

The Last Humans Project: Humans Surviving the Climate Extinction Event

Trent Batson, Ph.D.
trentbatson@mac.com

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As of this month (January 2020), a cultural consensus among recently published articles in respected newspapers such as the *New York Times* and the *Washington Post*, as well as in *The New Yorker* and many other online sites seems to have arisen: the climate crisis is at a tipping point and human extinction, to some extent, may be inevitable. The other consensus seems to be that the only answer is to work on reducing greenhouse gases. This book and project offer another answer, saving humanity in the short run, a project that can engage all humans immediately. Both answers are necessary.

We humans now living on earth are, in fact, the last living species in the human genus. There have been a couple of dozen other species before. We homo sapiens are a relatively recent species, only a few hundred thousand years old (the human genus is around 6 million years old). We are literally the last surviving human species. And, thus, the title of this book is *not* implying humans will necessarily become extinct; however, we also realize that mass human extinction *could* happen, so we offer a means to prevent such extinction. Let's not actually be the last humans.

Australia today [January 3, 2020] is ground zero for the climate catastrophe. Its glorious Great Barrier Reef is dying, its world-heritage rain forests [are burning](#), its giant kelp forests [have largely vanished](#), numerous towns have [run out of water](#) or are about to, and now the vast continent is burning on a scale [never before seen](#). <https://www.nytimes.com/2020/01/03/opinion/australia-fires-climate-change.html>

The bookstore in the fire-ravaged village of Cobargo, New South Wales, has a new sign outside: "Post-Apocalyptic Fiction has been moved to Current Affairs."

An informative organization to understand the background for [The Last Humans Project](#) is the website for The Union of Concerned Scientists: <https://www.ucsusa.org/about>

Introduction

Human survival is at risk. That risk is immediate. Climate change effects have ignited the 6th mass extinction on earth, currently underway. We do need to "save the earth," and those efforts must continue, but we also need to save ourselves! Those are two separate (but linked)

projects involving very different activities and time scales. While hundreds of organizations are working hard on reversing climate change, very few are focused on saving humans from extinction in this century. And none that we know of have our framework and plan for “saving humanity.”

The Last Humans Project is launching, with this publication, a global initiative that coincides with efforts to reverse climate change but has a more immediate goal: saving society through coordinating projects to adapt to climate change in locales everywhere. This will involve non-profits and NGOs working toward one mission statement. We offer a detailed plan for how to launch these projects this year and every year afterwards.

If we don't survive as a species until 2100 – just 80 more years -- reversing climate change will obviously be moot as a project. The earth itself will go on in an altered way, but we will be gone, or so much reduced in numbers that we humans will then be ineffective to reverse climate change. And, unfortunately, this is not hyperbole, but reality.

The human species is vulnerable to extinction because most of us are utterly dependent on the systems within our societies that provide the means for us to live: our houses, our food, warmth, clothing, our financial and communication systems, our transport, our electricity – and so on. All that we take for granted is actually necessary to our lives. Interrupt any system and we humans are vulnerable. The systems are global and fragile: foods are transported around the world, financial systems are global, energy supplies are global, and on and on. To the extent these global systems are managed by digital systems, depending on electricity, they can be disabled by extreme weather events. (People still living a primitive life have a bit of an advantage since they don't depend as much on global human society as we “civilized” humans do).

To address what might seem counter-intuitive – that our species is at such risk when we read and hear constantly that, conversely, our species is a threat (save the earth!) – this Project works to re-frame assumptions about “human,” about the climate crisis, and about what global measures we must undertake right away – in 2020. We offer a “NewMaPP” as a way to organize global human response to climate disasters and therefore mitigate their effects. NewMaPP is explained, in outline, in this chapter and then more fully developed in the chapters coming in February, March and each month afterwards until the book is complete.

Our Project involves these steps:

- Engaging a percentage of the roughly 250,000,000 students enrolled in 19,400 institutions around the world in a mission to prevent human extinction – an organization in England uses the name “Extinction Rebellion,” and we see that phrase as a good descriptor for our project's goal as well. <https://rebellion.earth> - <https://www.whed.net/home.php>

- If only one tenth of these students opt for our special “extinction rebellion” curriculum of active learning in real-world extinction projects, The Last Humans Project will have a very large Survival Force (25,000,000) to join the Project and help preserve human society.
- Hundreds of projects already exist to “save the earth,” that is, to reverse climate change, but the time scale for such reversal is a few centuries. Human extinction threats are already underway and may reach crisis proportions in just 30 years. Therefore, our project must start, at scale, in 2020, and must work in cooperation with existing projects. NewMaPP projects can coordinate or work within existing non-profits and NGO’s, or governmental initiatives, or even corporate initiatives such as efforts to move to alternate energy sources.
- Identifying core human abilities proven during our evolution over several million years that, if brought to bear on the problem of human survival in the form of a new course of study (a “major,” or a “concentration”), will save us, or at least most of us. Once we see that historical evolutionary human abilities are different than what many may believe now, the extinction rebellion curriculum will make sense. The best human abilities currently do not figure in the learning design in most of formal learning at any level; the best human abilities do not even figure in the human evolution story as widely understood.
- To identify core human abilities, we confront deep biases inherent in human evolution studies that have blinded us to actual core human abilities. At this crisis moment in human history, we can no longer be handicapped by these deep biases; the more we know about what we humans are capable of, and the more we enlist those abilities, the better our chances of surviving as an intact global human society.
- With a re-created story of human (that is, the story of human evolution) that reveals historic core strengths of our species, we can build an emergency curriculum for higher education to be used as *one* concentration for study in all 19,400 global colleges and universities. This curriculum is based on a learning theory analysis of what abilities were required of humans to become not only survivors but dominant. What is our “magic”? And, this curriculum is, in many ways, the best curriculum for success in life even if such success does not involve working in “extinction rebellion” jobs. (Students can still choose traditional majors or concentrations; the Last Humans concentration will be just one choice).
- Students in this concentration, offered immediately (many pieces are in place now), will participate in climate and survival initiatives while they are enrolled in real-world “extinction rebellion” courses that are required to progress in this academic concentration. Graduates will be ready to work with existing NGOs and non-profits, some UN agencies, selected municipalities and states and other organizations to help

preserve human society (national governments have proven themselves incapable of deep commitment to “extinction rebellion.”)

Argument One; human language:

A Glimpse into a truly ancient Human Language

I felt as though I was in a theater-in-the-round: I had an “audience” in front of me and behind me. I was co-teaching a course that had elicited such excitement that those who had not been able to register for the course were standing in the hall behind me and experiencing the class through our open classroom doors. My co-teacher and I felt on the spot to live up to expectations. I was on a knife-edge; so was Clayton.

Why? We were in a revolutionary moment – and an evolutionary moment. It was the early 1970s and linguists had just proven convincingly that American Sign Language (ASL) is a fully developed natural human language that could and does communicate every bit as richly as any spoken language. Never before had sign language been understood in that way.

We were at Gallaudet University in Washington DC where the Linguistics Research Lab had attracted linguists and anthropologists from around the country to be part of this historic work.

Clayton and I were teaching ASL poetry and our course was the first academic course ever in ASL poetry. We were trying to identify “rhyme” in ASL poetry, and metaphor, and stanzas – or were those features of spoken and written poetry not extant in ASL poetry? We were creating a new branch of literary analysis as we taught the course. (And, yes, the entire array of poetic elements does exist in ASL poetry).

I am bilingual in English and American Sign Language (ASL) having taught deaf students and worked with deaf colleagues for 30 years (1968-1998). I am a person with normal hearing, so I learned ASL on the job. This 30-year field experience helps me frame this entire book – living within the entire spectrum of human language from spoken word to sign and therefore knowing intimately how the whole body produces human language within a continuum from visual to aural. This knowledge allows me to add significantly to the human story going back over two million years.

During those 30 years, I lived through the ASL revolution, worked with linguists studying ASL, and did the equivalent of a post doc in linguistics both at Gallaudet and Carnegie Mellon. I know the before and after about sign language, the theory, and have the experience to address a major blind spot for human evolution researchers: sign language. We humans made sounds AND signs right from the time of the earliest toolmaking. We had language. But, the book is not an argument for sign language, or not only an argument for sign language, but an argument that because we had sign language right from the start of our major departure toward modern humans (2.5 million years ago), we had language and society and culture. The sign language used then would have been a mix of sounds and signs, of posture and expression,

and of context, but all human language is that same mix. We will show, as part of the book, how language is the most obvious cause for all human development during evolutionary times.

Once we have accepted the fact that language (and society and culture) is at the root of human evolution for the past 2.5 million years, we can – at least in theory – alter our entire belief system about learning, about what is important in human society, about us and our history, and about how humans should adapt to the sweeping changes happening right now. This book presents you with a human evolutionary story that is not redacted by bias and omission.

Argument Two and Three and So On:

Between 1985 and now, I have served as one of the influencers in U. S. higher education for technology and learning. Serving in this “revolutionary” capacity, I and other tech leaders learned to re-think higher education. With this habit of mind developed over 35 years – transformation – I and my colleagues can now look at a challenge of a far greater dimension: climate change and human survival.

Knowing that sign language, as the mother human language, is the spark for our unique human cognition, we can look at higher education’s basic assumptions and re-frame them. But, not just for the sake of re-framing (although it will lead to better learning), but for the sake of creating graduates who can work on the inconceivable challenges in the next few decades about how to assure human survival in our current mass extinction moment.

We provide a learning design and mission statement for global higher education, all 19,400 institutions, to catalyze the higher education engine toward human survival. This is The Last Humans Project.

Chapter One. Two Systems

*“At Save The Bay, our efforts have always focused on the protection and preservation of Narragansett Bay. The organization also placed a large emphasis on the restoration of important Bay habitats. Now, with the accelerating impacts from climate change and sea level rise, we’ve shifted from a mindset of **restoration** to one of **adaptation**.” Michael Jarbeau, Narragansett Baykeeper, Save The Bay, Providence, RI. <https://www.savebay.org> (Personal email, November 18, 2019; emphasis added)*

*Shailene Woodley: “One of my favorite parts of **Big Little Lies** is when the school holds a meeting for parents mad that their children are upset after being told the truth about our dire climate crisis.*

The truth of that scene, and of this moment in history, is whether we are ready or not, the climate crisis is here. We can't pretend it will go away.

The science is clear: if we don't make the necessary changes, every living being on earth will face extinction." (email sent from *Our Revolution*, November 15, 2019)

Two Systems Threatened, Natural and Human-Created

Human life depends on natural systems (the biosphere) operating "normally," but climate change has set our global natural systems out of whack; human life also depends on social systems (water, food, shelter, etc.). Both natural and social systems are collapsing. Ref: <https://www.theguardian.com/environment/2019/may/06/human-society-under-urgent-threat-loss-earth-natural-life-un-report>

The natural systems will continue to worsen for humans for a century or more. Social systems are already beginning to collapse. It is the social systems we need to address immediately, while also continuing our efforts to reverse climate change.

Climate change is a 300-year problem; mass extinction is a 30-year problem. Many are working on the 300-year problem; no one seems to have a plan to work on the 30-year problem. This book offers one.

Climate Change Has Happened

Climate change has already happened, is accelerating, and continues. It is a *fait accompli*. Climate change has brought about the 6th mass extinction event on earth. Extinction is our immediate problem because we are among the species threatened with extinction. (see *The Sixth Extinction*, Elizabeth Kolbert, <https://us.macmillan.com/books/9781250062185>)

See: <https://www.youtube.com/watch?v=SvbTFwXagdQ> – "The Last Humans," video. On the YouTube channel "Exurb1a." The author's name seems to be Alex McKechnie. He lives in Bulgaria but is British. This attribution is reviewable (one can be anonymous on the web).

Climate change can perhaps be reversed over a few centuries. But do we humans actually have a few centuries to diminish climate change caused by too much CO₂ and other greenhouse gases in the atmosphere? It would not seem so. The immediate problem is how to preserve human society. The immediate problem is preserving enough global human systems – food, finance, communications, transport, etc. -- to assure survival of our species.

In late November 2019 – former Secretary of State John Kerry spoke in Iceland about a new coalition called [World War Zero](#) to confront climate change; he is the latest "big name" to mount an offense to reverse climate change. The problem is that, meanwhile, extinction is imminent so, if social systems are disrupted, how will we combat climate change? Our book is

based on the common-sense recognition that human society does not really confront a problem until it has no choice; that is, climate change effects will continue to accelerate no matter how many organizations are formed to work against those effects. We need, therefore, to work on preparing for survival at the same time as we work on reducing climate change. First things first. <https://thebarentsobserver.com/en/ecology/2019/10/john-kerry-declares-world-war-zero-response-climate-crisis>

We most urgently need to adapt all human systems – utilities, infrastructure, communications, supply chains, evacuation procedures, refuge preparations, border procedures, disaster-response procedures, cooperative agreements, food stores and water storage, and on to all current human systems necessary for society to function. We need to constantly adapt these systems so society can keep functioning. Humans live within society; most humans cannot survive outside of social systems, or, to put it another way, off-grid. (I built an off-grid cabin so I know what's required to live off-grid; a nearby, fully-functioning and stocked grocery store is one requirement).

The 6th mass extinction underway now on earth affects the entire biosphere, including humans. We are in fact the last human species still alive. This book provides a way to make sure we are not literally the last humans to ever live on this earth. You are familiar with the cause, and perhaps the effect – mass extinction – but may not be aware of any way to actually take action to mitigate extinction. There is a way.

How Humans Survive (and thrive)

Despite the really bad fix we've got ourselves into, we humans can survive and eventually thrive. Our strength is our thinking ability and our thinking ability derives from our language. In this book, we use learning theory to understand evolution. This is an unusual approach. Cognitive scientists do study the human brain and do write part of the story of human, but we do not see learning theorists hypothesizing about why and how humans developed our unique thinking ability.

Although other animals enjoy aspects of our communication abilities and our thinking abilities, we humans exist in a qualitatively distinct sphere of cognition from any other species: meta cognition. We can reflect – that is, we can think about thinking; we are aware that we will die; we are self-aware. We can have a thought and judge that thought at the same time. We look for meaning. The ability to reflect is like having a mirror outside our body that reveals ourselves back to us. This ability to reflect is our great advantage.

How this ability developed ties in with our use of tools and our hands. Being able to manipulate objects in intricate ways, as our hands allow us to do, can be understood as externalizing (or extending) a thinking space. We externalized thoughts via language but we also were able, at least 2.6 million years ago, to externalize our learning space in an equally complex way by manipulating objects, such as rocks, to flake off sharp pieces of rock that could be fashioned into a tool or weapon.

As we manipulated the rocks, we had to evaluate our process. This process of assessment through a procedure (making tools) is an advanced thinking skill. You compare your process to previous attempts; you might learn by mimicking another human who knows more about making rock or stone tools than you do. Mimicking a process of toolmaking is akin to mimicking a motion that can become a semiotic signifier.

In other words, the hands led, or paralleled, a process of thinking that produced better and better tools but also led to a greater array of hand gestures than our cousin chimps or bonobos had, and, that eventually, over years, became rule-bound. Once a gesture becomes part of a rule-bound system of signifiers (hand gestures accompanied by sounds and body posture all within a context), and once those signifiers can produce multiples sentences, a language has appeared.

Only by being able to pass on knowledge of tool-making over the years were humans able to continually improve the quality and usefulness of their tools. Expert tool makers taught novice tool makers so that the skills were passed on.

“The health of the ecosystems on which we and other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of economies, livelihoods, food security, health and quality of life worldwide,” said Robert Watson, the chair of the Intergovernmental Science-Policy Platform on **Biodiversity** and Ecosystem Services (Ibpes). “We have lost time. We must act now.”

<https://www.theguardian.com/environment/2019/may/06/human-society-under-urgent-threat-loss-earth-natural-life-un-report>

Biases in Human Evolution Studies

Human evolution studies in most fields depend on empirical (material) evidence, which would seem to reassure us that human evolution analyses are based on solid evidence and therefore are sound and valid interpretations. However, the opposite is true. Depending on material evidence so insistently seems to have severely hampered our formal understanding of actual human evolutionary history.

Adding to this distortion from an overweening dependence on empiricism, is a historic and ugly history of Eurocentrism. But, even as human evolution studies have worked to correct that early bias, a similar extreme bias remained: a bias toward just the last one tenth of one percent of human evolutionary history, the last 10 to 20 thousand years out of an actual human history of 2.6 million years (since tools) when human species were shaped. Eurocentrism has become unacceptable in human evolution studies, but “recent-ism” has not. The most important human discoveries happened millions of years ago, not a few thousand.

Fear of hypothesizing about a period when empirical evidence is absent led to absurd conclusions: just because we have no empirical evidence of human accomplishments one or two million years ago doesn't mean they didn't happen. And, in some cases, it is absurd to conclude they didn't.

I did not seriously study human evolution until 2016, but I have immersed myself (as a seasoned researcher) in human evolution studies for 3 years – a great time to be studying the field. Unfortunately, I have become increasingly bewildered and shocked by the narrowness of vision of the fields. Part of this narrowness is an extraordinarily limited understanding of human language. Humans have signed (i.e., used a sign language) – and made sounds – from 2.6 million years ago until the present.

Only 50,000 years ago did homo sapiens (the most recent human species) develop the larynx necessary to move our languages toward the oral end of the language continuum. Speaking languages is a human *anomaly*, a weird and very recent development. People signed 2.5 million years ago and still sign today. Signing is the “natural” and historic human language. Yet, this seemingly obvious fact is almost completely ignored in human evolution studies.

The third bias is less striking, but no less important and crucial to The Last Humans Project: once we – those who can help with our Project – recognize that humans from at least the time of our first toolmaking 2.6 million years ago have lived within a society and culture that very quickly determined human evolution more importantly than “natural selection,” or that themselves (society and culture) became “natural selection,” then we can use our fresh eyes to envision the new concentration in global higher education and how that can lead to our survival.

“Fighting Climate Change”

But, of course, why do we need to think about language and human evolution to deal with climate change? After all, aren't “we” already doing a lot to combat climate change?

Many organizations and some countries are working hard to reverse climate change. So, the long-term human project is actually underway – decreasing the amount of greenhouse gases in the atmosphere. This long-term project is also *failing*. The shift to alternate energy sources is significant but insufficient in scope. Greenhouse gas buildup continues to increase.

The other human project, preserving human society in *this century*, has not begun, or it has begun in only a few places where homes are being moved above flood plains, flood barriers being built, sea walls raised, and other local adaptations, but not in any global, coordinated way. (We are happy to be corrected in this claim, if warranted).

Both projects – reversing climate change and avoiding extinction -- are urgent and must proceed together. But it seems that most people think the only path is to reverse climate

change. The other path is addressing the urgent issue of extinction. We must start on the project to preserve human society now.

The Plan

Once the new story of human evolution is understood, and the core abilities of humans also understood, we educators around the world can envision the new “emergency” curriculum for global higher education. All 19,400 institutions of higher education in the world will first adopt a mission statement:

Lead the world in preserving human society during the current mass extinction caused by climate change. Offer a program, that enrollees can choose, that will engage them immediately upon matriculation in real-world projects aimed at preparing human society for extinction events such as floods, fires, rising seas, droughts, heat waves, famine, climate refugees, and other similar climate change effects that are bringing about the 6th mass extinction on earth that includes a threat to human survival. This mission is shared by all institutions of higher learning in the world and thus is a joint mission crucial to human society.

To enable this mission, all institutions will then include the new curriculum as an option for enrolled students as the way the institution will fulfill that mission. This curriculum builds on trends in higher education that have been underway for decades – internships, service learning, experiential learning, problem-based learning, social learning, and so on – all aimed at more active learning, more student-initiated learning, more authentic learning. The Last Humans curriculum simply moves these well-established and proven learning designs to a new level of urgency and implementation.

Collective Learning

Human society would still be limited to tribal organization and would be tiny in numbers but for a major factor that led to the explosion of human societies in numbers and power: *collective learning*.

Once homo erectus or homo habilis, or another concurrent human species roughly 2.5 million years ago invented language – mostly a sign language – we humans could share complex thoughts and thus pass on a whole range of human learning to other groups of living humans *and* to future humans. This is collective learning; learning via signed language in space and in time. We current humans, now, still share in and are a product of human collective learning.

Collective learning serves as an umbrella phrase for the NewMaPP curriculum suggested in outline above. The term describes how all human learning has occurred for over 2 million years. It is now instantiated by a number of learning designs as listed just above. It is also now a call to action, an organizing concept, and a way for human society to survive, mostly intact, until 2100 and beyond.

As we have recognized, governments will not lead globally, in a short enough time, to create a coordinated effort to protect global human systems necessary for survival, so NGO's and non-profits, including higher education, must lead instead. Higher education is the largest such organization and is, in many ways, the most influential. Why not higher education as the lead organization? It is the best equipped organization to launch an immediate project around the world. The Last Humans Project reminds higher education that it has a civic responsibility, that it is more than a business, and that it is at the core of human society and is its best hope for survival.

Our Fragile Social Structures and a Request

Human society, partly because we are a global interconnected species dependent on global systems, is vulnerable. If flooding, fires, heat waves, famine, or failed countries, or other disasters disrupt global systems, the effects on human society will be serious and widespread. We see these disruptive climate change effects happening now – fires, floods, extreme weather, drought, crop failure and so on.

Because these effects – taken together under the term “mass extinction” -- have already started and appear to be catastrophic, we ask you (as a human, as a citizen, as an influencer) to re-frame the entire way that you see our world. **If higher education is to take on the lead role to save humanity, societies must support that new role.** This re-framing is, therefore, a starting point toward a collaborative global response. The new frame we offer in this series of publications during 2020 is necessary, and hopeful, and could help human society survive the century.

Is Extinction Really Likely?

Each chapter will offer a part of our frame, or plan. The plan is based conceptually on a revised story of human evolution. The revised story shows us how humans have survived and thrived for millions of years. Humans have always faced extinction events. All human species have, in fact, gone extinct except for us. We homo sapiens are master survivors, master adapters, master problem-solvers. Let's find out why we are such and what abilities have allowed us to survive in the past few million years so we can use those abilities now as our species, once again, faces extinction.

How can 7 billion humans go “extinct”? Right. We are accustomed to hearing about “over-population.” That has seemed to be the problem for at least a century (with some indications that population decline is actually beginning). The big question, now, is: do we have redundant systems as backup? Our large numbers do not protect us from extinction.

If We Are So Vulnerable, What Can We Do?

The new story of human evolution informs the entire plan for human survival. When we say “new story,” you can also read “new” as “a revised, fact-based, theory-driven account of how humans actually evolved.” Sometimes, if you take an interdisciplinary approach to putting together evidence and claims from many fields, you can find a new awareness of truth.

The plan, then, builds on what we have discovered about historical human abilities that are often discounted today. If we want to survive the mass extinction, we had better know what we humans are capable of. Our best selves are expert survivors; we see enough of our worst selves already; it is now time to engage our best selves to make sure human social structures persist through the mass extinction.

Even Knowing Our Innate Abilities, What Can We Do?

Each of us has read or heard, over the past 40 years, about the dangers of climate change. Yet, despite increasingly dire warnings, climate change speeds up. What have we done wrong?

One deep issue seems to be that global human society has been built to cooperate on commonly shared needs to create global systems that benefit all, such as a global financial system, global supply chains, and trade agreements. We humans have also forged military alliances for the benefit of a limited number of nations. But, at the same time, nations compete, sometimes disastrously so.

What is it about humans that good people choose bad people for high office? When I was an undergraduate, one of my professors said that the least mentally fit people rise to the top of human society. It seems he was right.

“The [personality](#) traits that make up the [Dark Triad](#) become the core of the toxic personality, in Templer’s view. These include the tendency to exploit others (Machiavellianism), to have little feeling or regard for their fellow human beings ([psychopathy](#)), and to seek, to an extreme degree, being the center of [attention](#) ([narcissism](#)). The Dark Triad has been studied in a variety of contexts, including work settings, where the toxic employee was defined in all three facets. Templer believes that you only need one central quality to define the core of the toxic worker, and that is scoring toward the low end of the “honesty-humility” dimension.”
<https://www.psychologytoday.com/us/blog/fulfillment-any-age/201803/why-toxic-people-get-ahead>

“We favour ineffective leaders with psychopathic traits. The American personality psychologist Dan McAdams recently [concluded](#) that the US President Donald Trump’s overt aggression and insults have a ‘primal appeal’, and that his ‘incendiary Tweets’ are like the ‘charging displays’ of an alpha male chimp, ‘designed to intimidate’. If McAdams’s assessment is true, it would fit into a wider pattern – the finding that psychopathic traits are more common than average among leaders. Take the [survey](#) of financial leaders in New York that found they scored highly on psychopathic traits but lower than average in emotional intelligence. A [meta-analysis](#) published this summer concluded that there is indeed a modest but significant link

between higher trait psychopathy and gaining leadership positions, which is important since psychopathy also correlates with poorer leadership.” <https://aeon.co/ideas/the-bad-news-on-human-nature-in-10-findings-from-psychology>

As this book is being created, the world has tipped toward autocracy and plutocracy, and toward dictatorships in general. In times of rapid change, it can seem as though human society responds badly. We are in a time of rapid change because of new digital technologies. Somehow, absolutism seems attractive when the ground is shifting under us; we let the loudest voice tell us what to do.

Politics is not The Answer

We humans, therefore, must recognize that we cannot only turn to nations to address our extinction moment because politics does not bring the best leaders forward. As a result, few nations will sacrifice for the good of the species, or, sacrifice more than other nations. While tribalism may be comforting within a national society, it is disastrous for the species.

Knowing this sad truth about national societies, we must recognize that some other human organizations will need to act instead of, or in addition to, nations. And those organizations exist. The globe is blanketed with non-governmental organizations and non-profits whose mission and actions are in fact for the good of our species. The resources and energy are there. A record of success tells us we humans do have the ability to cooperate globally to preserve human society despite the worst efforts of bad leaders.

But, how do we humans, in the next year, or two or three, mount global cooperative efforts to engineer global human systems to prevent human extinction? There are hundreds of powerful NGO's and non-profits. How do we turn that force for good to a shared purpose?

Here is our argument in a nutshell:

1. The time frame to reverse climate change is too long to prevent human extinction.
2. While efforts to reverse climate change must continue, we humans, as a species, have to act in 2020, 2021, 2022 and each year after to prevent our own extinction.
3. Human society is vulnerable because most humans depend on society-supported systems to live and those social systems may be degraded significantly around the world in the present and over the years to come.
4. Those social systems are already being disrupted by the intensifying effects of climate change.
5. Nations will not cooperate sufficiently to save human society because of the tendency of bad people to rise to power politically.

6. But, organizations committed to social good bring out the best in humans and can cooperate globally to save human society.
7. To turn a major portion of those social-good organizations toward human survival, one institution can lead.
8. That institution is global higher education, 19,400 individual institutions in all countries of the world that serve as the engines for societies everywhere.
9. Higher education already collaborates despite national borders and political distrust.
10. To understand how higher education can accomplish this urgent task, we turn to human evolution studies with the question “what specific human abilities have allowed us to survive and thrive over the past 2.6 million years?” And, therefore, how do we create a “survival corps” of college students and graduates who can immediately jump into the task of human survival, a different challenge than “climate change?”
11. We establish an academic concentration within all 19,400 institutions of higher education around the world based on these factors:
 - a. Advancing the human abilities that have allowed humans to survive in the evolutionary past. The course of study itself will build on those innate abilities (it is not clear that higher education is doing that now) by inculcating them in college students who opt for that concentration.
 - b. Graduating people who can take action to preserve global human systems so our species survives. They will have worked on real life problems related to human survival during the entire time of their enrollment and then be ready to continue that work after graduating.
 - c. This concentration also happens to be an ideal learning path, incorporating many of the most effective learning practices already recognized in higher education.
12. Coordinating this global effort through the United Nations and other global NGOs and non-profits.

A Note on Our Time Scale

Though our Project focuses on this century, it is based on a new understanding of human evolutionary history – let’s utilize our best human abilities now when it really matters. But, first, we need to understand our best human abilities. Current literature on human evolution does not provide that understanding, unfortunately. We therefore have to build that background in our project in order to galvanize human learning and energy to focus on the climate crisis.

Our argument depends on a realistic human history, “realistic” meaning not focusing only on the most recent past, but focusing on the time when the most important human abilities developed. And, also, focusing on those prior human species who developed our core abilities.

- 4,000,000,000 years ago – earth (roughly)
- 6,000,000 years ago – human genus
- 2,600,000 years ago – toolmaking and language; **the beginning of the “new story.”**
- 1,800,000 years ago – fire and cooking; social space after dark
- 300,000 years ago – homo sapiens; a recent species
- 50,000 years ago – human language moves to oral-dominant; very recent
- 40,000 years ago – Neanderthals become extinct, last human species other than sapiens
- 10,000 years ago – end of last glaciation; agriculture
- 340 years ago – industrial revolution in Europe
- 75 years ago – end of industrial revolution; beginning of digital age and anthropocene
- 32 years ago – publicizing climate change
- 30 years from now – human extinction accelerates
- 300 years from now—greenhouse gases begin to decline

When human history is perceived over 2.6 million years, with the recognition that we humans invented language then, and with the recognition that language was and is the basis for society and culture, and, further that we humans have evolved within culture for most of our evolutionary history (instead of in “pure” nature), then the meaning of “human” changes radically from a seemingly common misconception of “human.” It is this new picture that forms the basis for our plan, called NewMaPP. We have looked at the past to understand our future.

NewMaPP

The Last Humans Project is centered on a new map of human society. That is, with higher education at the center during this century’s survival crisis. The crisis is about the survival of human global systems on which humans have come to depend, absolutely, for daily life. Higher education is uniquely positioned to assume a leadership role in this century because of its ability to engage a unique human ability, the instinct to cooperate at least on an individual or small group basis if not at an international level.

To understand NewMaPP, let’s revisit post-World War II in Europe. There, many countries were partly in ruins. The United States, untouched directly (despite losing many service men and women), had an intact economy and industrial base. It was in a position to help re-build economies and societies in other parts of the world. The U. S., of course, had more than an altruistic urge to help other countries, because U. S. business needed international markets for its industries, and when The Marshall Plan was initiated, in 1948, it was seen as a way to

prevent more countries being absorbed into the Soviet sphere. (Russia was offered assistance but refused and also blocked aid to those countries within their sphere of influence).

Nevertheless, the U. S. did create “The Marshall Plan” that has been credited with aiding many Western European countries in their postwar re-building. The restoration in a number of countries was astounding in its speed, thanks not only to The Marshall Plan, of course, but still the Plan remains a model for international cooperation in response to a global crisis.

Using the Marshall Plan model, not as giving away large sums of money, but as a model of international cooperation on a large scale implemented quickly, The Last Humans Project has created “The New Marshall Plan in Perpetuity” or NewMaPP. It harkens back to that Plan but also describes a “new map” of human society with NGOs and non-profits leading humanity more so than governments or for-profits. Governments are about power and for-profits are about, of course, profit. Non-profits are about social good. It is a more appropriate kind of organization to lead the world during the climate crisis in this century.

Political Futility

A democratic presidential contender in November 2019 recognized that we face a “climate crisis,” but then said he’d “take on the oil companies.” He fails, like almost everyone, to see that the climate crisis – the extinction event underway – is a separate problem from reversing climate change. The crisis or extinction threat is immediate and involves ways to keep society functioning during global disasters. Reversing climate change is a separate 3-century problem to reduce carbon dioxide and other greenhouse gases in the atmosphere. If he somehow “takes on the oil companies,” that will do nothing to deal with present extinction events.

A Diurnal Trance

Each day, most of us get up around the same time – later on weekends, perhaps – we may then let the dog out, prepare breakfast, pack our kids’ lunch, get dressed, drive the same route to work, with the same traffic patterns, get to work on time, see many of the same people each day and so on. There is nothing in this “diurnal trance” – this daily regularity – to suggest that humans are edging toward extinction.

Sure, we had a really wet spring, and, sure, we’ve read about blizzards and hurricanes and wild fires – droughts, heat waves – and so on, but we’ve read about or heard the same hysterical reports before. We survived, right?

In recent world history, humans survived World War One, known as The Great War until we had a “greater” war 25 years later. We survived the Great Depression when it seemed Capitalism had failed, and World War II when societies around the world were left in ruins, the A-Bomb (so far), and, many people believe, we are surviving climate change. No such luck.

There have been five mass extinctions on earth –

1. End Ordovician, 444 million years ago, 86% of species lost
2. Late Devonian, 375 million years ago, 75% of species lost.
3. End Permian, 251 million years ago, 96% of species lost.
4. End Triassic, 200 million years ago, 80% of species lost
5. End Cretaceous, 66 million years ago, 76% of all species lost

<https://cosmosmagazine.com/palaeontology/big-five-extinctions>

And, now we have number 6:

“The Holocene **extinction**, otherwise referred to as the **sixth mass extinction** or Anthropocene **extinction**, . . . an ongoing **extinction** event of species during the present Holocene epoch (with the more recent time sometimes called Anthropocene) as a result of human activity.” https://en.wikipedia.org/wiki/Holocene_extinction

(Another historical mass extinction was reported on in September 2019, potentially altering the total number of mass extinctions:

<https://www.sciencedaily.com/releases/2019/09/190909105555.htm>)

In other words, if we are using the same measure as we use to indicate the danger of a nuclear disaster, the minutes to midnight measure, and use it instead to measure how close to the human extinction event we are at this moment, we’d have to say “a few minutes PAST midnight.” This extinction has already started.

The clock is The Doomsday Clock. Here is the most recent statement’s “teaser” on the website for the Doomsday Clock: <https://thebulletin.org/doomsday-clock/> The clock is officially at 2 minutes *before* midnight but, to us, since “doomsday” has already begun in the form of global climate disasters, how can we not already be *in* doomsday?

Groups of humans, and some societies, will most likely survive during this extinction event, but probably in a distinctly different form. This will affect your children and grandchildren; if you are young, it will affect you. Or, it already has in a wildfire or flood or drought.

Beyond Alarmist

Our point in this book is not just to be alarmist, although the previous paragraphs are certainly alarming. Instead, we offer an approach for humanity to mitigate (lessen) the effects of the mass extinction. We offer a global, cooperative approach that can help human society persist despite inevitable disruptions. The approach does not contemplate governments taking a lead, given the rampant nationalism around the globe, but instead other organizations leading with governments perhaps providing support.

Why I Can Write This Book

I am “untethered” from higher education, that is, no longer employed by an institution or non-profit. I no longer have to seek promotion, reputation, or income. This means I am freer to re-imagine what higher education should do, globally, than if my career or reputation depended on a higher education entity. I am freer to be a disrupter on a greater scale. As one of the higher education technology leaders over the decades, I have already served as a disrupter because the technology itself is such and I was and am a proponent of good uses of new technologies. In this book, I continue in that tradition of re-imagining our world as new technologies influence how we create our world.

A Case We Do Not Need to Make

In the serial chapters of the book I have written and continue writing, released as free, downloadable PDFs, I do not need to make the case that we are approaching, if not already in, the tipping point of the mass extinction. We actually may be near to the feedback loop where natural systems fail and cause other natural system to fail. But, in hopes that we have some time – a few years -- to adapt in large-scale ways to the effects of climate change before it is too late, we offer a radical full species program, NewMaPP, just described, to organize globally for our best chance to survive as a species and global society. (The actual reference curriculum will appear in detailed form in a subsequent chapter available in February).

Sapiens has become so successful because we sapiens are both specialists and generalists (explained more fully in the Higher Education chapter) and therefore able to build large societies. We have succeeded to the point of excess. We sapiens know only expansion and growth; it is what we do. We have very little experience with shrinking in both land space and population (and therefore economically).

But, if we do not need to prove in this book the urgency humans face – reports each day make the case – we do need to make the case that our society, as a whole global human society can cooperate as humans always have, even though only partially at a global scale, to adapt to the effects of climate change through a new Marshall Plan in Perpetuity. We have shown we can cooperate at a high level within a society (that is, within national borders), but can we similarly cooperate at a high level between societies?

A big part of our new Marshall Plan in Perpetuity is what we know about human abilities from the study of human evolution. NewMapp depends on knowing what we humans are best at – how did we become so successful?

The actual story of human evolution has not yet been told, at least as far as we can see after reviewing the current consensus in all the fields, exhaustively studying evolution over the past three years. This is a big problem, because, if we are to help human society survive, we need to know what strengths we have, and how we can best use those strengths to get us through this “rough patch.”

We have found profound lessons from the study of human evolution that form the foundation for this book. We have also found profound lessons from the large gaps in the story of human evolution. The most important parts of the human story over the past 2.6 million years are missing. The human story, therefore, ends up making no sense. We have filled in a key and vital part of the human story and that key part leads us to NewMaPP, based on knowing – now – that the cradle of humanity is language.

Some may be surprised by the actual story of human – not just homo sapiens, a recent species, but all the species that came before. In fact, it could be that homo erectus, an earlier species from whom we inherited many of our best abilities, may have been the “best” species! They and habilis and perhaps other human species created the frames within which sapiens has prospered. We sapiens (modern humans) did not start tool making, or invent language, or control fire or learn to cook food – we sapiens inherited those crucial abilities. We have lived on that inheritance, invested it well, and we have thrived because of that “investment.”

But, there are no other species around now, so we are it. Human species have proven to be vulnerable to extinction and we are no exception, despite our numbers and technologies.

We Have Succeeded Too Well

We sapiens have been all too successful because of a wonderful combination of traits but we have also been too successful too rapidly. The relationship between human evolutionary success and climate change informs the recommendations we make in this book for global higher education, as an industry sector, to take on a totally new and crucial mission. The 6th Mass Extinction, or “the anthropocene,” will inescapably bring about a disruption of human society world-wide. That disruption – floods and storms and wildfires – is already publicized regularly, but those effects are only the beginning.

Evolution studies have shown that humans are among the best cooperators of all species. Few other species will instinctively help, or cooperate with, a non-kin species individual. People do instinctively help another person in trouble. No hesitation. It doesn't matter if the person is related. In fact, this cooperation instinct is one reason human society has grown to be so immense. It is one of our greatest advantages.

But, how can we, now, as extinction faces us, get nations to cooperate as individuals do? It is probably too late and too close to our potential extinction to change the behavior of nations so as to more closely align with our individual instinct to cooperate. Since, in the short range, we have no hope of changing how governments cooperate, or at least to cooperate beyond a local benefit, we need higher education to take on a role in saving humanity from extinction.

Higher Education Redeems Itself

“Higher Education” has a bit of a bad rap right now: while the advent of information technology has changed the terms for success in life, higher education seems focused almost

wholly on earlier ideas of life success and also not on societal benefit but institutional internal issues.

What has happened to the social responsibility of higher education? Equity and retention and social justice and so on are all in need of attention, but at the same time society faces extinction: how is higher education addressing not only individual equity but the survival of human society? We have known climate change is an “existential threat,” to use a current phatic expression, meaning, we suppose, a threat to our existence, and not a resurgence of philosophical existentialism (although that *could be* threatening).

Higher education can change in three very fundamental learning design trends – active, authentic, and social learning. Those trends are already underway in higher education (HE), so we are merely advocating a dramatic acceleration of these three trends.

As we tell the (revised and more complete) story of human evolution, based on a cultural studies approach in synthesizing results from a large range of disciplines, and based on long language experience of an unusual variety, our reasons for suggesting this dramatic acceleration of trends will become clear.

Human society will survive. How much of our current population will still be alive is the big question. We humans have the instinct and ability to cooperate on a large scale. Let’s get going.

Topics for subsequent releases:

- **The Actual Story of Human.** We modern humans (*homo sapiens*) evolved fairly recently, just about 300,000 years ago, long after earlier species had discovered and developed the most important human abilities that we, *sapiens*, then used to build large societies. The human genus appeared about 6,000,000 years ago. However, for the purposes of this book, “modern humans” can trace their cultural inheritance, that is, language, toolmaking, fire and cooking, back to the period between 2,600,000 years ago and 1,800,000 years ago when *homo habilis* and *homo erectus* built the foundation for modern humans. This timeline of discoveries and inventions is different in important ways from the consensus in evolution studies. But, this actual timeline, and the story that goes with it, is where we find the basis for how to preserve global human society during the ongoing extinction event. (This will be a two-part release).
- **Higher Education NewMaPP.** Global higher education, all 19,400 institutions, is the engine for human society. Higher education, as a collaborative generator for leaders around the world, can manage NewMaPP, the New Marshall Plan in Perpetuity. Like the post-WWII Marshall Plan, designed to restore Western Europe after the War, the NewMaPP can do the same for human society. NewMaPP includes specific new structures in higher education around the world that will enable HE to lead in the effort

to preserve human society.

NewMaPP can be put in place immediately. One mission statement, about preserving human society, can be and must be adopted by every university and university system around the world, as a start. Most universities have mission statements, so the NewMapp mission statement would be added as a capstone mission.

The curriculum behind the NewMaPP capstone mission can also be adopted immediately. That curriculum will include some courses of study that are already a logical piece of NewMaPP within institutions. Other parts of the curriculum will be new but in every case an extrapolation from powerful trends for new learning designs already in development in many places and partially implemented in others. The new part of NewMaPP will be global coordination toward the one goal of preserving human society.

A mission statement to be adopted by all higher education institutions in the world:

“Lead the world in preserving human society during the current mass extinction caused by climate change. Offer a program that enrollees can choose that will engage them immediately upon matriculation in real-world projects aimed at preparing human society for extinction events such as floods, fires, rising seas, droughts, heat waves, famine, climate refugees, and other similar climate change effects that are bringing about the 6th mass extinction on earth that includes a threat of human extinction.”

- **Technology.** Our mindless adoption of new technologies over our entire human evolutionary history has led us, now, to the unintended consequence of human extinction. It has led us to weapons of mass destruction in the last century. And yet, the technology of language is what made us human 2.5 million years ago. Part of NewMapp has to be oriented toward global agreements about how to guide technology use to do the least damage to human society. And to do the most good. Technology may be “neutral,” but its affordances are not.
- **Language.** The current understanding of language is hampered by naivete. Language, for humans, is a whole-body production. Seeing it as a solely oral (spoken) activity, as is commonly done by language researchers, leads to absurd conclusions about human evolution. And not only “absurd,” but disastrous: it has led to the claim that humans had no language during most of our history, as if our greatest and most essential ability, came as an after-thought. It has led to an exaggerated focus on the use of tools, as in weapons, as the major ability of humans – as if we are war-like by nature. Instead, making tools and language are inter-related in fascinating ways. The actual history of human language is a major part of the conceptual basis for NewMaPP.
- **Analysis of Metacognition and Human Consciousness.** The ability to reflect – to think about thinking – or to judge what we are doing by some moral principle – involves the

unique ability humans have for metacognition. Human learning is “situated” in a context, such as in a particular time in your life, or in a particular social setting (your family, for example), or in a job situation: you learn to do something for a particular purpose and are able to do a job. We do not learn in isolation. So, as long as our contexts remain constant – you are within your family for years and you know how to relate to your parents and siblings – you can be smart within that situation. The challenge is to UN-situate your learning and knowledge and then apply it to a new context. (Bereiter)

In other words, can you transfer what you know in one job to a new job, for example? Can you UNSituate what you learned in the previous job and apply it to the new job?

The underlying challenge is adaptation (“transfer”) – how in life do you understand principles from one experience to another and apply them? And, for the purposes of this book, how can human society adapt to the challenge of extinction? How can we unsituate ourselves from a world political order based on selfish motives (capitalism by one name or another) and re-situate ourselves in a cooperative world order in order to survive?

[This is not a condemnation of capitalism, only an honest assessment of the core energy that capitalism depends on].

Humans have the ability to adapt to radically new environments and new challenges; right now, in this century, we face the greatest challenge to our metacognitive adaptability ever.

- **Agriculture.** Humans began farming very recently in our evolutionary history – just 10 thousand years ago. Without agriculture, human population could not have grown so explosively. While we learned to feed more people, we also learned to “own” part of nature. Owning land may have increased the need to defend that land. While we love the romantic ideal of farming, it may well have been a source of increased warfare.

And, now that we humans are reaching the limits of our sustainable growth in numbers and consumption, how to feed even the existing human population is a problem: large segments of fertile land used for farming are becoming depleted; only through petroleum-based fertilizers are we humans able to feed everyone, or almost everyone.

Anyone who thinks eating plants and not meat is helping reverse climate change probably does not understand their own carbon footprint from eating vegetables. The absurd idea that “don’t eat meat” will “save the planet” is an exaggeration. In some ways, eating meat is more sustainable long term (for a limited number of humans) than eating grains: cattle eating grass in well-watered parts of the world and nourishing the earth with their manure can go on indefinitely; the grain crops that feed the world

cannot.

- **Limits of empiricism.** Because we now face extinction, we need to know how to mitigate human losses as the extinction event continues over the next few centuries. This “need to know” is a severe challenge. We need to know, for sure, that what we try will work. For many decades, we humans have depended on the scientific method to verify what works. And we still do and must continue to do so. But, we also need to recognize a hard truth that supersedes science: there are limits to what we know through empiricism. The applicable example is our acknowledging that humans became human through inventing language 2.6 million years ago. There is no way to “prove” this is true, any more than there is a way to *prove* that humans spoke 50,000 years ago, yet all human evolution researchers accept the latter claim but deny the former.

In other words, science, in the absence of evidence, can be as foolish and ignorant as any other way of knowing or not knowing truth. “Truth,” in the absence of evidence, can be as prejudicial and absurd, in the name of science, as any wild claim.

We base all claims in this book on the evidence and analyses that are available, but we go beyond the science of human evolution to tell the human story that makes sense and that is useful for our survival right now. Let’s call it “the language hypothesis.” As pragmatism says, whatever works is true (more or less). If our story helps humanity survive because of NewMaPP, then we can wait for peer review of our claims about human evolution until after we have survived extinction.

Conclusion

Knowing that we humans invented language halfway through our 6 million-year existence and then became the dominant species on earth changes the entire story of human. In higher education, STEM (science, technology, engineering and math) have assumed the character of a religion: mention “STEM” and people take a breath – “oh, this is important.” But, any success in those 4 fields is grounded in language. Language is the context within which all human knowledge was created and shared and is the basis for success in any STEM project. STEM projects are derivative; language is the source. And this truth must be recognized for NewMaPP to succeed and human society to survive. We humans cannot coordinate our survival if we cannot communicate understandably with each other. Right now, a majority of college graduates cannot communicate understandably or effectively in speech or in writing.

Author of Chapter One, Two Systems:

Trent Batson, Ph.D., served as a professor or administrator at eight different universities and as founder of a global non-profit over a – so far – 56-year academic career.

<https://members.educause.edu/trent-batson>

Reviewers of Chapter One:

Randy Bass, Vice Provost for Education, Georgetown University

Bryan Alexander, Senior Scholar, Georgetown University

Philip Long, Senior Scholar, Georgetown University

- With the release of this first chapter of the Book, we invite collaborators for the next chapters, as outlined at the end of Chapter One. Contact trentbatson@mac.com
- This chapter also serves as a “prospectus” for any publishers interested in adding to the distribution of this book.
- We also invite collaboration with other NGOs and non-profits with compatible goals.

Given the urgency of the problem this book addresses, I opted to release the book in serial fashion immediately, a chapter a month, instead of going through the usual publication process.