the driver of innovation and prosperity in the world, but it has led to a deep-rooted desire among humans for more. Incentives are aligned around economic and productive efficiency which fails to protect public goods and manage public problems. However, Harari reminds us that capitalism and its ideas are nothing but a myth of human creation (Harari, 2015). We must understand that these deep routed values are not immutable and that they must be changed in order to prioritize human sustainability over economic and material growth. A new outlook on the world focused on humanity's survival rather than economic and scientific progression is necessary for solving our climate and sustainability problems.

Global Collaboration

The second part of the solution to our climate and sustainability problems, identified by these leaders' teachings, is the need for global collaboration. With a general ideological shift from goals surrounding the realities that humans have created towards goals surrounding the survival of and the wellbeing of the human species, the world can have a more focused view on our sustained life. Few problems of our past have needed a global effort to solve. Even Diamond, when discussing the reasons for societal collapses in the past, described these collapses among relatively small communities. One of the key problems with this regards the aforementioned

idea, our ingrained values prioritize the wrong goals for humanity's sustainability. Problems like climate change are especially difficult because they disproportionately affect developing countries which do not have the resources to combat them. That is why global collaboration is necessary.

The Global Challenges Foundations was founded in 2012 with the aim of identifying and "reducing the main global problems and risks that threaten humanity" (GCF, 2019). One of its most recent reports, its annual review called "Global Catastrophic Risks", accesses the main risks that humanity faces and the ways for us to govern these risks; the report is comprised of contributions from around 20 of the world's leading researchers in this space (GCF, 2018). After reading the report, it becomes quite clear that the identified risks to humanity involve global collaboration to mitigate them. Take weapons of mass destruction for example. The committee has identified this as one of nine major risks to humanity's survival (GCF, 2018). This is possibly the clearest example of the need for global collaboration that has and hopefully will continue to be upheld. The world has seen the devastating impacts of nuclear weapons constructed many decades ago. People may have little idea of the destructive capabilities of today's nuclear, chemical, and biological weapons, but global governance has already led to major scrutiny over the use of such weapons. Thus far, governance like the United Nation's ban on all nuclear weapon usage has been successful in mitigating many of these risks. Now, humanity must utilize these same venues to govern other risks like climate change and ecological collapse. Diamond reminds us that "the big problems facing the world today are not at all beyond our control." He reiterates that all our major problems derive from our own making; thus, there is no reason that we shouldn't be able to solve them together (Diamond, 2005).

Recognizing the Unknown

Finally, Christian, Diamond, and Harari have shown us that humans have an innate ability to adapt to changing environments unlike any species before us. As discussed earlier in this paper, David Christian teaches us about Big History through a series of thresholds of increasing complexity in our universe. At first, these thresholds are billions of years apart as the universe slowly evolves. However, one quickly realizes that the distance between these thresholds is exponentially decreasing. Our universe is becoming increasingly complex at an accelerating rate which makes it unfathomable for humans, today, to predict what our future holds even tens of years from now.

The Global Challenges Foundation dedicates one of their nine risks to this idea of "unknown risks". One of their key insights here is to study "weak signals", hints that a strange future may come closer to fulfillment (GCF, 2018). With climate change, accelerating positive feedback loops such as methane release in the artic could be a key hint that societies today must act to mitigate this problem and prepare for the repercussions of massive releases of methane in the atmosphere. However, one of the key problems here is not about climate change at all, but rather artificial intelligence. The GCF identifies the advance of artificial intelligence as an issue of its own, but it is, certainly, an important unknown of our future. Artificial intelligence has been around for many decades, but today we see the creation of systems that dramatically beat humans at specific tasks. One can imagine a not too far away future where AI could reach or exceed human capability on all fronts. Maybe AI will surpass human ability and be the next threshold in David Christian's Big History, or maybe humanity will prevent that from happening. However, today's societies must understand that the universe is becoming increasingly complex and we cannot know what the future will bring, but we can prepare for what is possible.

Conclusion

Throughout this course, we have explored the teachings of David Christian, Jared Diamond, and Yuval Noah Harari. Christian provides a framework for all these teachings in the Big History Project. The development of our universe can be broken down into thresholds of increasing complexity. With this far-reaching perspective, it becomes clear that the complexity in our universe is increasing at an accelerating rate. Harari and Diamond delve into the history of humanity. Harari shows us that humans, Sapiens, are unlike any species before. We have the ability for collective learning which has allowed us to create fictional realities that have led humans to prosper for centuries. However, these intersubjective realities have led to the demise of many societies before us as taught by Jared Diamond. We can learn from humanities past mistakes, our understanding of human values, and the fragility of our universe when working to solve the climate and sustainability problems that face humanity today.

The ideas and concepts taught by these three leaders have helped me to better understand that humanity does have the ability to deal with the known problems facing us today. First, a shift in our core values ingrained in our intersubjective reality must begin to prioritize the survival and well being of the human species over scientific and economic progression. Second, global collaboration is necessary to solve our sustainability problems, because these problems affect all of humanity and many will take a global effort to solve. Finally, in a universe of accelerating complexity, we cannot know which novel properties will emerge in our universe next. We must take the steps to prepare for the massive changes that we identify as possible in the case that those possibilities become realities. Christian, Diamond, and Harari have imparted their wisdom and it is our responsibility to take action to solve the climate and sustainability problems that face humanity today.

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