I. Culture and global integration

1. Are there gods good for growth?

"So why did the societies of the Islamic civilization stagnate, along with the Chinese, the other serious rival to European economic dominance in the first half of the second millennium? The answer emerges from a more subtle and less fatalist analysis of the role of religion in economic history. What matters, it seems, is less the precise doctrines than the uses to which the religion itself is put, and the <u>willingness of societies to change or reinterpret laws grounded in religious belief</u>. Islamic economies struggled to increase productivity, or output per head of population. There was no great breakthrough in agricultural efficiency—the advance that would centuries later spur the development of Europe. Businesses and partnerships remained small. There were few examples of substantial private sectors operating genuinely independently of the state (…) Unlike European cities, Muslim cities were not allowed to develop into autonomous entities, or to pioneer ideas of personal and commercial freedom. They remained centers of religious piety. The Islamic empires did not develop states that were primarily interested in technological progress or productivity. They spent more time fighting over what they already had or trying to seize more through invasion. But this had a lot more to do with accidents of geography and history than with the theology or 'management structure' of the prevailing religion. <u>It was perhaps Islam's misfortune to have been born in the Middle East and maintain its centers of political power there</u>, originally in Mecca and Baghdad (…) Being in the Middle East meant bad luck on the resource front: <u>shortages of minerals and timber made the transition to a manufacturing market economy much harder than it was in Europe</u>. And, then as now, it was bad for peace. The Islamic world was plagued by destructive raids by marauders that frequently threatened to knock stable, sustained economic development off course. In particular, the growing threat of the Mongols in Central Asia realized its destructive capacity under the rule of Genghis Khan in the thirteenth century. The Mongol invasion laid waste to cities across the Islamic world."

"… it was the failure of any one denomination to predominate, not the nature of Protestantism itself, that created a comparatively open European civilization with a variety of beliefs (…) By contrast, <u>the dominant culture in the operation of the Islamic empires tended toward one of military authority: top-down, unquestioning</u>, with a vast amount of power vested in a centralized state."

"The crucial difference between Islamic societies in the Middle East and Christian societies in Europe was not in the theology of the respective religions (…) The difference was that <u>European merchants were powerful enough to have inconvenient laws disposed of</u>, even when that required changing the religious justification of those laws. Their counterparts in Islamic countries, for reasons largely unrelated to the nature of the religion itself, were not (…) Islam has sometimes provided a useful cover to governments wanting to maintain control over their economies and their people."

"Perhaps, rather than its values becoming embedded in the psychology of its followers, <u>religion influences growth mainly through its exploitation by the institutions of power</u>."

Beattie, Alan (2009): *False economy. A surprising economic history of the world*, **Riverhead Books, New York.**

2. Objections to religious faith

"There still remain four irreducible objections to religious faith: that it wholly <u>misrepresents the origins of man</u> and the cosmos, that because of this original error it manages to <u>combine the maximum of servility with the maximum of solipsism</u>, that it is both the result and the cause of <u>dangerous sexual repression</u>, and that it is <u>ultimately grounded on wish-thinking</u>."

"And here is the point, about myself and my co-thinkers. Our belief is not a belief. Our principles are not a faith. We do not rely solely upon science and reason, because these are necessary rather than sufficient factors, but we distrust anything that contradicts science or outrages reason. We may differ on many things, but <u>what we respect is free inquiry, openmindedness, and the pursuit of ideas for their own sake. We do not hold our convictions dogmatically</u>."

"We are reconciled to living only once, except through our children, for whom we are perfectly happy to notice that we must make way, and room. We speculate that <u>it is at least possible that, once people accepted the fact of their short and struggling lives, they might behave better toward each other and not worse</u>. We believe with

certainty that an ethical life can be lived without religion. And we know for a fact that the corollary holds true—that religion has caused innumerable people not just to conduct themselves no better than others, but to award themselves permission to behave in ways that would make a brothel-keeper or an ethnic cleanser raise an eyebrow. Most important of all, perhaps, we infidels do not need any machinery of reinforcement (...)We atheists do not require any priests, or any hierarchy above them, to police our doctrine (...) How much effort it takes to affirm the incredible! The Aztecs had to tear open a human chest cavity *every day* just to make sure that the sun would rise."

"Past and present religious atrocities have occurred not because we are evil, but because it is a fact of nature that the human species is, biologically, only partly rational."

"Religion has run out of justifications. Thanks to the telescope and the microscope, it no longer offers an explanation of anything important."

"We are in need of a renewed Enlightenment, which will base itself on the proposition that the proper study of mankind is man, and woman. This Enlightenment will not need to depend, like its predecessors, on the heroic breakthroughs of a few gifted and exceptionally courageous people. It is within the compass of the average person."

Hitchens, Christopher (2007): *God is not great. How religion poisons everything*, **Twelve, New York.**

3. Religion as an unavoidable danger?

"Religion is man-made. Even the men who made it cannot agree on what their prophets or redeemers or gurus actually said or did. Still less can they hope to tell us the 'meaning' of later discoveries and developments which were, when they began, either obstructed by their religions or denounced by them. And yet—the believers still claim to know! Not just to know, but to know *everything*. Not just to know that god exists, and that he created and supervised the whole enterprise, but also to know what "he" demands of us—from our diet to our observances to our sexual morality (...) The person who is certain, and who claims divine warrant for his certainty, belongs now to the infancy of our species."

"Religious faith is, precisely *because* we are still-evolving creatures, ineradicable. It will never die out, or at least not until we get over our fear of death, and of the dark, and of the unknown, and of each other. For this reason, I would not prohibit it even if I thought I could. Very generous of me, you may say. But will the religious grant me the same indulgence? (...) As I write these words, and as you read them, people of faith are in their different ways planning your and my destruction, and the destruction of all the hard-won human attainments that I have touched upon. *Religion poisons everything.*"

Hitchens, Christopher (2007): *God is not great. How religion poisons everything*, **Twelve, New York.**

4. The celebration of violence

"... the current practice of publicizing every violent attack is radicalizing more people than al-Qaeda or IS combined. Young people don't have to be radicalized by religious extremism; the simple lure of fame is often enough. There wouldn't be nearly as many violent incidents if the media and its consumers simply stopped rewarding the perpetrators. This celebration of violence creates two problems. The first is that we now live in a society where anyone can become an instant celebrity by simply killing a lot of people (...) In the process they become famous— and in turn, they inspire others. The second problem is that the majority of these incidents are automatically assumed to be 'terror' attacks, and the perpetrator is assumed to have either been connected to or radicalized by Islamic State. After constant exposure to this type of reporting, the public begins to conflate Islamic extremism with mainstream Islam, which opens the door for widespread Islamophobia."

"...it just seems common sense that if one wants to avoid the persecution of an entire group of people, the first step would involve the elimination of scapegoats. And since that can only happen by dispelling the myth of us versus them, that's where we should focus our efforts. Collective action is tricky but not impossible. Remember how boycotts helped eradicate apartheid in South Africa? As consumers of the news, we can also put an end to the sensationalizing of violence. The onus is on us."

"The news is literally saturated with incidents involving Islamic extremism but very little, if anything at all, on Islam itself (...) As a result the average viewer is led to believe that the threat from Islamic extremism is far

greater than it actually is. This perception creates fear, and fear leads to toleration of and even demand for policies that are both oppressive and discriminatory."

"The reason that the discipline of terrorism studies is in such a state of chaos is politics. <u>All this politicking serves as a gatekeeping function that protects the status quo</u>."

"Harold Lasswell famously defined <u>politics as 'who gets what, when and how</u>.'"

Maszka, John (2018): *Washington's dark secret. The real truth about terrorism and Islamic extremism*, Potomac Books, Lincoln, Nebraska.

5. Global protection of children

"… the United Nations has passed resolutions and initiated treaties establishing and attempting to enforce children's rights. Going far beyond the 1924 and 1959 declarations, the <u>1989 Convention on the Rights of the Child</u> offered a wide-ranging affirmation that the best interests of the child should guide all policies and decisions regarding childhood. The convention's forty articles reflect all of the concerns, values, and issues that had swirled around the idea of childhood throughout the previous century, including health, education, freedom of speech and religion, and the right to a name and nationality. The UN's Committee on the Rights of the Child oversees the enforcement of its provisions. <u>Although the United States was involved in the drafting of the convention, it remained the only nation not to have ratified it as of 2017</u>."

"In addition to primary care programs related to nutrition and health, the UN has worked to eliminate child marriage, provide standards for children's rights within families and the treatment of refugees, eliminate child prostitution and child pornography, and discourage the exploitation of children in armed conflicts. Despite these efforts (…) in 2000 an estimated 100 million school-age children were out of school, 50 million were working in harsh conditions, 30 million were involved in sex trades, 150 million were malnourished, and millions more had been orphaned by or suffered from AIDS."

"Ideas about children's responsibilities and commitment to their rights continue to vary from nation to nation. In the West, children's rights and autonomy tend to prevail over parental prerogative (…) Yet, in another demonstration that children's history is far from linear, <u>some of the rights gained by children during the twentieth century had eroded by late in the century, at least in the United States</u>. This was especially true in the courts, as juvenile offenders were increasingly tried as adults, and in cases involving free speech."

"By the early twenty-first century even developing nations had seen great improvements in their children's health over the previous fifty years. Yet <u>poverty continued to limit the educational opportunities and influence the health of tens of millions of children</u>. Malnutrition was a fact of life for perhaps 40 percent of young people living in the developing world. In a single year over 800,000 children died of AIDS, primarily in sub-Saharan Africa. <u>Even in the United States and the United Kingdom, around 20 percent of children lived in poverty</u> (…) Climate change has emerged as a new threat to the world's children (…) Brazil provides an example of the many issues related to poverty, violence, and health that confront most of the world's children in the early twenty-first century. Many Brazilian children were subjected to poverty and violence that hindered the realization of a 'modern' childhood."

"Lest one think violence plagues only developing and poor nations, it is important to note that <u>at least 16 million American children live below the poverty line and that nearly 1,300 children are killed by guns each year, making it the third leading cause of death among children</u>. Over 90 percent of all children under the age of fourteen who die from gun violence live in the United States."

"Despite numerous declarations by the United Nations and other international groups deploring the use of child labor, and although most countries have passed laws forbidding the work of young children and limiting the kinds of work older children can do, <u>paid labor remains a reality for hundreds of millions of children around the world</u>."

"Activists believe that many children are trapped in forms of coerced labor prohibited by the United Nations and other international human rights organizations. These include <u>slavery and other forms of involuntary work</u> (forced 'apprenticeships,' for instance, and indentured servitude), <u>sex trafficking, and forced marriage</u>. Although exposure to these conditions is difficult to track, a 2017 report by one advocacy group estimates that a fourth of the more than 40 million people (mostly females) facing such coercion were children."

Marten, James (2018): *The history of childhood. A very short introduction*, Oxford University Press, New York.

6. Globalization of children's culture

"At the same time that post–Second World War child welfare activism has become increasingly global in outlook, child and youth culture has also taken a global turn. Its modern version started with the American "Baby Boom" generation, which came to represent the growing cultural and economic importance of children and youth. The 76.5 million American baby boomers born between 1946 and 1964 grew up during a period of sustained economic growth, unrivaled American power, and rapid suburbanization."

"It became easier to track the similarities and differences in the experiences of children and youth because, long before the term *globalization* was common currency, a youth culture that ignored national boundaries had emerged. Protest and political activism was one form of youth culture occurring in the 1950s and 1960s, but starting as early as the 1920s, many forms of popular culture, from movies to music to dress to technology, united an increasingly large percentage of the world's children and youth, at least superficially, and at least for those affluent enough to join in. Indeed, the consumerism that had begun developing in the nineteenth century and flourished prior to the Second World War grew into a major driver of the world economy by the twenty-first century."

"Much of the content that shaped consumption by children originated in the United States (…) But major threads did appear elsewhere, from 'Beatlemania' and the global rise of rock and roll music coming out of Great Britain in the early 1960s to the development in the 1990s of video games, comics, television shows, and t-shirts, caps, backpacks, and other merchandise branded with images from such global franchises as Pokémon and Hello Kitty that originated in Japan (…) the most common experience of children throughout the world was their access to television (…) This development drove an expansion of child consumerism; between 1989 and 2002, for instance, spending by American children increased by 400 percent."

"This is not to say that the globalization of children's culture has been uniform. Poverty necessarily limits access to some of the technology, mobility, and discretionary spending required to fuel that culture. Thus, while this global culture has reached into virtually every part of the world, it has also highlighted class, ethnic, and even religious differences."

Marten, James (2018): *The history of childhood. A very short introduction*, Oxford University Press, New York.

7. Miyamoto Musashi's (1582-1645) strategy rules

"I hereby convey to the world for the first time in writing my strategy for collective and individual combat (…) For those who care to learn my principles of combat strategy, follow these rules in observing the Way:

1. Think never to veer from the Way

2. Train unremittingly in the Way

3. Acquaint yourself with all arts

4. Know the Ways of all vocations

5. Discern the truth in all things

6. See the intrinsic worth in all things

7. Perceive and know what cannot be seen with the eyes

8. Pay attention even to trifles

9. Do not engage in superfluous activities."

Musashi, Miyamoto (2018): *The complete Musashi. The Book of Five Rings and other works*, Tuttle Publishing, Tokyo (Translated with an Introduction by Alexander Bennett)

8. The psychology of Silicon Valley

"Two of the most salient values found throughout Silicon Valley are a dedication to problem-solving and big ideas (…) Many believe the success of the industry, combined with its newfound cultural relevance and the glamorous

pull of working for a top tech company, has reinforced not only Silicon Valley's insularity, but also driven what some describe as outright <u>hubris</u> (...) The creator of the World Wide Web, Tim Berners-Lee , has repeatedly expressed his dismay at the current state of his invention and a <u>desire to restore the more prosocial foundations of the internet</u> as he intended it to be."

Cook, Katy (2020): *The psychology of Silicon Valley,*

9. The hubris syndrome

The hubris syndrome refers to the personality change acquired by some persons occupying positions of social, political, economic, ideological leadership. The change is characterized by <u>lack of realism (the loss of touch with reality) and excessive self-regard</u>. Both traits lead to incorrect decision-making. The Hubris Syndrome and power go together: power is necessary for the syndrome occur; leaders suffering from the syndrome that have lost power never regain it.

10. The inverse law of sanity

"Normal persons have mild positive illusion, which, in the context of power, predisposes them to developing hubristic behavior. In contrast, depressed persons are more realistic and empathic than normal persons, and thus, in the context of power, less prone to the Hubris Syndrome."

Garrard, Peter; Graham Robinson; eds. (2016): *The intoxication of power. Interdisciplinary insights,* **Palgrave Macmillan, Basingstoke, UK.**

11. The Dunning-Kruger effect

The Dunning-Kruger effect is the cognitive bias according to which <u>people tend to overestimate their own competence</u> (one's is not fully aware of his or her own ignorance).

12. Self-confirming bias

Self-confirming bias is the cognitive bias in which people tend to take into account or emphasize information/evidence that <u>reinforces their views/beliefs</u>, and neglect information/evidence contradicting their views/beliefs.

13. Self- serving bias

Self-serving bias is the cognitive bias in which <u>people tend to attribute success to themselves and failure to external factors</u>. It is an expression of overconfidence: people seem to overestimate their skill, knowledge, competence, efficiency, moral virtues...

14. The principle of social proof

<u>People tend to make decisions and adopt beliefs on the basis on what others do and believe</u>. The individuals' perception of correct/acceptable behaviour/beliefs depends on the extent to which other follow/hold the behaviour/beliefs. To decide what is appropriate people tend to rely on what others do. The presumption is that one makes fewer mistakes by respecting social evidence (the majority cannot be wrong). Social proof appears most influential under uncertainty and similarity.

15. The halo effect

The halo effect t is the cognitive bias in which the overall impression of a person influences the belief regarding the person's character (attractive-looking people tend to be perceived as kind, intelligent, successful). [Special case: the <u>Dr. Fox effect</u>. Students tend to rate higher a teacher who presents the material in an engaging, expressive, enthusiastic manner, regardless of the value, interest, usefulness, meaning, plausibility of the content.

Talk nonsense under conditions of high expressiveness gets higher ratings than providing informative and useful contents in a dull manner.] [To which extent can social proof be manipulated by the Halo effect?]

16. The role of the teacher

"But the terrible mistake that our civilisation has made, I believe, is to <u>turn the truth about our dying civilisation into an excuse for lying systematically to our children</u>. We lie to our children every time we pretend that they can expect an ordinary career of their choice in an endlessly growing economy (…) We lie to them every time we tell them we love them while giving them a new piece of plastic crap before turning our attention swiftly back to our mobile phones. We lie to them, and ourselves, if we think or declare that we love them and yet the actions we take, rather than being directed with determination toward the aim of seeking to transform this civilisation for the better, actually hasten its likely collapse. <u>We lie to them because much of the time we lie to ourselves</u>, of course. But also *because we are pierced by the thought that their innocence shouldn't be swept away instantly* before it has had any time to give them some feeling of safety within which they can become sanely 'attached' and sanely individuated."

"<u>The first responsibility of intellectuals and of teachers at a time like this is to come clean</u>. We should tell it like it is; and we should apologise for not having a better story to tell, a better world to bestow. We should be inspired by figures like Spartacus, Cato the Younger, Vaclav Havel, Mahatma Gandhi, Petra Kelly, Greta Thunberg: we should be clear that <u>our power, such as it is, rests now in being authentic</u>; in not shying away from extremely uncomfortable realities; in sharing how we feel. I find that one of the most powerful things I can do now is to share my fear (and grief) for the younger generation with them. That's the basis of real dialogue; real empathy."

Read, Rupert; Samuel Alexander (2019): *This civilisation is finished. Conversations on the end of Empire— and what lies beyond*, Simplicity Institute, Melbourne.

17. Epochs A and B (Jonas Salk and Jonathan Salk, 2018)

"<u>The sigmoid growth curve consists of two sections of different shape: the upturned portion describes a phase of progressive acceleration of growth; the second portion is downturned and describes a phase of progressive deceleration</u>. The difference in shape between the two portions of the curve suggests both quantitative and qualitative differences in human life between the two periods of time."
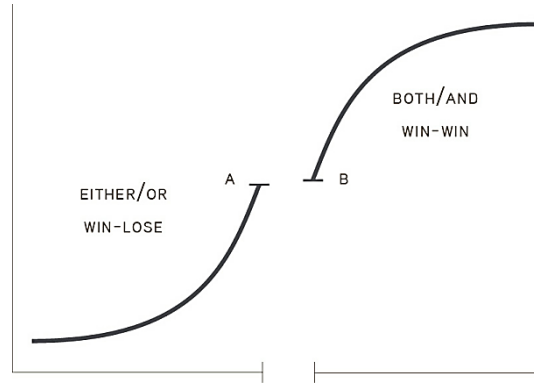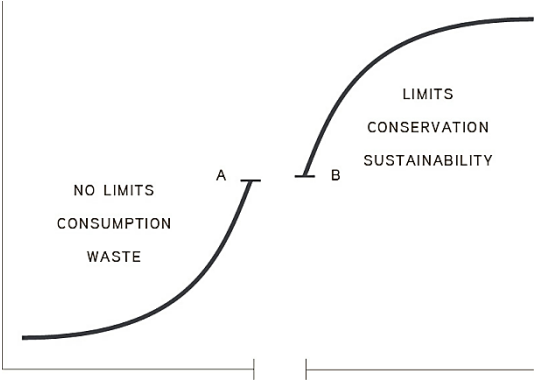
"We are moving from an era dominated by limitless growth, competitive strategies, short-range thinking, and independence to one characterizedby awareness of limits, cooperation, long-range thinking, and interdependence (…) <u>We are on a frontier, but it is not territorial or technological; it is human and social</u> (…) In the years to come, we face the challenge of understanding and facilitating a slowing of human population growth and, ultimately, of adapting to conditions associated with a relatively constant population size at a level far beyond anything we have previously experienced."
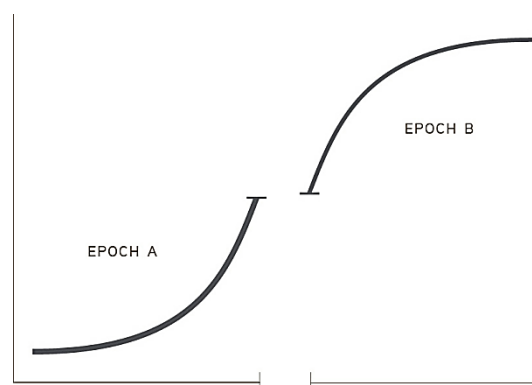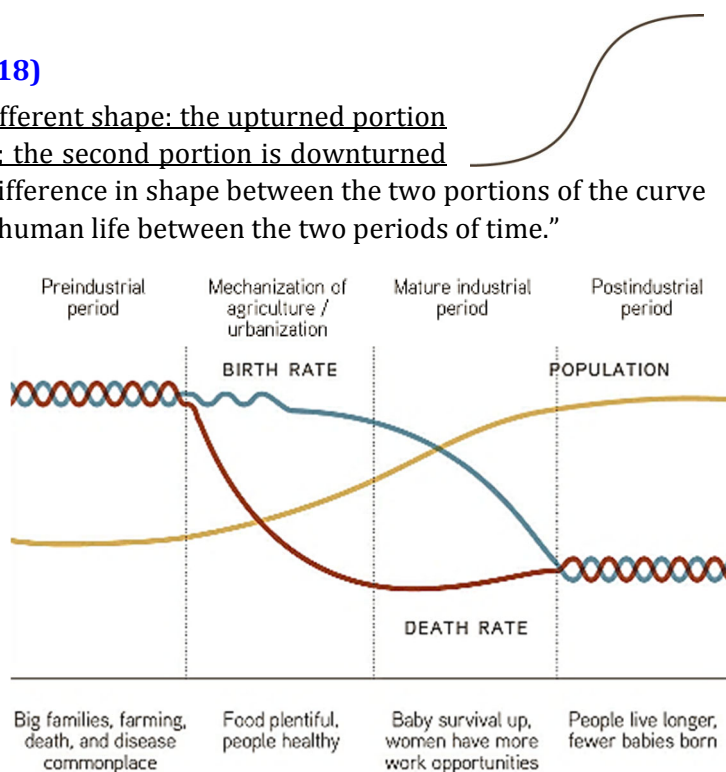
"To someone born in Epoch A, the future would appear to have few limitations in terms of growth, resources, and available energy. Someone living in Epoch B would, however, have a distinct sense of limitations and of the necessity to adapt to the approaching of a plateau in population growth."

"In Epoch A, progressive increase in population was seen to be positive; in Epoch B, this increase is now of negative value and, if left unchecked, threatens our very existence."

"In Epoch A, competition and the demands accelerating growth were inherently of persistent, associated with either/or attitudes and philosophies and the prevalence of win-lose strategies in the resolution of conflict. People or nations saw the world as a place in which any benefit to the other is a loss or detriment to the self. In Epoch B, however, the tendency toward balance, collaboration, and interdependence will be based upon and evoke a philosophy of both/and and the development of win-win strategies."

"Epoch B values, attitudes, and behaviors are emerging not only because they are humane but also because they are advantageous to individuals and to society. During this transition, it can be expected that conflict, at all levels of human life, will increase. In the long term, such conflict will be most effectively and constructively resolved with both/and rather than either/or strategies and through the integration of the values of Epoch A and Epoch B. The present period is especially sensitive. In resisting change, we may cling to values that are obsolete and exceed the tolerance of nature. Resisting change may ameliorate some problems in the short term but will not provide the basic shift in values needed in this epochal transition."
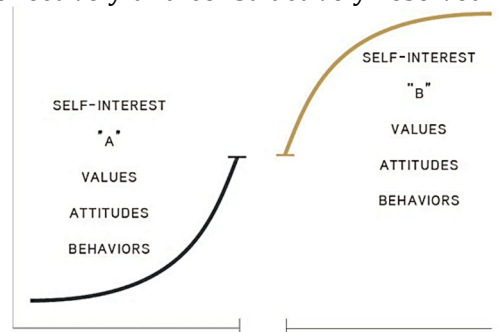

"Those in the Baby Boom generation were born just before the point of inflection; however, the inflection of the curve occurred during their lifetimes. Thus, they were born in the reality of Epoch A but have lived the later part of their lives in Epoch B—the part of the curve where growth is slowing. Those in the Millennial generation were born after the point of inflection of the growth curve, fully in Epoch B. From the time of their birth, the reality they have experienced has been one of awareness of limits, the need to conserve, and the sense of the planet as an integrated whole. Thus, their attitudes, values, and behaviors have been shaped by and are adapted to a reality very different from that experienced by any generation before them."

"The epochal change now taking place affects every aspect of human life—individual and institutional, emotional and cognitive, personal and technological. It calls for the resolution of imbalances and conflicts that have arisen in the course of preceding centuries and for the integration of divergent tendencies in human life. This integration will occur in ways that will differ according to local history, culture, and ecological conditions, but it must occur."

Salk, Jonas; Jonathan Salk (2018): *A new reality. Human evolution for a sustainable future*, **City Point Press, Stratford, CT.**
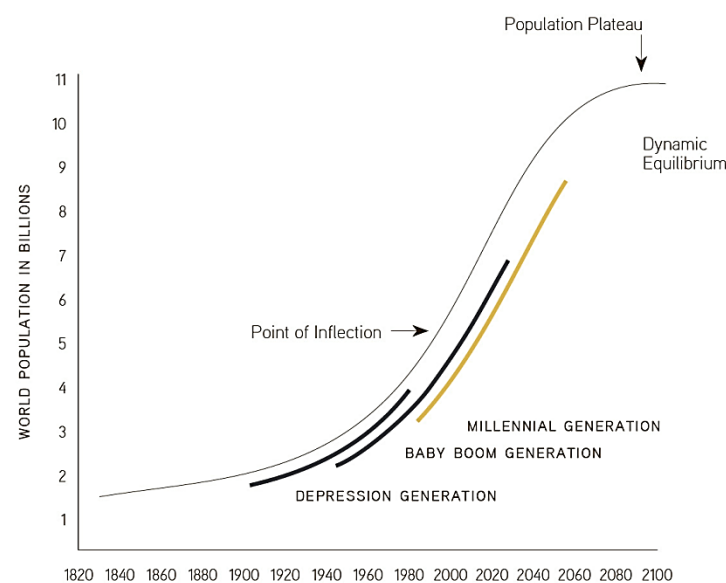
18. The Great Seesaw (Geoffrey Blainey, 1988)

"In the western world a powerful seesaw is at work but is rarely noticed. The seesaw carries a wide range of beliefs and attitudes, and when the seesaw moves many of those attitudes move too. The seesaw has been tilting

up and down since at least the eighteenth century, and at times it reaches an extreme angle (…) <u>The seesaw is an indicator of the condition of the western world</u>, and is especially vital during a long period of relative peace between western nations (…) <u>Those who admire Technology have tended to criticise Nature, and those who admire Nature have tended to criticise Technology</u> (…) The arts in all their variety reflect the swing of the seesaw."

"The movements of the seesaw influence the birth of new ideas, the way they are expressed, and the enthusiasm or apathy of scholars towards those ideas (…) <u>Technology is the sum total of mankind's current skills as a problem solver; and when our faith in those skills becomes weaker, we view more pessimistically the world's main natural resources and above all, the hope of finding substitutes for those resources</u>."

"<u>A swing of the seesaw has strong economic effects</u>. A loss of confidence in Technology -that powerful dynamo of modern capitalism- sends shock waves through the economic system, while an increased respect for Technology adds zest to economic activity. Although the seesaw is linked to economic life, the evidence does not indicate that economic changes are always propelling the swings in intellectual and social attitudes. Economic changes do affect the seesaw but in turn the seesaw affects economic life (…) The time will probably come when economists recognise these cultural signs."

"<u>The swing between Technology and Nature is in a sense a swing between optimism and pessimism</u>. Those who believe in Technology, I sometimes call the optimists. Those who believe in Nature, I sometimes call the pessimists. I know this is too simple a contrast, for many who favour a return to Nature are pessimistic towards the short-term future of their civilisation but, believing they hold the ultimate panacea, are optimistic towards the long-term future (…) <u>An optimist, by my definition, respects our science-based civilisation and believes that it will continue to flourish</u>."

"My own conclusion is that a version of the seesaw existed in earlier centuries but was slower and less powerful. Later the seesaw became influential as society became more secular and as new technology became decisive (…) The seesaw stands at one of its most revealing positions in the period extending roughly from 1750 to 1790 when both Nature and western civilisation had powerful admirers; it illuminates the period from the 1840s to the 1870s when faith in western civilisation and specially its technology reigned supreme; it is important in the shorter period after the 1890s when faith in Nature revived powerfully, and in the recent post-war period when a strong swing towards Technology was followed by a strong swing towards Nature (…) <u>The seesaw is more than a guide to people's attitudes to Nature on the one hand and to modern industrial society on the other</u>. Many of our important values and attitudes are clustered at one end of the seesaw. The seesaw often carries, at opposite ends, the following riders and beliefs:

OPTIMISTS	PESSIMISTS
Optimists believe that:	Pessimists believe that:
Man is intelligent	Man is not as clever as he thinks he is
Our industrial civilisation is admirable	Our industrial civilisation is sick
New technology is beneficial	New technology is dangerous
Reason is the highest virtue	Imagination, instinct and emotion are the highest virtues
City life is noblest	Rural life is noblest
Rural life fosters idiocy	City life corrupts and pollutes
The work ethic deserves three cheers	Leisure deserves three cheers
Paradise is full of change	Paradise is stability and simplicity
Nature must be harnessed	Nature, if left alone, is bountiful
Science will provide	Nature will provide
Specialisation is wise	The all-rounder is preferable
Competition is a virtue	Co-operation is a virtue
Modern man is the ideal	The noble savage is the ideal
The golden age lies in the present and future but not in the past	The golden age lies in the past and maybe in a far-away, utopian future

Blainey, Geoffrey (1988): *The Great Seesaw.
A new wiew of the western world, 1750-2000, Macmillan, Basingstoke, UK.**

19. It all has happened before: the four turnings (William Strauss and Neil Howe, 1997)

"The reward of the historian is to <u>locate patterns that recur over time</u> and to discover the natural rhythms of social experience. In fact, at the core of modern history lies this remarkable pattern: <u>Over the past five centuries, Anglo-American society has entered a new era—a new turning—every two decades or so</u>. At the start of each

turning, people change how they feel about themselves, the culture, the nation, and the future. Turnings come in cycles of four. Each cycle spans the length of a long human life, roughly eighty to one hundred years, a unit of time the ancients called the saeculum. Together, the four turnings of the saeculum comprise history's seasonal rhythm of growth, maturation, entropy, and destruction:”

- The *First Turning* is a *High*, an upbeat era of <u>strengthening institutions</u> and weakening individualism, when a new civic order implants and the old values regime decays.

- The *Second Turning* is an *Awakening*, a passionate era of <u>spiritual upheaval</u>, when the civic order comes under attack from a new values regime.

- The *Third Turning* is an *Unraveling*, a downcast era of <u>strengthening individualism</u> and weakening institutions, when the old civic order decays and the new values regime implants.

- The *Fourth Turning* is a *Crisis*, a decisive era of <u>secular upheaval</u>, when the values regime propels the replacement of the old civic order with a new one.”

“Each turning comes with its own identifiable mood. <u>Always, these mood shifts catch people by surprise</u>. In the current saeculum, <u>the First Turning was the *American High* of the Truman, Eisenhower, and Kennedy presidencies</u> (…) <u>The Second Turning was the *Consciousness Revolution*, stretching from the campus revolts of the mid-1960s to the tax revolts of the early 1980s</u> (…) <u>The Third Turning has been the *Culture Wars*, an era that began with Reagan's mid-1980s Morning in America</u> and is due to expire around the middle of the Oh-Oh decade, eight or ten years from now (…) The Fourth Turning is history's great discontinuity. It ends one epoch and begins another. <u>History is seasonal, and winter is coming</u>.”

“**Sometime around the year 2005, perhaps a few years before or after, America will enter the Fourth Turning** (…) Trying to foresee where the eruption will go once it bursts free of the channels is like trying to predict the exact fault line of an earthquake. All you know in advance is something about the molten ingredients of the climax, which could include the following:

- *Economic distress*, with public debt in default, entitlement trust funds in bankruptcy, mounting poverty and unemployment, trade wars, collapsing financial markets, and hyperinflation (or deflation).

- *Social distress*, with violence fueled by class, race, nativism, or religion and abetted by armed gangs, underground militias, and mercenaries hired by walled communities.

- *Cultural distress*, with the media plunging into a dizzying decay, and a decency backlash in favor of state censorship.

- *Technological distress*, with cryptoanarchy, high-tech oligarchy, and biogenetic chaos.

- *Ecological distress*, with atmospheric damage, energy or water shortages, and new diseases.

- *Political distress*, with institutional collapse, open tax revolts, one-party hegemony, major constitutional change, secessionism, authoritarianism, and altered national borders.

- *Military distress*, with war against terrorists or foreign regimes equipped with weapons of mass destruction.”

Strauss, William; Neil Howe (1997): *The fourth turning. An American prophecy*, Broadway Books, New York.

20. ‘We’ versus ‘Me’

“The energies of a duality drive the Pendulum of public opinion. On one side is ‘Me,’ the individual—unique, special, and possessing unlimited potential. On the other side is ‘We’—the group, the team, the tribe, the collective. ‘Me’ and ‘We’ are the equal-but-opposite

attractions that pull society’s Pendulum one way, then the other. The twenty-year Upswing to the Zenith of ‘We’ (e.g., 1923–1943) is followed by a twenty-year Downswing as that ‘We’ cycle loses energy (e.g., 1943–1963).

Society then begins a twenty-year Upswing into 'Me' (e.g., 1963–1983), followed by a twenty-year Downswing as the 'Me' cycle loses energy (1983–2003). Think of the Pendulum as the forty-year heartbeat of society, systolic and diastolic."

"The 'Me' cycle.

1. demands freedom of expression;

2. applauds personal liberty;

3. believes one man is wiser than a million men: 'A camel is a racehorse designed by a committee';

4. wants to achieve a better life;

5. is about big dreams;

6. desires to be Number One: 'I came, I saw, I conquered';

7. admires individual confidence and is attracted to decisive persons;

8. believes leadership is 'Look at me. Admire me. Emulate me if you can'; and

9. strengthens a society's sense of identity as it elevates attractive heroes."

"The 'We' cycle.

1. demands conformity for the common good;

2. applauds personal responsibility;

3. believes a million men are wiser than one man: "Two heads are better than one";

4. wants to create a better world;

5. is about small actions;

6. desires to be a productive member of the team: 'I came, I saw, I concurred';

7. admires individual humility and is attracted to thoughtful persons;

8. believes leadership is 'This is the problem as I see it. Please consider the things I am telling you and perhaps we can solve this problem together'; and

9. strengthens a society's sense of purpose as it considers all its problems."

"It's not about age; it's about attitude. It's not about when you were born; it's about how you see the world. In this book, the word generation will be defined as, 'life cohorts bonded by a set of values that dictate the prevailing worldview of the majority.' Life cohorts, not birth cohorts. Everyone alive—regardless of their age—who sees the world through the lens of a particular set of values is part of that generation."

"New values are introduced every forty years at a tipping point, also known as a fulcrum. This tipping point/fulcrum is where the Pendulum hangs directly downward, having just completed a Downswing and ready to begin the Upswing on the other side. On one side of society's Pendulum is 'Me,' marked by the idealization of individuality and freedom of expression. The values of 'Me' are the values of the grasshopper, not the ant. The grasshopper is happy-go-lucky, living always in the moment. On the other side of the Pendulum is 'We,' marked by the idealization of authenticity and belonging to a tribe, working together for the common good. The ants are 'We,' trying to do the right thing, fulfilling their obligations, cleaning up the mess the grasshopper left behind."

"It would appear that the Eastern and Western Pendulums are locked in opposite cycles. Western Europe, the Americas, and Australia are headed into a 'We' just as China, India, and the rest of Asia seem to be headed into a 'Me.' In essence, China is experiencing the '60s. Our 1963 happened for them in 2003."

WHAT HAPPENS WHEN WE TAKE A GOOD THING TOO FAR			
UPSWING WE VALUES	ZENITH WE (TOO FAR) VALUES	UPSWING ME VALUES	ZENITH ME (TOO FAR) VALUES
Responsibility	» Duty	Big dreams	» Hollowness
Humility	» Obligation	Individual expression	» Posing
Thoughtfulness	» Sacrifice	Freedom	» Phoniness
Conformity	» Regimentation	Being cool	» Self-centeredness
Authenticity	» Self-righteousness	Personal achievement	» Guru worship
Transparency	» Oppressiveness	Rose-colored lenses	» Depravity

WE — DRIVERS OF A "WE" VS. DRIVERS OF A "ME" — ME

WE	ME
• Demands conformity for the common good.	• Demands freedom of expression.
• Applauds personal responsibility.	• Applauds personal liberty.
• Believes a million men are wiser than one man.	• Believes one man is wiser than a million men.
• Wants to create a better world. "I came, I saw, I concurred."	• Wants to achieve a better life: "I came, I saw, I conquered."
• Is about small actions.	• Is about big dreams.
• Desires to be part of a productive team.	• Desires to be Number One.
• Admires humility and thoughtful persons.	• Admires individual confidence and decisive persons.
• Believes leadership is "This is the problem as I see it. Let's solve it together."	• Believes leadership is "Look at me. Admire me. Emulate me if you can."
• Strengthen society's sense of purpose, focuses on solving problems.	• Strengthen society's sense of identity, elevates attractive heroes.

WE — "WE" MINDSET VS. "ME" MINDSET — ME

"UNITED WE STAND, DIVIDED WE FALL"		"BE #1—SECOND PLACE IS THE FIRST LOSER"	
VALUES	REJECTS	VALUES	REJECTS
Responsibility	Relationships	Big dreams	Small actions
Humility	Teams	Individual expression	Conformity
Thoughtful	Small actions	Freedom	Self-sacrifice
Conformity	Connecting	Being cool	Self-denial
Authenticity	Volunteerism	Personal achievement	Personal responsibility
Transparency	Common good	Rose-colored lenses	Reality check

WE — EGO "WE" VS. SELF "ME" — ME

SEAT OF OBJECTIVE IDENTITY	SEAT OF SUBJECTIVE IDENTITY
RESPONSIBILITIES	DESIRES
• Relationships and connections	• Personal wants and needs
• Am I making a difference?	• Am I happy?
• Do I matter?	• Do I have status?
Responsibility carried too far becomes slavery.	**Freedom carried too far becomes depravity.**

21. Discrimination and democracy

"Both Western and non-Western societies continue to struggle with the conflict between relatively recent egalitarian ideals and inegalitarian social and political orders designed by prior generations of government and leadership to maintain dominance of a particular ethno-national group, religion, or presumed race. The most durable and enduring democratic polities have nurtured an ethnos within them, often at the expense of minoritized and racialized groups. The United States, France, and Britain—but also contemporary Germany, Switzerland, Belgium, the Scandinavian nations, Ghana, South Africa, Indonesia, and many other countries classified as democratic—have exhibited this tendency. The larger number of studies of these countries and the likelihood of particular groups or subgroups attaining the most preferable positions in the economy, polity, and society attest to this bias in the most democratic and societies in the contemporary world. How to make societies less ethnocentric, and more ethos-centric, is one of the great challenges of balancing cultural difference and democracy in contemporary nation-states."

"… population homogeneity, like the category of the foreigner and citizen, is a political artifact, not something we find ready-made in the world. So much of the origin tales told by various ultranationalist and xenophobic movements is mythical, not historical. the nation-state has always been a container populated by an ever-evolving assortment of nationalities, languages, migrants, and religions. Diversity on its own will not produce democracy, no more than homogeneous societies will."

"With few exceptions, the overwhelming majority of nation-states, city-states, colonies, or principalities in the world's history were founded with more than one readily identifiable population. The disagreements within Europe regarding who is, and who can be, a European and even more specifically, who can and cannot cross national and regional boundaries, generated another set of questions: Shall we let any of these outsiders in, and if so, which ones? By what criteria shall we include some people and exclude others? Once allowed in, who should be encouraged to leave, and who should be encouraged to stay? How people answer these questions in vastly distinct places in the world will help determine whether an ethos or an ethnos of democracy ultimately prevails in what is often referred to as the West."

Hanchard, Michael G. (2018): *The spectre of race. How discrimination haunts western democracy*, **Princeton University Press, Princeton, New Jersey.**

22. 'Nobody Knows Anything'

"… how is it possible that you can have a film directed by an Academy Award–winning director (Michael Cimino), starring a best-actor Academy Award winner (Christopher Walken), with a can't-miss script and a $50 million budget…and end up with *Heaven's Gate,* one of the biggest Hollywood flops of all time? On the other hand, how can you have a film with a first-time director, a handful of amateur actors, no script at all, a budget under $50,000…and end up with *The Blair Witch Project,* which, after grossing more than $250 million, is one of the most successful independent films of all time? There's a simple explanation. It's because <u>Nobody Knows Anything</u>. And it's not just in Hollywood. It's true in Silicon Valley, too (…) If Nobody Knows Anything—if <u>it's truly impossible to know in advance which ideas are the good ones and which aren't, if it's impossible to know who is going to succeed and who isn't</u>—then any idea could be the one to succeed. If Nobody Knows Anything, then you have to trust yourself. You have to test yourself. And you have to be willing to fail."

"Silicon Valley brainstorming sessions often begin with someone saying, 'There are no bad ideas.' I've always disagreed. There *are* bad ideas. But you don't know an idea is bad until you've tried it. And, as Netflix shows, sometimes bad ideas have a way of becoming good ones. Not only had all the people who told me that Netflix would never work (including my wife) gotten it wrong, but so had I. We all had. We'd all known that the idea *could* work, but in the end nobody knew anything about *how*—until it did."

23. Randolph's rules for success

1. "Do at least 10% more than you are asked.
2. Never, ever, to anybody present as fact opinions on things you don't know. Takes great care and discipline.
3. Be courteous and considerate always—up and down.
4. Don't knock, don't complain—stick to constructive, serious criticism.
5. Don't be afraid to make decisions when you have the facts on which to make them.
6. Quantify where possible.
7. Be open-minded but skeptical.
8. Be prompt."

Randolph, Marc (2019): *That will never work. The birth of Netflix and the amazing life of an idea*, **Little, Brown and Company, New York.**
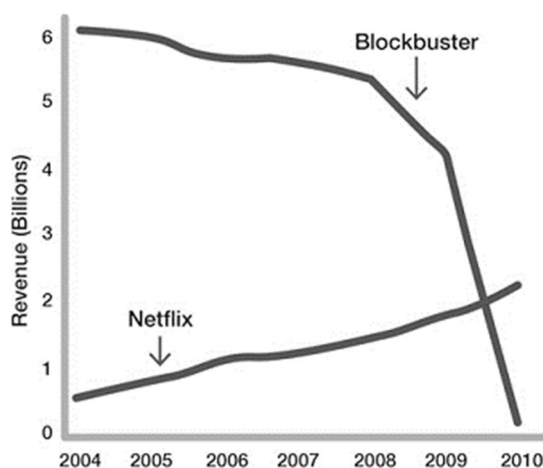
Collapse of Blockbuster and rise of Netflix

Bardi, Ugo (2020): *Before the collapse. A guide to the other side of growth*, **Springer, Cham, Switzerland.**

Satell, G.: A look back at why blockbuster really failed and why it didn't have to. Forbes (2014).https://www.forbes.com/sites/gregsatell/2014/09/05/a-look-backat-why-blockbuster-really-failed-and-why-it-didnt-have-to/#6df219961d64.

24. The social capital thesis

"<u>Social capital represents a propensity for mutually beneficial collective action, and it derives from the quality of relationships among people within a particular group or community</u>. Communities with high social capital will achieve superior outcomes in multiple domains, it is claimed; and communities with low social capital can be assisted to build up stocks of this resource, so their performance will also improve over time. Economic development, community peace, and democratic participation can all be promoted in this manner, simply by investing in the stock of social capital. Social capital is not directly observable; people carry it inside their heads."

"Social capital is defined by Putnam (1995: 67) [Putnam, Robert D. (1995): "Bowling alone: America's declining social capital," Journal of Democracy, 65-78] as 'features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit.' Relatively stable patterns of social interaction exist within some communities that are useful, social capital theory suggests, for sustaining mutually beneficial collective action."

"The broadest argument made on behalf of social capital can be briefly summarized as follows. <u>Persons bound together in dense social networks, infused with norms of reciprocity and trust, are better able and more inclined to act collectively for mutual benefit and social purposes</u> (…) The existence of such norms and networks enables these groups—and society as a whole—to deal smoothly and effectively with multiple social and economic issues. In addition to cooperating with each other for mutual economic betterment, citizens bound together by norms and networks are also able to obtain better governance."

Krishna, Anirudh (2002): *Active social capital. Tracing the roots of development and democracy*, **Columbia University Press, New York.**

25. Paradoxes of the knowledge society (Daniel Innerarity, 2013)

"It is said that we live in an information or knowledge society, but we should admit just the opposite: <u>ours is a society of disinformation and ignorance</u> (…) in a way that is simultaneously both more complex and more banal. Our ignorance is a consequence of three characteristics found in contemporary societies: the non-immediate nature of our experience of the world, the concentration of information, and the technology that intervenes between us and reality."

- "**A second-hand world.** The fundamental problem of the knowledge society is that (…) it makes us all a little dumber; the contrast between what we know and what can and, especially, should be known is so marked that it would make more sense to call it a society of ignorance (…) In other cultures, human beings knew very little, but that little bit was practically everything they could and should know (…) <u>Our world is second-hand and mediated. It cannot be any other way: we would know very little if we only knew what we know personally</u> (…) Our cognitive growth is dependent on trusting and delegating (…) Almost everything we know about the world is known through specific intermediations."

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- "**Excessive information.** One of the uncomfortable discrepancies in our world is a <u>type of ignorance</u> (…) <u>produced by an excess of information</u> and is designated by neologisms such as 'infotrash' or 'infotoxi-cation.' The specialization and fragmentation of knowledge has produced a plethora of information that is accompanied by a very slight increase in our comprehension of the world. <u>Human knowledge doubles every five years. But in proportion to the available knowledge, we are increasingly less wise</u>. We also find that the knowledge we have is not divisible, but demands an overarching perspective, which is increasingly difficult to attain. Connections between things frequently become unmanageable. Software designers call this 'overlinking,' an excess of references between different areas of knowledge (…) It is a paradox of privation in the midst of abundance. In a knowledge society, excess is the enemy (…) <u>Badly managed</u>

complexity is the new ignorance. Or better yet, as Weick (1995) says: "the problem is confusion, not ignorance." There is a type of impasse that stems from the very accumulation of information, because information does not distinguish between what makes sense and what does not (…) We live in an informative environment filled with a massive amount of data that does not provide direction."

- "**The submissive user.** All the paradoxes of the knowledge society are summarized in the following statement: <u>we live in a society that is more intelligent than each one of us</u>. Knowledge is everywhere; there is more knowledge than we can know (…) Cyberspace is a giant rumor cooker, a consumer of other people's knowledge. Managing rumors and making use of other people's knowledge are habitual ways for us to experience reality (…) Use and comprehension of an instrument are two different things. <u>Knowing how to use something is not the same as understanding it</u>; one thing is 'know-how' and another is knowledge. <u>In the contemporary world, knowledge that is used but not understood is on the rise</u>. The division of work that was typical in the industrial society has now been replaced by the division of knowledge in the knowledge society. <u>The user is a client of simplicity</u>. We do not want to know anything about the deeper logic of processors and programs; we prefer to remain on the pleasant surface of functionality."

Innerarity, Daniel (2013): *The democracy of knowledge***, Bloomsbury, New York.**

26. Cooperation vs competitition (Buxton and Hayes, 2016)

"Perhaps the most important lesson of this book is that by portraying people as some kind of Hobbesian mass that will inevitably meet food shortages with violence, or as hordes of would-be migrants massing at our borders, we are giving succour to the security strategists and the politics of fear that make people more willing to contemplate giving up their freedoms (…) <u>Crises, more often than not, lead not to civilisational collapse, but altruism and solidarity</u>. The fear of disorder, mayhem and the justification for military responses is the instinct of the richest –those with most to lose. This is what Solnit [Solnit, R. (2009): A paradise built in hell: The extraordinary communities that arise in disasters, Viking, New York] describes as '<u>elite panic</u>.' In contrast, <u>what emerged from the disasters she studied, are mini ephemeral utopian societies built on precisely the solidarity, democracy and accountability that neoliberalism and authoritarianism have stripped from contemporary political systems</u> (…) In contrast to the 'perspective of Malthusian dog-eat-dog resource competition', the issues engendered or exacerbated by climate change have just as much potential to produce cooperation among peoples. In other words, <u>when you have lots to lose, you are more compelled to collaborate than compete</u>."

"Faced with the sure knowledge of worsening climate change, corporations determined to continue business-as-usual, and a security industry promoting a politics of fear and insecurity, humanity faces a critical choice (…) we can throw up our hands in despair and darkly predict our demise – in which case we will entrench the power of those thriving from the politics of dystopia and hasten some of the worst-case scenarios that they predict or (…) we can reject their forecasts and believe in the power of popular movements to advance a different vision of the future, one that harnesses humanity's compassion, creativity and cooperation."

Buxton, Nick; Ben Hayes (2016): "Conclusion: Finding security in a climate-changed world"

27. 'What may be the most important thing that has ever happened in human history' (Pinker , 2011)

The decline in violence over the course of history and the fact that mankind may be living now the most peaceable era ever. Pinker identifies six major steps in the retreat from violence: the Pacification Process (transition from hunting/gathering to farming), the Civilizing Process (consolidation of centralized authorities), the Humanitarian Revolution (appearance around the Enlightenment period of organized movements to abolish socially sanctioned forms of violence and the ideology of pacifism), the Long Peace (after the Second World War the major powers stopped waging wars among themselves), the New Peace (since 1989, the end of the Cold War, organized conflicts have declined throughout the world) and the Rights Revolutions (inaugurated by the Universal Declaration of Human Rights in 1948, corresponds to the growing revulsion against aggression on smaller scales: against ethnic minorities, women, children, homosexuals, animals…). Forces driving the decline in violence: the state, commerce, feminization (societies more respectful with women tend to be less

violent), cosmopolitanism (which allows to understand better others' perspective), and the spread of reason to deal with human affairs.

Pinker, Steven (2011): *The better angels of our nature. Why violence has declined*, Viking, New York.

28. The bright side

Historically recent global trends that have coincided with the unfolding of the last globalization wave: decline in the number of wars and war-related deaths, continuous reduction in absolute poverty, more educated population, more people enjoying higher education, expansion of the middle class...

29. How things happen

"Artificial intelligence, big data, modern science, and the internet are all revealing a fundamental truth: <u>The world is vastly more complex and unpredictable than we've allowed ourselves to see</u>."

"We are at the beginning of a great leap forward in our powers of understanding and managing the future: rather than always having to wrestle our world down to a size we can predict, control, and feel comfortable with, we are starting to build strategies that take our world's complexity into account."

["*A/B testing*, in which a site tries out variants of an ad or content on unknowing sets of random users and then uses the results to decide which version the rest of the users will see."]

"<u>A/B testing works without needing, or generating, a hypothesis about *why* it works</u>. Why does some ad at Amazon generate more sales if the image of the smiling young woman is on the left instead of the right? We can make up a theory, but we'd still be well advised to A/B test the position of the model in the next ad we create. We've been brought up to believe that the truth and reality of the world are expressed by a handful of immutable laws. Learn the laws and you can make predictions. Discover new laws and you can predict more things. If someone wants to know how you came up with a prediction, you can trot out the laws and the data you've plugged into them. But with A/B testing, we often don't have a mental framework that explains why one version of an ad works better than another. A/B testing is just one example of a technique that inconspicuously shows us that principles, laws, and generalizations aren't as important as we thought. Maybe—maybe—principles are what we use when we can't handle the fine grains of reality."

"We've just looked at examples of two computer-based technologies that are quite different: a programming technique (machine learning) and a global place (the internet) where we encounter others and their expressions of meaning and creativity. Of course, these technologies are often enmeshed: machine learning uses the internet to gather information at the scale it needs, and ever more internet-based services both use and feed machine learning. These two technologies also have at least three things in common that have been teaching us about how the world works: <u>Both are huge. Both are connected. Both are complex</u>."

"Over the millennia, we've had plenty of ideas about how things happen (...) we have, throughout our culture's history, generally accepted four assumptions about how the next emerges from the now—assumptions that are now being challenged.

1. Things happen according to laws (...)

2. We can understand how things happen (...)

3. We can make things happen by pulling the right levers (...)

4. Change is proportional to effect."

"As we inch away from each of these four assumptions, perhaps our everyday understanding of how things happen is finally catching up with the way the world actually works, and how scientists have been thinking about it for a while now."

Weinberger, David (2019): *Everyday chaos. Technology, complexity, and how we're thriving in a new world of possibility*, Harvard Business Review Press, Boston, Massachusetts.

30. Religious extremism: back to essentials?

"In my mother's day, it was common for people to identify loosely as Muslim but not take their religion so seriously. Women did not wear hijab, people would drink, and Islam was as casual as religion is for most Christians today. But things have changed significantly."

"In those days in Egypt, people were much more secular than they are now. These were the days before the rise of the Muslim Brotherhood. Now, unfortunately, Egyptian Christians are killed by the hundreds as they pray in their churches. And even Muslims not deemed Muslim enough by the Sunni extremists, such as Sufi Muslims, are killed in Egypt as they worship in their Mosques. The whole Middle East and North Africa have become more extreme, and those extremists are spreading into Europe and North America as well. Other sects of Muslims are not even tolerated. An Ahmadi shopkeeper in the UK was killed by a Sunni extremist because he wished his patrons 'Happy Easter.' Sunnis are the majority of Muslims (about 90 percent) with Shias being the next largest sect (almost 10 percent) and all the remaining sects together barely 1 percent."

"To be a girl in a Muslim household has to be a fate worse than Hell. You are taught to be ashamed of everything you do, everything you are.

  'Don't laugh like that. You're a girl!'

  'Don't sit like that. You're a girl!'

  'Lower your voice. You're a girl!'

  'Lower your eyes. You're a girl!'

Girls are not ever allowed to look a man in the eyes. We have to keep our heads lowered like a dog to be reminded of our place as lesser than (...) Girls are how the level of a man's, or his family's, honour is measured. The more control he has over his wife and daughters, the more honourable he is   (...) The most important aspect of honour is a girl's virginity. It must be guarded at all costs. Girls must not ride bikes, horses, or engage in sports lest the hymen break."

"If a woman dishonours her family by dressing too Western or not Islamically enough, or by having male friends, or by a plethora of other mundane things, she could pay for that rebellion with her life. Honour violence and honour killings are frightfully common in Muslim communities across the world. There are thousands of cases per year. And there is strong evidence that these crimes are underreported (...) These cases are not limited to Muslim-majority countries. There have been cases of honour violence and honour killings all over Europe."

"The Muslim world has been shielded from criticism for so long. How will progress ever happen if criticism is considered bigotry? "

31. Women in the West and Islam

"Women in the West generally support one another in their resistance, but it's important to note that in societies that are highly patriarchal and highly misogynist, women rarely support one another. Each woman is too concerned with saving her own skin to be concerned about any another woman's skin. This is by design, of course. If women are too busy viewing one another as competition—as their husbands can marry up to four women—then there is no threat that they will work together against the common enemy. Keep the women fighting one another so they are too busy to join forces against their oppressors.

The Internet is changing all that. It is monumental. Women are not only removing their hijabs in public, they are also dancing in public, singing in public, riding their bikes in public, jogging in public—all these simple activities are either against the law in some countries or come at a very high social cost."

"For most women in Muslim-majority countries, their only options are fight, flight, or freeze."

Mohammed, Yasmine (2019): *Unveiled. How western liberals empower radical Islam,* www.FreeHeartsFreeMinds.com.

32. Women in the 21st century

"If you had your time again and had your choice, which sex would you choose?"

"It was excruciating. The forty-fifth president of the United States [Donald Trump] grabbed and patted the hand of Britain's second woman prime minister [Theresa May] and she allowed him to do it. What hope for the political obsolescence of sexual difference when the leaders of two of the oldest democracies parade themselves in such a pantomime? (...) Sadly every adult woman on the planet – and probably all too many a girl – has had to learn how to handle inappropriate male touching in a number of contexts."

"The internet is perhaps the greatest technological innovation of my lifetime. It is a perfect example of an advancement that causes history to accelerate (...) The Everyday Sexism Project was started by the formidable Laura Bates in the UK. It now gives women a platform to chart and discuss every form of discrimination, indignity and abuse internationally (...) So the internet can clearly be a vital tool in raising awareness and even organizing against both casual and extreme sexism and misogyny on a local, national and international scale (...) Yet the dark side is equal and opposite and has spawned a whole new hell of misogynistic abuse often laced with racism, menaces and direct intimidation."

"How much are you worth? And for that matter, how much is the worth of everyone you do and don't know? (...) What is considered of most economic value and what constitutes or may be translated into things called private property and wealth, public finances or gross domestic product (GDP) is not for the most part female, nor in female hands (...) In the early part of the twenty-first century, the bulk of the world's fragile and ever-dwindling resources and the 'golden tickets' to access them, sit in the hands of an extreme few. Most of them are men (...) Just eight men own as much as the 3.6 billion people who make up the poorest half of the human race."

"Women find themselves disproportionately among the poorest on earth, on account of either overt or more subtle discrimination in the context of property rights, the labour market and professions, or because they shoulder a huge and disproportionate share of the domestic and caring responsibilities within the family, which are either treated as completely without monetary value or significantly under-resourced and rewarded. Unsurprisingly therefore, it is suggested that it will take 170 years for women to achieve even mere pay equality with men. Yet the world would not function, nor humanity sustain itself without this unaccounted for private sphere of women giving birth to and nurturing each next generation of little workers, soldiers, leaders and reproducers of the same."

"The world of work is highly segregated both horizontally and vertically along gendered lines. So even a woman who gains access to paid employment is more than likely to do so in traditionally and stubbornly 'female' employment that is characterized by low pay and status, long hours and part-time or informal (including non-taxed) working arrangements. Such work may suit childcare needs in the short term, but is likely to fail to deliver on work or financial security or progression for the woman and her family in the long run. This pattern is replicated globally and seems particularly intractable."

"After I completed fifty years in the noble profession of women's health, I was once asked what is the one prescription which I think women need most for their health. My answer was 'power'. Power is what women need to enjoy their right to health – Professor Mahmoud F. Fathalla."

"Whether physical, mental, reproductive or more general, no substantial and sustained global improvements in women's health outcomes can be achieved without improving their finance and freedom and the circumstances governing every other aspect of life."

"Even a wanted pregnancy can still lead to considerable risks for women in many parts of the world (...) In 2013 the estimated numbers of women who died of complications in pregnancy or labour ranged from 289,000 to 350,000. Most of these are thought to have been preventable with better facilities and care. The Fifth of the Millennium Development Goals set at UN level was to cut the maternal mortality ratio by 75 per cent globally (...) steady improvement notwithstanding, the state of global maternal health remains a depressing one, not least because it is a story not of inadequate science or lack of resources but ultimately of a lack of priority, and political and economic will."

"Civil and political rights, for example, to respect for personal privacy or family life, and even basic human security, are extremely hard, perhaps impossible, to realize without adequate shelter. The converse is equally true. What kind of social right to adequate housing would not guarantee an element of privacy, security or the ability to live with the family or loved ones of one's choosing?"

"It is therefore especially alarming that in March 2017, the UN Special Rapporteur on the Right to Housing, Leilani Farha, felt compelled to make the following remarks to the UN Human Rights Council:

Housing has lost its social function and is seen instead as a vehicle for wealth and asset growth. It has become a financial commodity, robbed of its connection to community, dignity and the idea of home (…) The consequences of placing the interests of investors before human rights are stark."

"The benefits of education to every aspect of a happy, healthy and rewarding human life cannot be overstated (…) It is said that infant mortality is halved when the mothers in question are literate. Some have also calculated that a woman's lifetime income can be increased by as much as 15 per cent for each extra year she spends in education. Better educated young women also tend to enjoy better all-round health and have fewer children. They are more politically active and prioritize the provision of healthcare and education for the next generation. So it must be one of the greatest progressive stories of the twentieth century that during that period the average number of years spent in education increased from six to twelve for men and from five to thirteen for women in the developed world, where countries have made schooling compulsory."

" Across cultures and classes, isolation of women and couples would seem to be one key factor in both continuing domestic abuse and a woman's inability to escape it (…) If home is not safe and secure, neither is the outside world. A 2012 UN 'Safe Cities' study reported that in New Delhi 92 per cent of women were subjected to some form of sexual violence in public spaces during their lifetime, and 88 per cent experienced behaviour such as sexual comments, wolf-whistling, leering or obscene gestures. The on-street experience of women is appreciably different from that of men the world over."

"If gender inequality is the greatest global injustice, there are increasing points of resistance and progress. It may not even be an exaggeration to describe an accelerating movement for change right now (…) This movement is everywhere (…) However, one cannot ignore the way in which the great world religions have all too often clung to their less progressive cultural and scriptural roots in the distant past, and stood in the way of women's rights and equality."

"The fear is of a woman or girl effectively being forced to dress in a certain way by those at home."

"A world in which we are all equal is one where women and men share power, responsibility and opportunity. It is potentially a happier and more peaceful world, where women are less likely to be harmed by an intimate or loved one and men are less likely to die at the hands of another man or by suicide. It is a world where all people have the freedom to be self-defining and where those definitions matter less and less as the most important distinction increasingly becomes that of being human. A less unequal world precludes the concentration of wealth and influence."

Chakrabarti, Shami (2017): *Of women, in the 21st century*, **Allen Lane.**

33. Is history on women's side?

"This is a book with a very simple argument: women are not equal to men; they are superior in many ways, and in most ways that will count in the future (…) Women can carry on the business of a complex world in ways that are more focused, efficient, deliberate, and constructive than men's, because women are not frequently distracted by impulses and moods."

"In addition to women's superiority in judgment, their trustworthiness, reliability, fairness, working and playing well with others, relative freedom from distracting sexual impulses, and lower levels of prejudice, bigotry, and violence make them biologically superior. They live longer, have lower mortality at all ages, are more resistant to most categories of disease, and are much less likely to suffer brain disorders that lead to disruptive and even destructive behavior. And, of course, most fundamentally they are capable of producing new life from their own bodies, a stressful and costly burden in biological terms, to which men literally add only the tiniest biological contribution—and one that in the not-too-distant future could probably be done without."

"Contrary to all received wisdom, women are more logical and less emotional than men."

"I have been told that I am too hard on men—that I should recognize that most men are not guilty of violence, rape, promiscuity, or warmongering. Of course they're not. But the minority that is guilty of those things is dangerously large—many times larger than it is in women—and that minority has put a very strong stamp on human history."

"There is every reason to think that a future national hierarchy staffed and led by women, in a context in which women no longer have to imitate men to lead, dealing with other nations similarly transformed, would be less likely to go to war (…) Sex scandals, financial corruption, and violence are all overwhelmingly male."

34. A deficiency syndrome affecting 49% of humanity and causing serious damage

"There is a birth defect that is surprisingly common, due to a change in a key pair of chromosomes. In the normal condition the two look the same, but in this disorder one is shrunken beyond recognition. The result is shortened life span, higher mortality at all ages, an inability to reproduce, premature hair loss, and brain defects variously resulting in attention deficit, hyperactivity, conduct disorder, hypersexuality, and an enormous excess of both outward and self-directed aggression. The main physiological mechanism is androgen poisoning, although there may be others. I call it the X-chromosome deficiency syndrome, and a stunning 49 percent of the human species is affected."

"We humans have forty-six chromosomes, of which (*usually*) two—X and Y—are sex chromosomes. A woman's eggs each carry one X, and a man's sperm are about equally divided between those with an X and those with a Y. The fertilized egg becomes XX or XY, *usually* synonymous with female and male."

"The mammalian body plan is basically female. If you have just one X (Turner syndrome), you will not be fertile, but you will otherwise be female, as long as you have no Y. If you have two or more X's but also a Y (Klinefelter syndrome), you will not be completely typical, but you will be basically male. There are rare cases of infertility in women who are found to be XY but are insensitive to androgens due to another gene. And a few men seem to be XX under the microscope but are found to have the key Y genes accidentally attached to one of their X's— something that can happen in a slightly awry cell division. Otherwise it's fair to say: the body plan is female unless the Y flips it into maleness."

"… we can think of maleness as a syndrome, a chromosomal defect shared by 49 percent of humans. It does serious damage. It quashes the body's ability to create new life, causes excess death at all ages, shortens life, increases the risk of diseases ranging from heart attack to autism, and causes physical violence, among other symptoms."

35. Gender inequality

"Women have always had to struggle for equality, even in the small hunter-gatherer bands we evolved in. Yet with further cultural evolution, it got worse. With the rise of what we like to call civilization, men's superior muscle fostered a vast military, economic, and political conspiracy, enabling them to exclude women from leading roles."

"The freer and more educated girls and women become, the fewer children they have; men are proven obstacles to family planning. Even in the poorest lands, the increasing availability of women's suffrage, health services, microloans, and savings programs, is giving them control over their destinies. As soon as that happens, they reduce the size and poverty of their families. It becomes clearer every year that the best way to spend an aid dollar in the developing world is to educate and empower women and girls."

Konner, Melvin (2015): *Women after all. Sex, evolution, and the end of male supremacy*, W. W. Norton, New York.

36. Systems shaping the contemporary world

"… the systems most crucial in shaping the contemporary world: white supremacy, patriarchy, imperialism, capitalism, and the extractive/industrial system (…) The systems that give rise to race/racism and gender/sexism are white supremacy and patriarchy (…) It's an important move simply to name the systems because so many in the culture want to believe that we have moved beyond white supremacy and created a 'post racial' society, or that patriarchy is an old-fashioned term no longer relevant."

"The term 'patriarchy,' with its connotations of an almost feudal status of women, may be rejected, but two forms of patriarchal ideology remain strong. One is a theological version, seen most clearly in conservative Christian circles. Men -- husbands in heterosexual marriages -- are seen as the natural head of a household, charged by God with leadership responsibilities. The man should exercise that power responsibly, but exercise it he must, and women find their place in that chain of command. There's also a secular version of this, flowing not from belief in a divinely mandated order but from what is claimed to be the immutable reality of our evolutionary history."

"The United States is the current (though fading) empire in the world, and empires are bad things. We have to let go of self-indulgent notions of American exceptionalism -- the idea that the United States is a unique engine

of freedom and democracy in the world and therefore responsible and benevolent. Empires throughout history have used coercion and violence to acquire a disproportionate share of the world's resources, and the U.S. empire is no different (…) This empire emerged in full force after World War II, as the United States assumed the role of the dominant power in the world and intensified the project of subordinating the developing world to the U.S. system. Those efforts went forward under the banner of 'anti-communism' until the early 1990s, but continued after the demise of the Soviet Union under various other guises, most notably the so-called 'war on terrorism.' Whether it was Latin America, southern Africa, the Middle East, or Southeast Asia, the central goal of U.S. foreign policy has been consistent: to make sure that an independent course of development did not succeed anywhere. The 'virus' of independent development could not be allowed to take root in any country out of a fear that it might infect the rest of the developing world."

"Empire-building serves an economic system, which is best described today as a predatory corporate capitalism that is inconsistent with basic human values."

"The first task is to define the basics of capitalism, a socio-economic system in which (1) property, including capital assets, is owned and controlled by private persons; (2) most people must rent their labor power for money wages to survive; (3) the means of production and labor are manipulated by capitalists using rational calculation to maximize profit; and (4) most exchanges of goods and services occur through markets (…) The term 'finance capitalism' is often used to mark a shift to a system in which the accumulation of profits in a financial system becomes dominant over the production processes. Increasingly, it is clear that this financialization has led not only to intensified inequality but also to greater economic instability."

"Within this dominant ideology of market fundamentalism, it's assumed that the most extensive use of markets possible, along with privatization of many publicly owned assets and the shrinking of public services, will unleash maximal competition and result in the greatest good -- and all this is inherently just, no matter what the results. If such a system creates a world in which most people live in poverty, that is taken not as evidence of a problem with market fundamentalism but evidence that fundamentalist principles have not been imposed with sufficient vigor; it is an article of faith that the 'invisible hand' of the market always provides the preferred result, no matter how awful the consequences may be for people."

"… capitalism is fundamentally inhuman, anti-democratic, and unsustainable.

Inhuman (…) Why must we accept an economic system that undermines the most decent aspects of our nature and strengthens the cruelest? Because, we're told, that's just the way people are. What evidence is there of that?"

"*Anti-democratic*: In the real world -- not in the textbooks or fantasies of economics professors -- capitalism has always been, and will always be, a wealth-concentrating system. If you concentrate wealth in a society, you concentrate power; there is no historical example to the contrary."

"*Unsustainable*: Capitalism is a system based on an assumption of continuing, unlimited growth -- on a finite planet. There are only two ways out of this problem. We can hold out hope that we might hop over to a new planet soon, or we can embrace technological fundamentalism (more on that later) and believe that evermore complex technologies will allow us to transcend those physical limits here. Both those positions are equally delusional."

"Critics have compared capitalism to cancer. The inhuman and antidemocratic features of capitalism mean that, like a cancer, the death system will eventually destroy the living host. Both the human communities and non-human living world that play host to capitalism eventually will be destroyed by capitalism."

"The final hierarchal system -- and in some ways the most dangerous -- is the industrial model of human development, the latest and most intense version of an unsustainable extractive economy. The bounty that makes contemporary mass consumption possible did not, of course, drop out of the sky. It was ripped out of the ground and drawn from the water in a fashion that has left the continent ravaged, a dismemberment of nature that is an unavoidable consequence of a worldview that glorifies domination."

"The features of the current system include: (1) heavy use of nonrenewable inputs purchased off the farm, such as chemical fertilizers, pesticides, and herbicides; (2) extensive mechanization, making farming both capital- and technology-intensive; (3) heavy reliance on fossil fuels for those inputs and mechanization, to such an extent that critics joke that modern farming is the use of land to covert petroleum into food; (4) decreased self-sufficiency for individuals and communities, and increased dependence on corporations; and (5) a lack of

concern for, if not outright hostility toward, systems and living things that do not directly contribute to production.

Along with the dramatic increases in food production, the predictable results of this system have been: (1) drastic and continuing <u>loss of topsoil</u>; (2) <u>declining soil fertility</u>; (3) a severe <u>reduction in farm population</u>; and (4) the resulting <u>loss of knowledge of traditional methods</u> that require fewer inputs, less technology, less capital, and more people (…) The so-called 'Green Revolution' (…) was not really a revolution but an <u>extension of industrial agriculture to the Third World</u>, which resulted in short-term reductions in hunger but also exported this extremely fragile model to the developing world, creating the same long-term problems."

Jensen, Robert (?): *We are all apocalyptic now. On the responsibilities of teaching, preaching, reporting, writing, and speaking out.*

37. Trust: 10 laws

"At its core, <u>trust means willingly ceding a measure of control to another</u>—be it a person, an organization, or an institution—<u>and without the apparent safety nets of a binding contract or other means of coercion</u> in place. Although we trust with an expectation others will respond in kind, vulnerability is the psychological hallmark of trust. We're taking a risk, sometimes based on limited evidence. Trust is a leap of faith rooted in optimism."

LAW 1:	Start with Personal Integrity
LAW 2:	Invest in Respect
LAW 3:	Empower Others
LAW 4:	Measure What You Want to Achieve
LAW 5:	Create a Common Dream
LAW 6:	Keep Everyone Informed
LAW 7:	Embrace Respectful Conflict
LAW 8:	Show Humility
LAW 9:	Strive for Win-Win Negotiations
AW 10:	Fix Breaches Immediately

"<u>Why trust? Because it works, most of the time</u>. Not only do people accomplish more in a collaborative spirit when seeking win-win outcomes than when setting up the paraphernalia of paranoia, but they're simply much happier when dealing in a world of harmony and cooperation."

"When it comes to building great companies, <u>a leader's job isn't to make it to the top of the mountain alone. Instead, the task is to help others reach peaks *they* want to climb but might not be able to without the help of a leader</u> (…) Entrepreneurs may be criticized for having insufficient controls in place or trusting partners too readily. Maybe so in some instances. But the cost of the alternative can be much higher: Ever-present suspicion, double-riveted legal agreements, caution and caginess in interpersonal dealings—the touchstones of mistrust—can slow things down, drive away the most trustworthy people, and inhibit innovation."

"In the economy of trust, what goes around comes around. The more we look out for others, the more they look out for us. The more we trust, the more we are trusted. When trust is the medium of exchange, people collaborate and altruism can grow again to everyone's benefit (…) Put simply, <u>high-trust (altruistic) organizations prevail over low-trust (selfish) organizations</u>, and over time, high-trust leaders are more successful than low-trust leaders."

"Make no mistake: <u>Building and maintaining trust is hard work</u>. Trust can be fragile. One bad actor can damage it. A single act of deceit can destroy a reputation for being trustworthy that was built over a lifetime."

"Many organizations do things because "that's the way they've always been done." An organization's "best practices" are often just the codification of long-forgotten mistakes. High-trust organizations don't rely blindly on old rules."

Peterson's 10 laws of trust:

• Law 1: Integrity.

• Law 2: Invest in respect.

• Law 3: Empower others.

• Law 4: Measures. I trust the processes by which my work is evaluated.

• Law 5: Vision: create a common dream.

• Law 6: Communication: keep everyone informed.

• Law 7: Embrace respectful conflict.

• Law 8: Humility. My organization's leaders care more about doing what is right for its people, clients, and mission than they care about their own power and status.

• Law 9: Strive for win-win negotiations.

• Law 10: Fix breaches immediately."

Peterson, Joel; with David A. Caplan (2019): *The 10 laws of trust. Building the bonds that make a business great,* **HarperCollins.**

II. Challenges of global integration

38. A political challenge of globalization: can national borders be redefined?

"… one of the most fundamental changes in the Western world – and, by implication, also the rest of the world – the formation of the state, which [Joseph Strayer] dates to between 1100 and 1600, with the thirteenth century as a particularly crucial period (…) The definition of a state in contemporary international law is based on the Treaty of Montevideo of 1933: a state must have a permanent population, well-defined borders, a government and a capacity to honour international obligations. By contrast, there are no demands regarding the quality of government, internal sovereignty, impersonal bureaucracy, etc. (…) Despite – or rather because of – the arbitrary character of these borders, the United Nations and other international bodies insist on their permanence, fearing that concessions on this point would endanger the whole system."

"Politically, the development of the European Union has questioned the idea of the national state as the logical conclusion to a development going back to the Middle Ages and the early modern period."

"Whereas the importance of the European state has been reduced after 1945, the opposite is the case with the rest of the world, where the number of states increased from 51 to 193 during the post-war period and some kind of a national state for the first time in history became the normal political organization all over the world."

"[Charles] Tilly's understanding of European state formation is succinctly expressed in the statement 'War made the state and vice versa.' States were formed through military competition, in particular through the military revolution in the early modern period."

"Tilly later (…) introduces the distinction between coercion and capital, the former characterizing agrarian states, the latter urban ones, although the most successful states are combinations of the two."

"The national state is no longer the obvious political unit it was (…) 50 years ago. Europe no longer has the central place it then had in historical research and teaching. Concerning the former, however, a comparison with the rest of the world increases the importance of the political division of Europe and its origins – there is no other example of an area of similar size being divided in this way."

Bagge, Sverre Håkon (2019): *State formation in Europe, 843-1789. A divided world,* **Routledge, London and New York.**

39. Disruption

Through globalization, actual and potential connections and interactions increase. The new (more global) interactions tend to disrupt the existing (more local) ones. But globalization does not appear to create mechanisms to give a satisfactory solution to the disruptions. Left by itself, globalization is like a force of nature: you adapt (and accept it) or die.

40. Becoming more connected vs becoming more similar

Globalization occurs by increasing links. A possible side effect is that what is linked becomes more similar (ideas, technologies, goods, institutions, habits… are increasingly shared). Is that necessarily the case? Are there social dimensions (religion, culture, institutions) for which a reaction to increasing similarity will prevail? To which extent is the sequence links → diffusion → integration → homogeneity the most likely result?

41. What is new in the current (since the 1980s) globalization process?

One view is that all the globalization processes that have so far occurred are essentially the same and that the acceleration of these processes appear to be the radical novelty of the current globalization episode: same nature, fastest speed.

42. Economic dominance

The extension of the globalization process is more profound in the economic domain. This makes economic globalization the dominant force, to which the rest of globalizations (political, cultural, social, ideological…)

subordinate. Though <u>there are many globalizations</u>, the economic one seems to dominate and determine the rest: one globalization controls the rest.

43. Economic revolutions and globalization

If globalization processes are primarily driven by economic forces, it may be conjectured that <u>economic revolutions fuel globalization</u>. Once a sufficient number of hunter-gatherer economies developed, the necessary conditions for the agricultural revolution were created; this revolution gave new momentum to the ongoing (yet limited) globalization processes. When enough agricultural societies approached the limit of their development potential, an industrial revolution become feasible, which in turn facilitated the scaling-up of the globalization process. More recently, with industrialization spreading to underdeveloped economies, the developed economies acquired the potential to ignite a new economic revolution (the digital revolution) capable of boosting again the globalization process.

44. How inevitable is globalization?

<u>If economic development is locally inevitable (at least, in the longest run), then globalization also appears to be inevitable</u>: the global economy is the domain where (with enough material means available) economic development would ultimately unfold. Economic expansion would then be like a wild, unstoppable beast that overcomes any obstacle and that nothing can constrain.

45. Capitalism and globalization

<u>Capitalism and globalization appear to feed each other</u>. Capitalism facilitates the occurence of economic revolutions (powers the beast of economic expansion) and thereby accelerates the globalization process. Globalization facilitates the continuation of capitalism and reinforces it. This view would explain why globalization has become more intense and widespread when (since the 1980s) the forces of capitalism have been freed of most controls and have been allowed to exert all its expansionary powers. The new capitalism launched in the 1980s seems responsible for the current globalization wave. Are they then inextricably linked? Is the fate of globalization determined by the fate of the new capitalism? Is a defining characteristic of capitalism creating by destroying?

46. Financial globalization: international rise of the financial sector

<u>Globalization is a magnifier</u>: it amplifies effects and consequences. <u>Finance itself is also a magnifier</u> of real activity (production, circulation and distribution of goods): finance contributes to makes expansions (economic booms) more expansionary, but also to make contractions (economic busts and crashes) more contractionary. At the national level, finance has proved to be a source of instability. It is likely that it will also contribute to make the global economy also more unstable and volatile. Is a <u>global financial meltdown</u> the most likely possibility in the medium-long run, of which the 2008 financial crisis episode cented on developed countries was an early warning?

47. Labour and globalization

Though the labour market is so far the less globally integrated, it has been one of the most affected by globalization. The international mobility of capital and the relative international immobility of labour has produced a tendency (at least in the developed economies) to the rise of unemployment, a <u>slow growth of average wages, a deterioration in the position of the low-skilled workers</u> and a widening of the gap between high-skilled workers (and those at the head of companies and financial institutions) and the rest of workers and employees. Globalization has created a race to the bottom among the less skilled workers in the developed countries (reinforced as well by the decentralization of wage bargaining) and favoured a redistribution of income in favour of those at the upper ranks of the salary scale (increase in earnings inequality). Globalization

has coincided with a <u>shift of power to employers</u>, who have improved considerably their position in the distributional conflict against employees.

48. Economic inequality and globalization

One of the aspects that, at the national level, finance has contributed to magnify is economic inequality. <u>Liberalization and financialization have made property incomes</u> (capital income) more important and capable of growing faster than wages (labour income), thereby redistributing wealth from the majority to a minority. Since, by itself, capitalism appears to concentrate a large share of its benefits in a few hand, a globalization going hand in hand with capitalism is expected to increase economic inequality (the benefits of globalization are asymmetrically distributed).

49. Polarization and globalization

The asymmetry of globalization at a global scale has <u>reinforced the privileged position of 'the centre' (the most developed countries)</u> against 'the periphery' (the rest of countries). The centre is becoming more powerful, which in turn increases the polarization of the global system. The centre still monopolizes technology, finance, resource exploitation, global mass media and the most destructive weapons. The geopolitics is currently dominated by war and competition: among states, among companies, and among states and companies. The game being played (<u>survival of the biggest</u>) may eventually put an end to the game (human civilization is self-destroyed).

50. Technology and globalization

<u>Globalization helps to accelerate technological change</u>. Technological change endagers certain types of jobs. The faster technological change, the harder for workers to retrain and adapt to the new production environement. This makes <u>technological unemployment</u> more widespread and durable.

51. Welfare state and globalization

The ongoing globalization surge has coincided (has been caused) why the widespread adoption among developed countries of <u>economies policies favouring 'the market' against 'the state'</u> (associated with the neoliberal ideology): financial discipline (austerity measures), privatization, deregulation, tight monetary policy, retreat of the welfare state… This neoliberal globalization appears to put in great danger the survival of the welfare state built during the golden age boom (1945-1975). But without a welfare state compensating the strong economic inequalities that capitalism is prone to create, how viable is likely capitalism to be? <u>Is the neoliberal globalization itself viable</u>? Will globalization eventually demand a rebalance between *laissez-faire* and intervention/regulation in favour of the latter?

52. Democracy and globalization

<u>Successful participation in globalization seems to require sacrificing the needs of the majority</u> (Rodrik's trilemma). Will democratic societies adapt or tolerate to this requirement? How will national social structures respond to the domestic asymmetries (gap between economic elite and mass increasingly widened) created by globalization? Is in the last instance democracy incompatible with globalization? Which social structures are consistent with globalization? Specifically, are sufficiently egalitarian social structures unviable under full globalization?

53. Environment and globalization

<u>The productive forces unleashed by capitalism are fed by natural resources</u>. If the continuation of the globalization process (or simply the maintenance of the current state of globalization) depends on the continued expansion of the scale of operation of those productive forces, the limited amount of resources on the planet points to the unfeasibility of an indefinite growth of the global economy. How would globalization

respond to the halting of the global growth engine once it runs out of fuel? How much of what globalization has so far achieved is reversible (and how much will be reverted)? Are capitalism and globalization in the last instance bubbles that last and expand as long as there are enough available resources? Are they just parasites having no regard for their host (the planet)?

54. Cultural convergence?

We have not yet learned to tolerate diversity and difference (ethnic, linguistic, cultural, religious, political, sexual…). Cultural integration and uniformity seems to be reached by imposition. Western nationstates were erected applying this strategy. Will it work at the global scale? Will globalization backfire culturally? That is, will globalization cause a defensive reaction to what make be perceived as an attempt 'by them' to destroy 'us' (our identity, our way of live, our beliefs, our traditions)?

55. Political convergence?

Is global convergence to a unique political system likely? Is global economic convergence possible without political convergence?

56. The big triad: growth, distribution, stability

The challenges of globalization could be defined in terms of three dimensions.

• Growth dimension. Globalization is an expansionary process. The expansion of globalization unfolds in parallel with the growth, expansion or extension of other phenomena: flow of goods, people, information, practices, technologies, habits… Globalization has proved to be good at growth. Many variables have grown with it: global population, development and well-being, technological progress, material prosperity, energy usage, consumption, impact on the Earth System, speed of transport and communication… The impression is that the success of globalization along this dimension has been associated with its connection with the market institution: periods in which international mobility (of goods, capital, people) have been tolerated or stimulated appears to have intensified economic growth and globalization. Globalization itself has grown, as in encompasses or affects more aspects of human and social life.

• Distribution dimension. This refers to how the outcomes of the growth dimension are distributed among people (in this case, those involved in the globalization process). These outcomes could be positive (benefits and gains) or negative (costs and losses). There also a multiplicity of such outcomes, which can be defined in terms of income, wealth, political power, social influence or prestige, knowlege… Regarding distribution, globalization seems to have generated a mixed result: over the long run, its benefits tend to spread; over the short run, they tend to be concentrated. Hence, globalization is not necessarily good at distribution. An accelerated globalization could create a new dynamics in which the benefits initially shared by a few fail to be more or less evenly distributed among the rest. Without social or political institutions accelerating distribution, the benefactors of globalization may successfully block the extension of its benefits to the general population. In this case, inequality and heterogeneity may be the result of a decentralized (unregulated) globalization. The success of globalization to deliver fair distribution appears then to be related to the capacity of some centralized authority to steer, regulate or control globalization. The need for this authority seems more likely the fastest globalization expands or deepens.

• Stability dimension. This dimension has to do with the conditions necessary for the first and second dimensions to be viable. Concerning globalization, this dimension defines those conditions under which globalization can continue or, at least, be preserved.

(1) Social stability. A breakdown of globalization may occur as a result of insurmountable social or political tensions generated by an unfair distribution. The prospects in this respect do not appear favourable: nothing in

past or current globalization processes ensure that social institutions will be developed to handle successfully the distributional problems caused by globalization. Globalization seems to benefit (and favour) mechanisms (like free markets, property rights, monetary profits) that contribute to produce technological progress. Contrariwise, no such mechanism appears to consistently operate to create social institutions conducive to institutional progress (globalization does not need democracy, civil rights and freedoms, social benefits… nor has directly contributed to their creation).

(2) Ecological stability. Destroying the material base of globalization (the environment, its resources and renewal cycles) is the main threat to the continuation of the growth of globalization. Again, globalization is in a precarious position along the stability dimension: though the optimists regard the engine of growth (technology) as the source of solutions for ecological deterioration, the pessimists point to the impossibility of making continued growth sustainable (stable) on a finite environment. Against that limitation there is no technological solution. In parallel, there is the damage already inflicted on the environment, which could be possibly be well beyond repair. Given the characteristics of globalization (growth comes first and above all), it appears very likely that globalization (and civilization, its partner and co-creation) has been the fortunate outcome of exceptionally good conditions provided (but just for a short period of time) by nature. Nature eventually returns to unfavourable conditions. Globalization just helps nature to reach those conditions and, in the process, destroys civilization.

57. The great challenge

The great challenge is to ascertain whether there is a form of globalization in which the three dimensions coexist and if, they cannot, if globalization can mutate into a process in which the last two dimensions are sustainable at the expense of the first one: an intensive rather than extensive form of globalization.

58. Global instability?

- **Sources of financial instability.** (i) Global shadow banking. (ii) International dimension of Hyman Minsky's financial instability hypothesis. (iii) Insufficient or weak global finantial institutions. (iv) Lack of global finantial regulation. (v) Excessive privileges of the US economy and the dollar: the US is the centre of financial flows and US monetary policy diverts international financial flows. (vi) Triffin dilemma: stability vs liquidity.

- **Sources of economic instability.** (i) The global dual structure centre (rich and productive) vs periphery, which also tends to be reproduced at smaller economic scales. (ii) Domestic source: real-wage growth vs productivity growth. Insufficient real-wage growth leads to excessive debt accumulation, which endangers financial stability. (iii) Persistent global trade imbalances. (iv) Growth of transnational corporations. (v) Two views on the impact of globalization on economies: is it a stabilizing or a desatabilizing force? (vi) Is the increasing role of regional powers (EU, China and Japan) a stabilizing or a destabilizing global economic force? Do they favour discrimination excessively (preferential trade agreements)? (vii) Is the rise of China ultimately destabilizing for the global economy? (viii) Technological challenges: (a) is technological development out of control?; (b) is this development creating massive technological unemployment? (ix) Environmental challenges: (a) are we putting to an end the period of benign climatic conditions?; (b) is the working of the global economy depleting the stock of natural resources?

- **Sources of political instability.** (i) How stable are international political alliances? (ii) How stable is an international state system lacking strong institutions of global governance? (iii) The Thucydides trap (risk of an all-out war between hegemon and contender to global dominance) and the Churchill trap (risk of a long-term confrontation between two major powers, as in the Cold War). (iv) Are emerging powers (China, India, Russia) sufficiently stable domestically? (v) The paradox of dominance: dominant powers create a system used by challengers to rise.

59. Challenges of contemporary political life

"<u>The four great challenges of contemporary political life are global trade, the Internet, human migration, and safeguarding the environment</u>. Of the four, global trade has achieved a kind of conflicted peace. Finance is free to move. Although financial crises and competition between economic sectors, institutions, and governments create exceptions, sleights of hand like corporate bankruptcy allow amazing fluidity. Data, which as we have seen are integral to the movement of finance, are likewise almost entirely unrestricted. However, data are subject to far more regulation. Crime, terrorism, pornography, spam, identity theft, intellectual property, and the security of online trade are among the themes addressed in the major international forums where Internet governance is addressed."

"Media governance is shaped by the argument between the freedom of information to move and the restriction of data to authorized users. Freedom of human movement, meanwhile, is subject to increasingly virulent restrictions (...) Thus <u>while money can move at will and data within limited constraints, people are both restricted and compelled to move or to stay</u>. Movements of money are relatively unsupervised, so much so that money laundering has begun to worry even the world's financial centers. The Internet includes enclaves of intense security and others of untrammelled exchange. Meanwhile, <u>the movements of people are highly managed. Cosmopolitan elites are by and large free to go where they will</u>, but all others are governed by complex sets of international agreements and surveillance operations."

"The environment shares features with all three. It is subject to what the current jargon calls multistakeholder governance, involving not only nationstates but markets, expert bodies, and civil society organizations, which, however, in the case of environmental action have not produced shared policies, institutional forms, or convincing instruments to effect change. Like trade and the Internet, the environment continues to function but is surrounded by threats. Like migrants, it is subject to regimes of exclusion, especially from political debate, where it is spoken for and spoken about but has no voice of its own."

Cubitt, Sean (2017): *Finite media. Environmental implications of digital technologies*, Duke University Press Durham and London.

60. 'The state of our imbalance' (Henry Mintzberg, 2015)

- "**Consumed by consumption**. In today's world, we glorify consumption while we consume ourselves and our planet."

- "**Corporate persons and human resources**. As corporations have become 'persons' in the law, persons have become 'resources' in the corporations. Are you a human resource? I am a human being."

- "**The corporate press**. Most countries called democratic do not have an independent press so much as a corporate press, beholden to the owners and the advertisers (...) To restore balance in society, we need more alternate voices in the press and the media, not fewer."

- "**Numbed by advertising**. Stop for a moment and have a look at the next few advertisements you see. Ask yourself how many of them go beyond informing, to demean basic human values (mixing up diamonds with love, for example) or else to lie outright, by commission (...) or by omission."

- "**The commercialization of almost everything**. Consider the extent to which our world has become commercial, where everything possible is supposed to be 'monetized.'"

- "**The emasculation of government**. In the win-win scenario of communism, the state was supposed to 'wither away.' Now capitalism is working on it instead—at least for those government departments that do not serve its purposes. <u>Many countries have been relentlessly 'privatizing' their public services, as if business is inevitably superior to government</u>."

- "**Globalization for the global**. <u>In the name of globalization, many large enterprises run freely around the globe, cheered on by the powerful international agencies that should be regulating them</u>, all of these economic: the International Monetary Fund, the World Bank, the World Trade Organization (...) Here is

where the economic dogma has dug itself in most deeply, for the benefit of corporate entitlements worldwide."

- "**Democracy in America—Twenty-five years later**. Democracy is a dynamic process, not some fixed state. It comprises a variety of components, such as a truly free press, open elections, equal rights, and an independent judiciary. No country can just be declared democratic (…) The United States wrote the book on democracy as we know it. How has it been doing in the quarter century since the triumph of imbalance? Not well (…) Many people in the 'developed' world point their fingers at the corruption of politics in some of the poor countries. The difference in America today is that the corruption is legal."

"The country's greatest period of development—socially and politically as well as economically—arguably came in the four decades following World War II (…) The years since 1989 have borne witness to an alarming reversal on many fronts, including some where the country used to have the best record in the world. Consider the evidence on rates of incarceration (the highest in the world) and obesity (the second-highest); the use of antidepressants (the second-most prescribed drugs in the United States); the costs of health care (the highest in the world by far, with mediocre results); levels of poverty (the highest rates in 52 years of reporting), of voter turnout (114th of all nations), of high school dropouts (18th of the top 24 industrialized nations), of college graduation per capita (16th in the world), even of social mobility (now behind a number of the industrialized countries) (…) Yet denial remains the order of the day. In revisiting his 'end of history' thesis after twenty-five years, Francis Fukuyama (2014) concluded that he was right after all (…) The *New York Times* published an article (Shane 2012) that also discussed some of this evidence, but under a title that indicated another conclusion: "A Rule for U.S. politicians: 'We're No 1!'" In denial, at least. Especially worrisome is that so much of the American population has passively accepted such myths. What will happen when they have to face the reality?"

- "**Democracy for the globe?** The American record abroad has been mixed, yet here, too, a powerful myth prevails (…) The country has (…) promoted democratic elections in many countries. Meanwhile, nasty America has supported its share of oppressive regimes and has worked to undermine some decent ones, much of this to protect the interests of its businesses (…) Must we rely on a single country to lead the world to some just order, especially a country that continues to promote internationally the very model that has been causing so many of its domestic problems? Can the world's most enthusiastic proponent of individualism—for itself as a nation alongside its citizens—be expected to foster the cooperation that the world so desperately needs?"

Mintzberg, Henry (2015): *Rebalancing society. Radical renewal beyond left, right, and center*, **Berrett-Koehler Publishers, Oakland, CA.**

61. The most important lesson in history?

"…perhaps the most important lesson we can learn from history is that short-term solutions and quick profits come at a great price in the long run."

Fawcett, Bill (2013): *Doomed to repeat The lessons of history we've failed to learn*, **William Morrow.**

62. The fallacy of metaphysical questions

"The fallacy of metaphysical questions is an attempt to resolve a nonempirical problem by empirical means (…) A prime example is the problem which is eternally popular among Civil War historians : 'Was the War inevitable?' A scholar who carries this question to the archives can illustrate his answer by reference to historical events; he can add persuasive power to his metaphysical proposition by the appearance of factual solidity. But he can no more hope to resolve the issue of inevitability by empirical research than he can hope to determine by modern methods of quantification the number of angels which might be made to perch upon the head of a proverbial pin."

Fischer, David H. (1970): *Historians' fallacies. Toward a logic of historical thought*, **Harper Perennial, New York.**

63. The didactic fallacy

"The didactic fallacy is the attempt to extract specific 'lessons' from history, and to apply them literally as policies to present problems, without regard for intervening changes." (Fischer, 1970, p. 157)

64. The quantitative fallacy

"The quantitative fallacy (...) consists in the idea that the facts which count best count most. (...) [It is] a criterion of significance which assumes that facts are important in proportion to their susceptibility to quantification. There is an epigram, perhaps apocryphal, attributed to Lord Kelvin, that everything which exists, exists in quantity. Enthusiastic quantifiers have amended Lord Kelvin's statement to read, 'Unless a thing can be measured quantitatively, it does not exist significantly.' Therein lies a fallacy." (Fischer, 1970, p. 90)

65. Mukherjee's (2015) Law 2

" 'Normals' teach us rules; 'outliers' teach us laws."

Siddhartha Mukherjee (2015): *The laws of Medicine*.

66. The greatest dilemma

"This stark choice confronts humanity with what is perhaps the greatest dilemma it has ever faced in its history: can we try to mobilize our resources in the most unprecedented ways over a short time span of no more than half a century to avoid the worst of the devastating scenarios outlined in the IPCC report or do we continue to give priority to economic growth and its principal mechanism, the extension of a consumer society throughout the world, seeking at best to modify or 'green' it? At its heart, this is a dilemma about the contradictions between what our science is telling us and what our deeply entrenched belief systems are telling us about how we organize our economy and society; indeed, its roots go deep into what we believe constitutes the good life. Our future rests on which of these we choose to follow, the evidence or our beliefs. Yet, few see the challenge in these terms. Many believe that science and technology will permit us to maintain our current consumer lifestyles while simultaneously reducing our greenhouse gas emissions by up to 95 % by 2050 and replacing our dependence on fossil fuels by renewable sources of energy."

"Given that the post-carbon transition is inevitable and given its incompatibility with the continuity of growth, a certain amount of austerity will also be inevitable. Hence the desirability of reconstructing the concept of austerity instead of continuing to demonize it. (...) Perhaps the way down will not be so terrible if, in addition to being more materially modest, slower and more local, it proves to be more egalitarian, co-operative and democratic."

Ernest García; Mercedes Martínez-Iglesias; Peadar Kirby; eds. (2017): *Transitioning to a post-carbon society. Degrowth, austerity and wellbeing*, Palgrave Macmillan.

III. Futures of global integration

67. Six supertrends shaping the future (Edward Cornish, 2004)

- **Technological progress.** "We can think of technological progress as the growing capability of humans to achieve their purposes. Technological progress has been the supremely important trend in human evolution for millions of years."

- **Economic growth. "**Technological progress promotes economic growth (…) because people are eager to use their know-how to produce goods and services, both for their own use and to sell to others. Economic growth is also a self-sustaining process."

- **Improving health.** "Technological progress and economic growth have led to improving human health because they have produced more food, more effective sanitation, better health services, and so on. Improving health leads to increasing longevity, which has two very important consequences: population growth and a rise in the average age of the population."

- **Increasing mobility.** "People, goods, and information move from place to place faster and in greater quantity than ever before (…) Mobility can also cause social and cultural disruption."

- **Environmental decline.** "Environemtal decline is continuing for the world as a whole because of continuing high population growth and economic development."

- **Increasing deculturation (loss of traditional culture).** "Deculturation occurs when people lose their culture or cannot use it because of changed circumstances (…) Today, the world is estimated to have 6,000 languages, but the number is expected to dwindle to about 3,000 by the end of the twenty-first century due to high mobility, globalization of economic activities, and other factors. Urbanization also contributes to deculturation."

Cornish, Edward (2004): *Futuring. The exploration of the future*, **World Future Society, Bethesda, Maryland.**

68. Yuval Noah Harari's (2018) lessons for the 21st century

- **IDEOLOGY**. History has not ended. The fascist ideology was defeated in World War II. The communist ideology after the Cold War. The liberal ideology emerged apparently definitively triumphant. But since the 2008 global financial crisis, freedoms seem to be in retreat in many countries: new walls erected; restrictions on trade and immigration applied; the independence of the judiciary system compromised; freedom of the press under attack; strongmen impose illiberal democracies or, even, autocracies; Brexit; Trump; internally non-democratic but externally liberal China has become an emergent hegemonic power… Will liberalism reemerge as the dominant ideology or will a new ideology (nihilism?) replace it?

- **WORK**. The rise of technological unemployment and of an economically useless class. Is technological development going to make having a job a luxury? Or will the current fears of massive unemployment become just another illustration of the Luddite fallacy, as in the long run automation will create more jobs than it destroys? Machines have initially displaced humans in activities involving physical abilities (manual jobs in agriculture and industry). Now, machines (artificial intelligence) are rivalling with humans in cognitive abilities (use of information). Is there another type of abilities (beyond the physical and the cognitive) in which machines will not be able to outperform humans (art, emotions, intuitions about other humans)? Is there an unhackable trait of humans? For if everything in a human can be replicated by a machine, what are the long run prospects of humanity?

"The AI revolution won't be a single watershed event after which the job market will just settle into a new equilibrium. Rather, it will be a cascade of ever-bigger disruptions. Already today few employees expect to work in the same job for their entire life. By 2050, not just the idea of 'a job for life', but even the idea of 'a profession for life' might seem antediluvian."

"The challenge posed to humankind in the twenty-first century by infotech and biotech is arguably much bigger than the challenge posed in the previous era by steam engines, railroads and electricity. And given the immense destructive power of our civilisation, we just cannot afford more failed models, world wars and bloody revolutions. This time around, the failed models might result in nuclear wars, genetically engineered

monstrosities, and a complete breakdown of the biosphere. Consequently, we have to do better than we did in confronting the Industrial Revolution."

"Potential solutions fall into three main categories: what to do in order to prevent jobs from being lost; what to do in order to create enough new jobs; and what to do if, despite our best efforts, job losses significantly outstrip job creation."

"It is debatable whether it is better to provide people with universal basic income (the capitalist paradise) or universal basic services (the communist paradise)."

- **BIG DATA**. Help or control? A benign use of Big Data algorithms might empower people, helping them to make fast and easily what currently are difficult decisions. They could help people to discover what they really want and help them to obtain it efficiently. Alternatively, there are at least two dark scenarios.

  (i) **Rise of the robots: the Terminator world**. AI entities created by humans could not remain obedient to humans and become free to develop their own agenda (which need not be beneficial to humans).

  (ii) **Big Brother and digital dictatorship: the Orwellian world.** AI entities created by humans could actually be too obedient to humans. Unscrupulous governments might use too efficient killing machines and too powerful surveillance algorithms to monitor people all the time and impose an absolute control on all human activities. Computing power contributes to reduce the comparative advantage of democracies over dictatorships in data-processing: information processing and decision making need no longer to be distributed among many social and political agents. "AI might make centralised systems far more efficient than diffused systems." And even if political systems manage to remain democratic under the AI impact, people may suffer from new forms of exploitation, oppression or discrimination: the Big Brother could develop in the private sector (banks and corporations could benefit far more from the AI revolution than the ordinary citizen).

Harari, Yuval Noah (2018): *21 lessons for the 21st century*, Jonathan Cape, London.

69. Jorgen Randers' (2012) five big issues toward 2052

- The sustainability revolution. "The future world will not have an expanding population. It will still use much energy per person, but that energy will be used wisely and be of the renewable sort. In the end the world will run on energy from the sun (…) It will be a world that focuses on human well-being, not only on its material component. The big question is how fast the transition to sustainability will happen. The sustainability revolution has already begun, that is for sure."

- The end of capitalism? "Capitalism has done wonders for global wealth creation over the last centuries, and this system for allocation of human activity dominates the current world economy. Capitalism has successfully focused attention and capital on organizations that are able to provide goods and services to customers who are willing and able to pay. Whenever demand shifts, the capitalistic system reallocates, again and again, thereby contributing to a continuing restructuring and growth of the societal pie. But in the same process, uncontrolled capitalism concentrates wealth in fewer hands. So there is a growing group of critics who point to the inequitable distribution of success in the system. The defenders of capitalism have always responded that this is the task of the politicians. But since politicians, particularly in democratic societies, seem unable to tax and redistribute in a sufficient manner, capitalism normally ends with the blame. Employment is the main tool of distribution in the capitalist economy (…) But unemployment compensation is normally quite limited both in value and in the length of time it is available. This is why job loss is so much feared in all capitalist economies, and why capitalism comes under fire whenever unemployment rates increase."

- The end of economic growth? "Yes, economic growth can continue, but only as long as the accompanying ecological footprint remains within the carrying capacity of the globe. (…) Will humanity manage to limit its ecological footprint to fit within the carrying capacity of the planet? Or will we continue to allow overuse of natural resources and the pollution-absorption capacity of the global environment? As you will see later, current lifestyles require roughly the support of 1.4 planets. Humanity has overshot. We see the result of the overshoot most clearly in the ongoing accumulation of CO_2 in the atmosphere (…) It will be physically impossible to lift the material standard of living of all nations to that of the current West (…). In summary,

global average per capita resource consumption will never reach the level that Americans enjoyed around the year 2000."

- <u>The end of slow democracy</u>? "Democracy has many advantages and often yields solutions that are more sustainable than top-down decisions. But speed is not one of the characteristics of democratic decision making. So the way I see it, the fundamental question in this domain is <u>whether democracy will agree on a stronger state (and faster decision making) before it is too late</u>—before we run into the brick wall of self-reinforcing climate change, irreversible biodiversity loss, and insufficient investment in forward-looking research and development."

- <u>The end of generational harmony</u>? "Over the last hundred years or so we have gotten used to expecting that each generation enters the grown world in better shape. That means with better health, better education, more wealth, and better prospects (…) Today's young, particularly in the rich world, are facing a new situation. They are inheriting a significant burden of national debt from their parents; they have to beat their way into markets characterized by persistent unemployment; they can ill afford housing at the same level as their parents; and they are expected to pay for their parents' pensions. On top of this, the prospects for a quick resolution of these issues are grim. So the relevant question becomes: <u>Will the younger generation calmly accept the burden bestowed on them by the older generation</u>? Or will we get an aggressive and paralyzing confrontation between young and old, starting with confrontations with the baby boomers in the rich world?"

- <u>The end of stable climate</u>? The intergenerational issue (…) is most obvious in three areas: anthropogenic biodiversity destruction, climate change, and entombment of radioactive waste (…) <u>The prime legacy issue in 2012 is humanity's big and growing emissions of greenhouse gases, which lead to global warming</u>. The CO_2 is emitted as a gas into the atmosphere and quickly moves around the globe. It remains in the atmosphere for a long time while waiting to get absorbed in the ocean (as carbonic acid in the water) or in trees and plants (as plant material when they grow). Presently, very roughly one-quarter of the CO_2 flows into the ocean, one-quarter flows into new biomass, and one-half remains in the atmosphere. The long-run accumulated effect of these flows has been to lift the concentration of CO_2 in the atmosphere from 280 ppm in preindustrial times (circa 1750) to 390 ppm today (2010). The CO_2 flows also have increased the acidity of the oceans and created a more difficult life for shell-forming species. More CO_2 in the atmosphere accelerates plant and tree growth, but it also leads to higher temperatures on the surface of the earth. <u>The global average temperature has increased by 0.7°C since preindustrial times</u> (…) And if we are to keep the temperature rise below plus 2°C we must keep the concentration of CO_2 in the atmosphere below 450 ppm (…). The concentration is currently going up by 2 ppm per year."

70. Jorgen Randers' (2012) 'grocline'

"In the last third of the twenty-first century I believe the world economy will have entered into an era where the <u>combination of individual growth and societal decline has become the norm</u>. Per capita consumption will be growing year by year, just as in the good old days. And at the same time the total economy—the GDP—will be in constant decline. This could be called 'grocline'—simultaneous growth and decline. <u>The grocline world is one where the individual situation improves while the total pie shrinks</u>. It's good and bad at the same time—decade after decade.

## 71. The founder's paradox

"<u>Of the six people who started PayPal, four had built bombs in high school</u>. Five were just 23 years old—or younger. Four of us had been born outside the United States. Three had escaped here from communist countries: Yu Pan from China, Luke Nosek from Poland, and Max Levchin from Soviet Ukraine (…) Are all founders unusual people? (…) Some people are strong,

The founder distribution

some are weak, some are geniuses, some are dullards—but most people are in the middle. Plot where everyone falls and you'll see a bell curve. Since so many founders seem to have extreme traits, you might guess that a plot
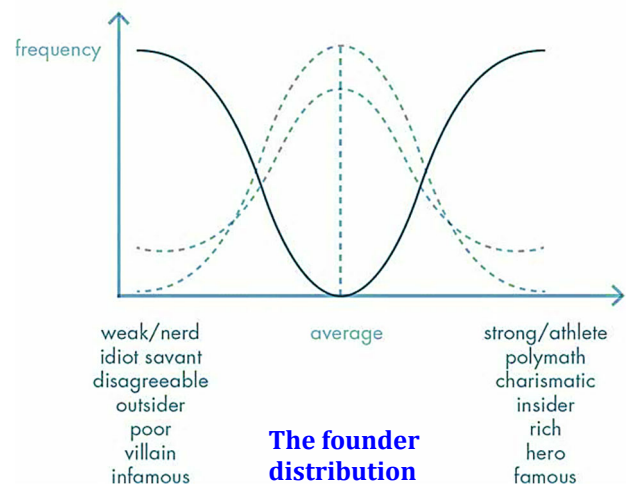
showing only founders' traits would have fatter tails with more people at either end. But that doesn't capture the strangest thing about founders. Normally we expect opposite traits to be mutually exclusive: a normal person can't be both rich and poor at the same time, for instance. But it happens all the time to founders: startup CEOs can be cash poor but millionaires on paper. They may oscillate between sullen jerkiness and appealing charisma. Almost all successful entrepreneurs are simultaneously insiders and outsiders. And when they do succeed, they attract both fame and infamy. When you plot them out, founders' traits appear to follow an inverse normal distribution."

Thiel, Peter; Blake Masters (2014): *Zero to one. Notes on startups, or how to build the future*, **Crown Business, New York.**

72. Nick Bostrom's futures of humanity (in Thiel and Masters, 2014)
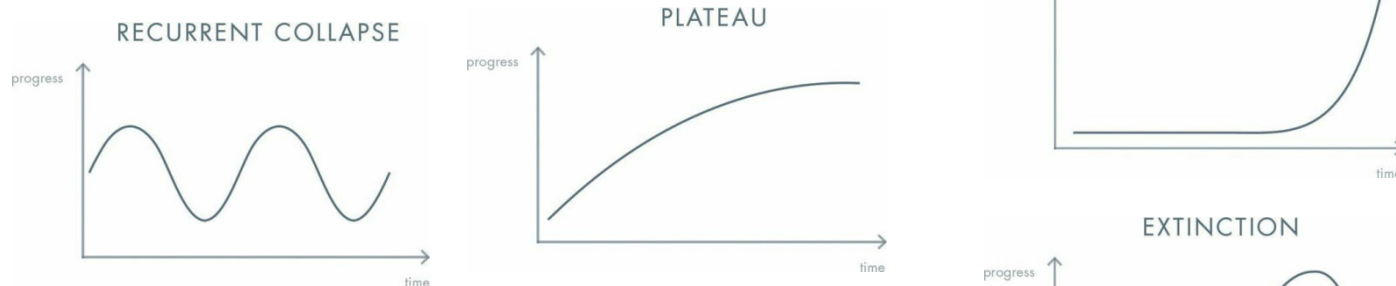

73. The future as seen in the past and as seen now

"What distinguishes modernity's from antiquity's conception of the future is the idea of the future as a garden of forking paths. The modern understanding is no longer based on the notion of a thread of life that unravels inexorably and can only be apprehended or misapprehended. It presupposes an open and malleable future that can be predicted in the present and also altered. Prognoses are no longer self-fulfilling but seen as a form of pragmatic knowledge. They envision a contingent future subject to change."

Horn, Eva (2018): *The future as catastroph. Imagining disaster in the modern age*, **Columbia University Press, New York.**

74. Humanity's challenges (Julian Cribb, 2017)

- **Species extinction, defaunation.** "Of all the human impacts which affect other creatures and plants, by far the largest is our practice of modifying natural landscapes and seascapes, so they support less and less wildlife. The main reason we modify these environments is for farming, fishing and grazing in order to supply the food we need each day (...) A major extinction event driven by humans is poised to occur in the world's oceans , similar to the one which has already taken place among land animals over recent history."
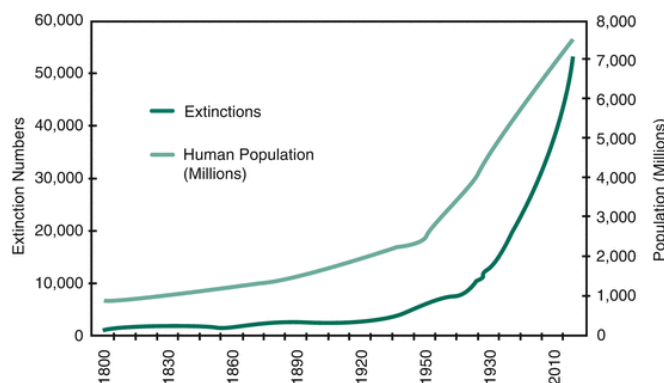
- **Global overshoot: resource scarcity, water scarcity, soil degration, deforestation, desertification, ocean mingin, energy struggle.** "The human story in the twenty-first century will be dominated by a titanic global struggle—economic, political, scientific and military—for resources. On this, to a significant degree, turns the fate of civilisation. In every prior age till now the bounty of the Earth was ample to sustain the ascent of human society. Scarcities, when they occurred, were local, regional or else the result of human interference or mismanagement. Now (...) the physical demands of seven to ten billion humans, each aspiring to a higher standard of living, are
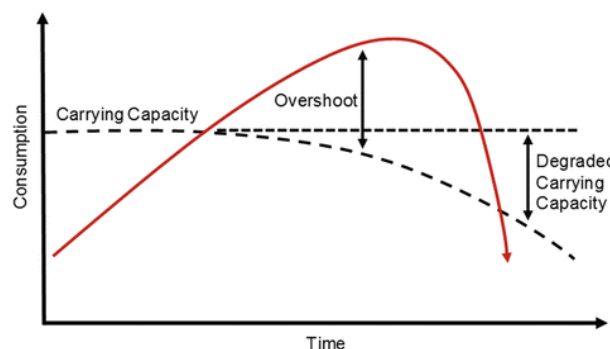
combining to exceed the Earth's carrying capacity. Put simply, <u>we are using more stuff than the planet can renewably provide</u> (...) <u>To support the average citizen of Earth takes around 1386 tonnes of water a year</u>. This is known as our 'water footprint' and consists of all the water used to produce our food, consumer products, or provide the services on which we rely (...) In total, <u>humanity goes through more than 9 trillion tonnes of fresh water annually</u> (...) Even in the late twentieth century many people believed it inconceivable that human demands could possibly exceed the bounty of the world's vast oceans, or cause them such harm as to undermine their health and deplete the life they hold. This is no longer true."

"<u>Cheap energy is the blood supply of modern civilization</u>. <u>To keep the world ticking over requires</u> the use of about 550,000,000,000,000,000 British thermal units (<u>550 quadrillion Btus</u>) of primary energy each year (...) The typical Canadian consumes around 400 million Btus a year to maintain their lifestyle, the average German 165 m, the average Argentinian 90 m, the average Chinese 80 m and the average Egyptian 42 m. To satisfy this gargantuan global energy hunger in the second decade of the twenty-first century took <u>33 billion barrels of oil, 120 billion cubic feet of gas, 8.5 billion tonnes of coal and 20 trillion kilowatt hours of electricity every year</u>. Of this total, <u>fossil fuels supplied around 80 %</u> of all primary energy and renewables about 20 % in the years 2013–2015."

- **Weapons of mass destruction, arms race, chemical and biowarfare.** "<u>Eight countries have the technical capability to unleash nuclear mayhem</u> (...) In 2015, (...) China had about 260 total warheads. France had around 300 operational warheads. Russia had about 1512 strategic warheads deployed on 498 missiles and bombers and was thought to hold another 1000 strategic warheads and 2000 tactical nuclear warheads. Several thousand more awaited dismantlement. The United Kingdom had 160 deployed strategic warheads and a total stockpile of 225. <u>The United States had 7700 nuclear warheads</u> (...) 4500 active warheads and 3200 'retired' weapons (...). India had 120 nuclear warheads. Israel had 80 (...). Pakistan had 120 (...) One reason why weapons of mass destruction are more to be feared in the twenty-first century than in the twentieth is that humanity is much more vulnerable than in the past."

- **Global and uncontrollable warming.** "The data—whether measured on land, in the air, in the oceans, or at the interface in the form of sea-level rise, told the same story:<u> there has been a steady rise in the Earth's temperature</u>. 2014 was officially proclaimed the warmest year on record—at 0.69 °C hotter than the average for the whole twentieth century—only to be eclipsed by 2015, according to the World Meteorological Organisation. In February 2016, the world was shocked by reports that the surface of the Earth north of the equator was already 2 °C warmer than pre-industrial temperatures—this was the line that was never supposed to be crossed. Nine of the ten warmest years ever recorded occurred during the twenty-first century, and average temperatures rose worldwide for 38 consecutive years since 1977."

Annual Global Temperature (Land, Ocean, and Combined)
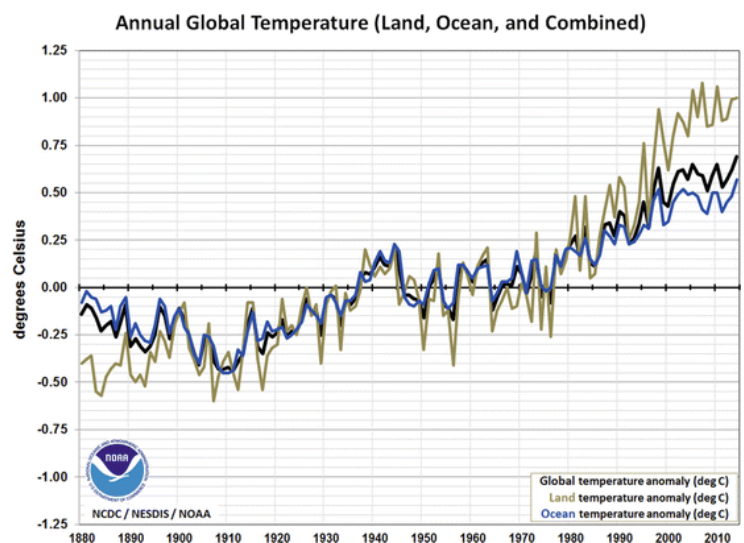
- "**Planetary poisoning.** Earth, and all life on it, are being saturated with man-made chemicals in an event unlike anything which has occurred in all four billion years of our planet's story. Each moment of our lives, from conception unto death, <u>we are exposed to thousands of substances, some deadly in even tiny doses and most of them unknown in their effects on our health and wellbeing</u> or upon the natural world. These enter our bodies with every breath, each meal or drink, the clothes we wear, the products with which we adorn ourselves, our homes, workplaces, cars and furniture, the things we encounter every day. There is no escaping them.

- "**Food insecurity.** There are ten main factors which drive global food insecurity (...) On the demand side, the requirement for a doubling in global food production is driven by <u>population growth</u> (...) and <u>rising</u>

<u>living standards coupled with economic demand for higher quality</u>, richer, more nutritious foods (…). On the supply side, the main things that limit our ability to double food production are:

- o Physical loss and <u>decline in fertility of soils</u> worldwide, combined with a shrinking world farming area.

- o <u>Scarcities of fresh, clean water</u> in heavily populated regions (…).

- o Uncertain availability and <u>high cost of liquid transport fuels</u> out to mid-century and beyond.

- o Emerging <u>scarcities of high-quality mineral fertilisers</u> (…).

- o Continuing decline and <u>potential collapse of wild fish stocks</u> due to overfishing and ocean pollution.

- o <u>Global decline in public sector investment in food, agricultural and fisheries science</u> (…).

- o A worldwide drought of 'patient capital' for new investment in farming and food production, along with speculative investment in farm land and commodities and 'landgrabs' by speculators and rich corporations.

- o <u>Extinction of the temperate climate</u> which gave rise to agriculture (…).

It is the synergy between these ten drivers that is the primary cause of global food insecurity, present and future (…) <u>Ours is the first generation in human history to throw away half our food</u>. Between one third and a half of the efforts of the world's farmers, horticulturalists and agri-scientists, amounting to 1.3 billion tonnes of food a year worth over \$1 trillion, are sent to landfill or else rot in the fields (…) The <u>modern diet is neither safe nor healthy</u>: medical scientists estimate that today two out of every three people in the world die from a diet-related disease (…) the world diet has to change—to one that is fresh, diverse, healthy and which prevents disease instead of causing it."

- **Megacity collapse, new plagues, machine minds.** "The greater risk from AI may stem less from autonomous weapons (…) than from machine intelligence which might seek—for reasons of its own—to dominate, supplant or eradicate humans (…) A second dimension in which the march of technology imperils the human future is through the rise of the '<u>nanocracy</u>', a condition in which close surveillance and information about individuals throughout the whole of their lives will be maintained by a network of governments, commercial corporations and law enforcement agencies."

- **Wealth divide.** "Worldwide, while there is abundant evidence that humanity is becoming wealthier and achieving higher living standards as a whole, there is also evidence that <u>wealth is being distributed less evenly across many societies and is concentrating in fewer hands</u> (…) Oxfam argues that half the world's wealth is now held by just 1 % of its people (…) According to The Guardian, in 2014, 80 individuals on Earth controlled more wealth than the poorest 3,600,000,000 (…). The Credit Suisse Wealth Report in 2015 came up with a similar estimate, that 1 % of the population controlled half the household assets in the world (…) <u>For civilisation and our species to survive and prosper sustainably in the long run, common understandings and co-operation are essential, across all the gulfs that divide us</u>—political, ethnic, religious and economic."

- **Illusions, delusions.** "<u>The modern world is founded on a belief in money</u>, a commodity that did not exist until about 5000 years ago and probably won't exist in the far future. Yet most people behave as if money were, in fact, real—rather than a consensual belief or a bond of trust between people (…) Religious belief has been the primary construct on which humanity has founded its vision of the world, its moral laws and social order (…) It is likely to be as significant a power and influence over human affairs in the twenty-first century as in the past (…) <u>Religious faith has proven both a great strength and sometimes a fatal weakness for humans</u>. Many faiths, while asserting their own truth, have a habit of denying the truths of others, and this often ends in tears. Between 1618 and 1648, for example, Europe was plunged into one of the bloodiest and most brutal sectarian conflicts in its history, between Catholic and Protestant states of the fragmenting Holy Roman Empire. It caused famines and epidemics, killed 7.5 million people, bankrupted many countries."

Cribb, Julian (2017): *Surviving the 21st century. Humanity's ten great challenges and how we can overcome them, Springer, Cham, Switzerland.*

75. The end of pandemics: 'the power of seven'

"The enormous health and financial impacts of epidemics are made worse through human foibles like fear, denial, panic, complacency, hubris, and self-interest. But we can end epidemics by facing up to them and applying concrete actions I call 'The Power of Seven': (1) ensuring bold leadership at all levels; (2) building resilient health systems; (3) fortifying three lines of defense against disease (prevention, detection, and response); (4) ensuring timely and accurate communication; (5) investing in smart innovation; (6) spending wisely to prevent disease before an epidemic strikes; and (7) mobilizing citizen activism."

Quick, Jonathan D.; Bronwyn Fryer (2018): *The end of epidemics. The looming threat to humanity and how to stop it*, St. Martin's Press, New York.

A century of deadly outbreaks
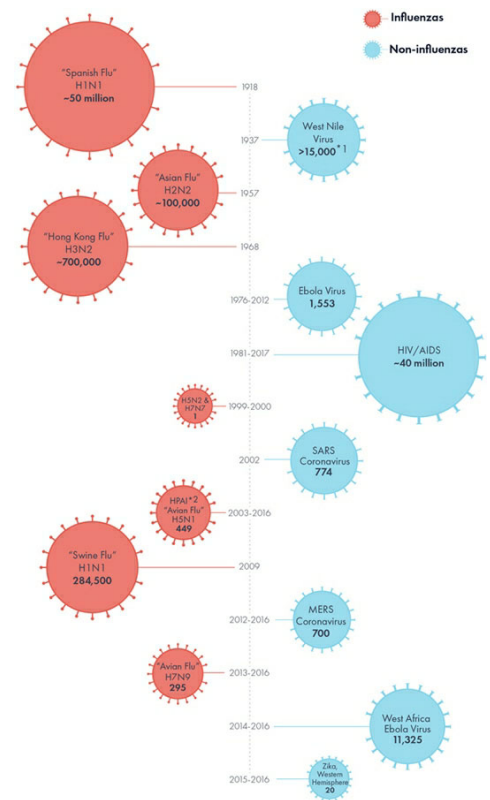
76. The Doomsday argument

"... the Argument goes like this: if you assume that the human race will survive millions more years, perhaps for the remaining lifetime of our sun, say 5 billion years or so, and that the population of the Earth stabilizes at around 15 billion at any one time, then there would have been at the end of all that about 500 quadrillion humans. Since, at the most, 40 billion or so people have lived on Planet Earth to now, that means that we, you and I, would be among the first 0.00001 percent of all humans. In probability theory (using Bayes's theorem, which essentially says that a hypothesis is confirmed by any body of data that its truth renders probable), the chances of so unlikely an outcome are vanishingly small—ask any gambler. What makes us so lucky, or so special? On the other hand, suppose that humans are wiped out by some catastrophe in the next decade or so. That would make us 40 billionth out of a total human population of maybe 50 billion, much better odds, and therefore much more probable. Conclusion: scenario two is more likely to be true. Therefore: <u>doom sooner rather than later</u>."

De Villiers, Marq (2011): *The end. Natural disasters, manmade catastrophes, and the future of human survival*, St. Martin's Press, New York.

77. Collapse

"... a NASA-funded group recently created the Human and Nature DYnamics (HANDY) program to model the fall of the Roman, Han, Mauryan, and Gupta Empires, and when they pushed the button, it spit out a disquieting forecast: '<u>Global industrial civilization could collapse in coming decades due to unsustainable resource exploitation and increasingly unequal wealth distribution</u>.' (...) In this model, by the way, <u>one of the greatest dangers came from elites who argued against structural change on the grounds that 'so far' things were working out</u>. That 'so far' is always the problem, as the man who fell off the skyscraper found out (...)

We've displaced most everything else: <u>if you weigh the earth's terrestrial vertebrates, humans account for 30 percent of their total mass, and our farm animals for another 67 percent, meaning wild animals</u> (...) <u>total just 3 percent</u>. In fact, *there are half as many wild animals on the planet as there were in 1970*, an awesome and mostly unnoticed silencing. <u>And yet nothing slows us down</u>—just the opposite. By most accounts, we've used more energy and resources during the last thirty-five years than in all of human history that came before (...) On his way to the theoretically groundbreaking Rio environmental summit in 1992, the first President Bush famously declared, '<u>The American way of life is not up for negotiation</u>' (...)

Why should you take seriously my fear that the game, in fact, may be starting to play itself out? The source of my disquiet can be summed up in a single word, a word that will be repeated regularly in this book: *leverage*. <u>We're simply so big, and moving so fast, that every decision carries enormous risk</u>.

Rome's collapse was, of course, a large-ish deal. But given that there were vast swaths of the world that didn't even know there *was* a Roman Empire, it wasn't a big deal*everywhere*. Rome fell, and the Mayans didn't

tremble, nor the Chinese, nor the Inuit. But <u>an interconnected world is different</u>. It offers a certain kind of stability—everyone in every country can all hear the scientists warning of impending climate change, say—but it removes the defense of distance (…) <u>We are putting the human game at risk, that is, from things going powerfully wrong and powerfully right</u>. As we shall see, humans have now emerged as a destructive geologic force (…) And humans have simultaneously emerged as a massive *creative* force, in ways that threaten the human game not through destruction but through substitution. <u>Robots are not just another technology</u>, and artificial intelligence not just one more improvement like asphalt shingles. <u>They are instead a replacement technology</u>, and <u>the thing's that's going obsolete may well be us</u> (…) The outsize leverage is so crucial because, <u>for the first time, we threaten to cut off our own lines of retreat</u>. When Rome fell, something else was there (…) The human game we've been playing has no rules and no end, but it does come with two logical imperatives. The first is to keep it going, and the second is to keep it human."

McKibben, Bill (2019): *Falter. Has the human game begun to play itself out?*, **Henry Holt and Company, New York.**

78. Three ways of falling: runaway train, dinosaurs, house of cards

"Consider Tainter's three aspects of collapse: the Runaway Train, the Dinosaur, the House of Cards. The <u>rise in population and pollution, the acceleration of technology, the concentration of wealth and power — all are runaway trains</u>, and most are linked together (…) If civilization is to survive, it must live on the interest, not the capital, of nature. Ecological markers suggest that in the early 1960s, humans were using about 70 per cent of nature's yearly output; by the early 1980s, we'd reached 100 per cent; and in 1999, we were at 125 per cent. Such numbers may be imprecise, but their trend is clear — they mark the road to bankruptcy. None of this should surprise us after reading the flight recorders in the wreckage of crashed civilizations; our present behaviour is typical of failed societies at the zenith of their greed and arrogance. <u>This is the dinosaur factor: hostility to change from vested interests, and inertia at all social levels</u> (…) <u>Civilizations often fall quite suddenly — the House of Cards effect — because as they reach full demand on their ecologies, they become highly vulnerable to natural fluctuations</u>. The most immediate danger posed by climate change is weather instability causing a series of crop failures in the world's breadbaskets. Droughts, floods, fires, and hurricanes are rising in frequency and severity. The pollution surges caused by these — and by wars — add to the gyre of destruction. Medical experts worry that nature may swat us with disease."

Wright, Ronald (2004): *A short history of progress*, **Anansi, Toronto.**

79. A new globalization?

"Our challenge now is to move forward from emergency state Wilsonianism to a twenty-first-century internationalism more suited to our economic and security needs, more suited to our democratic constitutional traditions, and more suited to our increasingly permeable twenty-first-century world (…) <u>An internationalism no longer defined by crisis management and ideological crusades would make essential global problems like halting climate degradation, curbing nuclear weapons proliferation, and combating preventable infectious diseases the central themes of American foreign policy</u>."

"Of the world's nearly 7 billion people, about one in four still live on less than $1.25 per day and nearly half on less than $2.50 a day."

"<u>What is needed is a contemporary version of the 1944 Bretton Woods global financial agreement</u>. Its purpose would be to build the same kind of financial architecture for decades of largely uninterrupted prosperity and sustainable, equitable growth that the original Bretton Woods created."

"<u>A new Bretton Woods system would have to be more internationally diversified</u>, like today's world economy. It would need to provide for other means of expanding international reserves than printing and exporting dollars. To accommodate rising economic powers like China, it would probably have to hark back to the original Bretton Woods formula <u>favoring open world trade but allowing limited national capital control</u>."

"A reformed, sustainable international economic system should not just address currencies and exchange rates. It also needs to <u>renegotiate international trade rules to let countries take some account of the environmental and labor conditions under which goods are produced</u>. Otherwise, trade can only mean a race to the bottom for poor and rich countries alike."

"That could help restore the lost balance between market expansion and democratic accountability and could help narrow, rather than widen, economic inequalities at home and abroad. Some goods might cost more at Walmart, but there would be trade-offs like better-paying, more secure jobs in the West and lower public health and environmental cleanup costs in the newly industrializing world. <u>Such arrangements would help raise living and social standards around the world</u>. They would make it possible to replace the current model of globalization—based on transferring work to low-wage countries while sustaining continued high levels of consumption in deindustrializing countries with deficits and foreign borrowing—with a more sustainable one: a <u>new model based on expanding production and rising living standards everywhere</u>. This second-generation model for globalization lacks the theoretical simplicity of the current neoliberal model. But it has the decided advantage of being more economically and environmentally sustainable, more humane, and more capable of mobilizing broad public support."

"The essential precondition for a wiser approach to globalization is moving away from the obsolete American worldview that nourishes and is nourished by our emergency state. <u>Our relations with the rest of the world will need to become less militarized and managerial</u>, our sense of national identity less rooted in a Wilsonian sense of moral mission and American exceptionalism."

Unger, David C. (2012): *The emergency state. America's pursuit of absolute security at all costs*, Penguin Press, New York.

80. A lesson from the past?

"The short-lived Empire of Ur exhibits the same behaviour as we saw on Easter Island: <u>sticking to entrenched beliefs and practices, robbing the future to pay the present, spending the last reserves of natural capital on a reckless binge of excessive wealth and glory</u>. Canals were lengthened, fallow periods reduced, population increased, and the economic surplus concentrated on Ur itself to support grandiose building projects. <u>The result was a few generations of prosperity (for the rulers), followed by a collapse from which southern Mesopotamia has never recovered</u>. By 2000 B.C., scribes were reporting that the earth had 'turned white.' All crops, including barley, were failing. Yields fell to a third of their original levels. The Sumerians' thousand years in the sun of history came to an end. Political power shifted north to Babylon and Assyria, and much later, under Islam, to Baghdad. Northern Mesopotamia is better drained than the south, but even there the same cycle of degradation would be repeated by empire after empire, down to modern times. <u>No one, it seems, was willing to learn from the past. Today, fully half of Iraq's irrigated land is saline — the highest proportion in the world</u>, followed by the other two centres of floodplain civilization, Egypt and Pakistan."

Wright, Ronald (2004): *A short history of progress*, Anansi, Toronto.

81. Civilizations as pyramid schemes?

"The careers of Rome and the Maya also show, I think, that civilizations often behave like 'pyramid' sales schemes, <u>thriving only while they grow</u>. <u>They gather wealth to the centre from an expanding periphery</u>, which may be the frontier of a political and trading empire or a colonization of nature through intensified use of resources, often both. Such a civilization is therefore most unstable at its peak, when it has reached maximum demand on the ecology. <u>Unless a new source of wealth or energy appears, it has no room left to raise production</u> or absorb the shock of natural fluctuations The only way onward is to keep wringing new loans from nature and humanity. Once nature starts to foreclose — with erosion, crop failure, famine, disease — the social contract breaks down. People may suffer stoically for a while, but sooner or later the ruler's relationship with heaven is exposed as a delusion or a lie. Then the temples are looted, the statues thrown down, the barbarians welcomed, and the emperor's naked rump is last seen fleeing through a palace window."

"<u>As the crisis gathered, the response of the rulers was not to seek a new course, to cut back on royal and military expenditures</u>, to put effort into land reclamation through terracing, or to encourage birth control (means of which the Maya may have known). <u>No, they dug in their heels and carried on doing what they had always done, only more so</u>. Their solution was higher pyramids, more power to the kings, harder work for the masses, more foreign wars. In modern terms, the Maya elite became extremists, or ultra-conservatives, squeezing the last drops of profit from nature and humanity."

"Easter Island and Sumer failed to recover because their ecologies were unable to regenerate (…) Rome and the Maya, collapsed heavily in their heartlands, where ecological demand had been highest, but left remnant societies whose descendants have come down to modern times. During a thousand years of low population, the land in both countries managed to recover (…) Why, if civilizations so often destroy themselves, has the overall experiment of civilization done so well? If Rome couldn't feed itself in the long run, how is it possible that for every person on earth in Roman times, there are thirty here today? Natural regeneration and human migration are part of the answer. Ancient civilizations were local, feeding on particular ecologies. As one fell, another would be rising elsewhere. Large tracts of the planet were still very lightly settled."

"A second answer is that while most civilizations have outrun natural limits and collapsed within a thousand years or so, not *all* have. Egypt and China were able to keep burning, without using up their natural fuel, for more than 3,000 years. What made them different? (…) The Nile valley's narrowness and drainage slowed the salt build-up that poisoned Sumer; and unlike the Maya and ourselves, ancient Egyptians generally knew better than to build on farmland. Egypt's population growth was unusually slow (…) Nature made Egypt live within its means. But Egypt's means were those of a remittance man (…) China also received more than her fair share of topsoil, though it had come as a lump-sum deposit rather than a yearly allowance (…) This land was almost endlessly forgiving, with erosion merely exposing new layers of good earth (…) Despite such upsets, and the recurring scythes of famine and disease, the generous ecologies of Egypt and China allowed revival before the culture lost its headway."

"We in the lucky countries of the West now regard our two-century bubble of freedom and affluence as normal and inevitable; it has even been called the 'end' of history, in both a temporal and teleological sense. Yet this new order is an anomaly: the opposite of what usually happens as civilizations grow. Our age was bankrolled by the seizing of half a planet, extended by taking over most of the remaining half, and has been sustained by spending down new forms of natural capital, especially fossil fuels. In the New World, the West hit the biggest bonanza of all time. And there won't be another like it."

Wright, Ronald (2004): *A short history of progress*, **Anansi, Toronto.**

82. Deglobalization of the World Wide Web?

"The World Wide Web is slowly returning to Earth and its entanglements: states, laws, cultures. Cyberspace, for a host of commercial and political reasons, is becoming many cyberspaces, some of which fit distressingly well onto the old political maps of nation-states. The web has even become a battleground for states' wars. Why is this happening, and what will remain of the old, free, and anarchic web to take into the future? Digital computing, the Internet, and eventually the web were invented and grew as part of a long line of government projects, mainly military ones, dating back to the First World War. But, beginning in the late 1960s, the Internet and geek culture split off from government, launching a period of spectacular innovation, excitement, and profit. The web became a place for enacting dreams of freedom."

"The web as a solvent of sovereignty had a very strong appeal, and was soon taken up by (…)T homas L. Friedman, a fixture at Davos, in his 1999 bestseller *The Lexus and the Olive Tree*: 'The symbol of the Cold War system was a wall, which divided everyone. The symbol of the globalization system is a World Wide Web, which unites everyone (…) In the era of globalization we reach for the Internet—a symbol that we are all connected but nobody is totally in charge'. Not *totally*: the United States remained a good deal more in charge than any other power (…) Without doubt, the web is and will be used for surveillance and for the projection of force, just as its forebears were. States and like-minded regions will assert control over it and most users' experience of it will be locally inflected. At the same time, the web will continue to have a global infrastructure and no one state will be able to dominate it, both because the other states won't let that happen and because the leading companies on the web will not abandon their drive for global growth. The web will be neither entirely united nor entirely divided. The web is a global private marketplace built on a government platform, not unlike the global airport system."

"For users and consumers, the attractions of interoperability overwhelm isolation; and the same becomes true, most of the time, for companies and governments, who find it hard to maintain their closed commercial or political monopolies if they want to continue to grow and assert themselves. This creates both competitive innovation and a dynamic Internet balance of power: As long as some major players continue to struggle against capture by other major players, the global infrastructure of the Internet will be preserved, mainly

because the desire to compete beyond borders will continue to animate all of those major players, private and public. The unending will to power provides its own anxious guarantee of freedom. Nonetheless, the Internet as an entirely cross-border enterprise (...) will not return, just as the American hyperpower dominance that created it will not return. It is very hard to see how that geopolitical moment could recur. The idea of a global web public wholly independent of state sovereignty was to a great extent an illusion of the early web industry."

Assange, Julian et al. (2015): *The WikiLeaks files. The world according to US empire*, Verso, London and New York.

83. Will the internet become militarized?

"Will commercially controlled data, which is the vast majority of web data, also be state-controlled data, or not? There are two major trends at work now. One is that enough money or power can buy security. The other is that the logic of interstate war is now being applied to the web as it was to predecessor technologies (...) It's tempting to see a long-term pattern at work: technology born in war returns to war."

"The key question for the Internet is whether it will become caught up in this great-power military logic (...) There are reasons to hope that a militarized Internet is not inevitable. The first (...) is the commercial dominance of the Internet, which gives it, by virtue of the desire of web companies and national economies to prosper, a relative autonomy from politics. The second is the growing technical ability of major players to secure their own systems, thus reducing their fears about the Internet as a whole. The third is a dawning realization among governments that they need to reach some minimal Internet *modus vivendi* (...) The fourth is that states are realizing that the Internet is not inevitably a mechanism for regime change—that it is a relative danger but not an absolute one. The United States has so far not crushed the opposition of its obstreperous multinationals. China has very reluctantly but materially accepted that its Netizens will upload photos of major disasters and demand official accountability. None of this points to any final victory of Internet freedom over the power of the state."

Malcomson, Scott (2016): *Splinternet. How geopolitics and commerce are fragmenting the world wide web*, OR Books, New York and London.

84. The tipping point

"*The Tipping Point* is the biography of an idea, and the idea is very simple. It is that the best way to understand the emergence of fashion trends, the ebb and flow of crime waves, or, for that matter, the transformation of unknown books into bestsellers, or the rise of teenage smoking, or the phenomena of word of mouth, or any number of the other mysterious changes that mark everyday life is to think of them as epidemics. Ideas and products and messages and behaviors spread just like viruses do."

"These three characteristics—one, contagiousness; two, the fact that little causes can have big effects; and three, that change happens not gradually but at one dramatic moment —are the same three principles that define how measles moves through a grade school classroom or the flu attacks every winter. Of the three, the third trait—the idea that epidemics can rise or fall in one dramatic moment—is the most important, because it is the principle that makes sense of the first two and that permits the greatest insight into why modern change happens the way it does. The name given to that one dramatic moment in an epidemic when everything can change all at once is the Tipping Point."

"Epidemics are a function of the people who transmit infectious agents, the infectious agent itself, and the environment in which the infectious agent is operating. And when an epidemic tips, when it is jolted out of equilibrium, it tips because something has happened, some change has occurred in one (or two or three) of those areas. These three agents of change I call the Law of the Few, the Stickiness Factor, and the Power of Context."

"This is the first lesson of the Tipping Point. Starting epidemics requires concentrating resources on a few key areas. The Law of the Few says that Connectors, Mavens, and Salesmen are responsible for starting word of mouth epidemics, which means that if you are interested in starting a word of mouth epidemic, your resources ought to be solely concentrated on those three groups."

"The theory of Tipping Points requires, however, that we reframe the way we think about the world (...) We have trouble estimating dramatic, exponential change. We cannot conceive that a piece of paper folded over 50

times could reach the sun (…) The world—much as we want it to—does not accord with our intuition. This is the second lesson of the Tipping Point (…) What must underlie successful epidemics, in the end, is a bedrock belief that change is possible, that people can radically transform their behavior or beliefs in the face of the right kind of impetus. This, too, contradicts some of the most ingrained assumptions we hold about ourselves and each other."

"But if there is difficulty and volatility in the world of the Tipping Point, there is a large measure of hopefulness as well. Merely by manipulating the size of a group, we can dramatically improve its receptivity to new ideas. By tinkering with the presentation of information, we can significantly improve its stickiness. Simply by finding and reaching those few special people who hold so much social power, we can shape the course of social epidemics. In the end, Tipping Points are a reaffirmation of the potential for change and the power of intelligent action. Look at the world around you. It may seem like an immovable, implacable place. It is not. With the slightest push—in just the right place—it can be tipped."

Gladwell, Malcolm (2002): *The tipping point. How little things can make a big difference*, **Little, Brown and Company, New York.**

85. Symbiosis ('system in which members of different species live in physical contact') everywhere

"One widely held unstated assumption is the great chain of being. It defines the venerable position of humans as the exact center of the universe in the middle of the chain of being below God and above rock (…) These ideas are rejected as obsolete nonsense by a consistent scientific worldview. All beings alive today are equally evolved. All have survived over three thousand million years of evolution from common bacterial ancestors. There are no 'higher' beings, no 'lower animals,' no angels, and no gods (…) We *Homo sapiens sapiens* and our primate relations are not special, just recent: we are newcomers on the evolutionary stage. Human similarities to other life-forms are far more striking than the differences. Our deep connections, over vast geological periods, should inspire awe, not repulsion (…) My claim is that, like all other apes, humans are not the work of God but of thousands of millions of years of interaction among highly responsive microbes."

"… symbionts are not obvious but they are omnipresent (…) Long-standing symbiosis led first to the evolution of complex cells with nuclei and from there to other organisms such as fungi, plants, and animals (…) To me symbiosis as a source of evolutionary novelty helps explain the observation of 'punctuated equilibrium,' of discontinuities in the fossil record."

"Living beings defy neat definition. They fight, they feed, they dance, they mate, they die. At the base of the creativity of all large familiar forms of life, symbiosis generates novelty (…) Symbiosis is not a marginal or rare phenomenon. It is natural and common. We abide in a symbiotic world."

Margulis, Lynn (2008): *Symbiotic planet. A new look at evolution*, **Basic Books, New York.**

86. The way forward: 'plenitude'

"Climate destabilization, economic meltdown, and the escalation of food and energy prices are warning signs from a highly stressed planet. Ecologists have defined a number of safe operating zones for the earth's complex systems and are finding that human activities have already led us outside a number of them. But the mainstream conversation has been stalled by fatalism. We're better at identifying what can't be done than what we need to accomplish.

There *is* a way forward, and I call it plenitude. The word calls attention to the inherent bounty of nature that we need to recover. It directs us to the chance to be rich in the things that matter to us most, and the wealth that is available in our relations with one another. Plenitude involves very different ways of living than those encouraged by the maxims that have dominated the discourse for the last twenty-five years. It puts ecological and social functioning at its core, but it is not a paradigm of sacrifice."

"From the perspective of the individual, there are four principles of plenitude. The first is a new allocation of time. For decades, Americans have devoted an increasing fraction of their time and money to the market (…) This brings us to the second principle of plenitude, which is to diversify from the BAU [= business as usual] market and 'self-provision,' or make, grow, or do things for oneself (…) The third principle of plenitude is 'true materialism,' an environmentally aware approach to consumption (…) The final principle is the need to restore investments in one another and our communities. While social bonds are not typically thought of in economic

terms, these connections, which scholars call social capital, are a form of wealth that is every bit as important as money or material goods. Especially in times of distress, people survive and thrive by doing for one another. Interpersonal flows of money, goods, and labor are a parallel system of exchange and savings. One casualty of an intense market orientation is that community has gotten thinner and human ties weaker."

Schor, Juliet B. (2011): *True wealth. How and why millions of Americans are creating a time-rich, ecologically light, small-scale, high-satisfaction economy*, **Penguin Books, New York.**

87. The Seneca curve (normality vs surprises) and the Seneca strategy

"Collapse is a rapid, uncontrolled, unexpected, and ruinous decline of something that had been going well before (...) Think of the case of Roseanne Barr who, in 2018, saw her career of TV anchor ruined in a day because of a single racist tweet she wrote."

"The average lifetime of a commercial company, today, is of the order of 15 years, but small companies tend to come and go much more quickly: it is the "fail fast, fail often" strategy (...) in most cases when a company goes down it goes fast, even for companies that were seen as the very image of solidity. Think of Lehman Brothers, the large financial company that went down in a few days at the time of the great financial crisis of 2008."

"Collapses are bad enough in themselves but they have a further quirk: they tend to arrive unexpected (...) There is no "science of collapse "taught in universities or in business schools, and most of what we do is based on the idea that things will keep going on more or less as they have been doing in the past. The economy is supposed to be growing forever simply because it has been growing up to now. The same is true for the human population, the production of crude oil, or life expectancy at birth: they have been growing in the past and they are expected to keep growing in the future."

"The results of decades of work tell us that rapid changes are part of the way the universe works, a manifestation of the principle that rules everything, from living cells to galaxies: entropy, the basis of the second principle of thermodynamics. The science of complexity is possibly the most fascinating field of modern science and surely one that has significant consequences for our everyday life."

"... the basis of the Seneca strategy can be described in four main points,

1. *Attention*. Remember that collapses occur and they do not just strike other people: they may strike you. Prepare in advance for a possible collapse!

2. *Avoidance*. You can avoid collapse if you start early enough by acting on the elements that put the system under stress. Detect collapses before they come!

3. *Mitigation*. If it is too late to avoid collapse, you can still reduce its damaging effects if you take appropriate precautions. Don't try to avoid collapse at all costs, but you can always soften it!

4. *Exploitation*. In some cases, you can use collapse to get rid of obsolete structures or to damage your competitors. And, therefore, welcome collapse!"

Bardi, Ugo (2020): *Before the collapse. Guide to the other side of growth*, **Springer, Cham, Switzerland.**

88. The Seneca rebound

"... the fact that a society, a state, or an organization can restart growing after collapse at a faster speed than before the collapse. In this case, Europe may have obtained a decisive advantage in a specific historical period because of a combination of geographical and historical factors that caused its population to 'rebound' at the right moment. It happened when the technologies needed to expand all over the world had been developed and could be used for that purpose (...) The reasons for the rebound are reasonably clear: depopulation frees resources that can be exploited for a new phase of rapid growth. Before the fossil fuel age, societies had two main natural resources to exploit: fertile soil and forests. Both tend to be overexploited: forests are cut faster than trees can regrow and the fertile soil is eroded and washed to the sea faster than it can reform. That
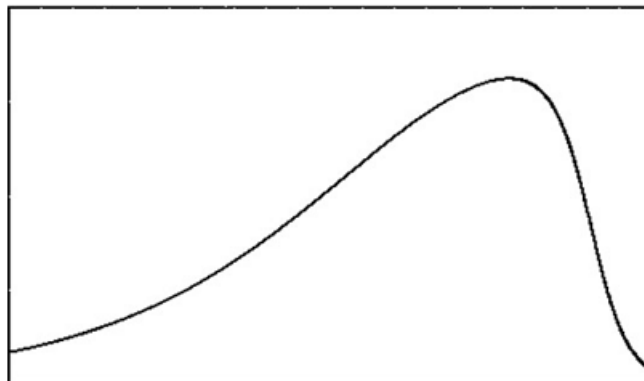
generates a decline of agriculture and the result is not just an end to population growth, it is a ruinous collapse resulting from famines and epidemics (…) But the disappearance of a large fraction of the population frees cultivated land for forests to regrow and that regenerates the soil. Then, when the population starts regrowing, people find in the new forests a near-pristine source of wood and, once cut, of fertile soil (…) The cycle restarts and it may go faster than the earlier one because society still remembers the social structures and the technologies of the previous cycle."

Bardi, Ugo (2020): *Before the collapse. Guide to the other side of growth*, **Springer, Cham, Switzerland.**

89. Ugo Bardi's guide to collapse

"1. Collapse is Not a Bug, it is a Feature (the Seneca Effect). Some 2000 years ago, the Roman philosopher Lucius Annaeus Seneca noted that growth is slow but ruin is rapid (…) Collapses occur all the time, everywhere and, over your lifetime, you are likely to experience at least a few relatively large collapses (…)

2. Collapse is Rapid (the Seneca Cliff). As Seneca noted, it takes only a short time for a large and apparently solid structure to unravel at the seams and crumble down in a heap. Think of the collapse of a house of cards (…) Collapses are fast (…)

3. Collapse is Often Unexpected (the Seneca Peak). Rarely does collapse give you an advance warning and some collapses are totally unpredictable, earthquakes, for instance. In other cases, the continuing growth before the crash may lull you to a false sensation of security, as it happened more than once to thefishing industry when thefish stocks collapsed just after that an all-time production high (the"Seneca Peak") (…)

4. Collapse is Bad for You (the Seneca Bottleneck). Collapses are a serious matter: they destroy things, kill people, generate sickness, make you sad, unhappy and depressed and, sometimes, they are irreversible. Yet, sometimes they are necessary to redress a situation that was impossible to control and they have to be accepted as a fact of life.

5. There is Life After Collapse (the Seneca Rebound). Collapse is nothing but a "tipping point" from one condition to another. You can't go back but you can move onward and what looks like a disaster may be nothing but a passage to a new condition which may be better than the old one. This can be called the"Seneca Rebound,"a characteristic of the evolution of complex systems. So, if you lose your job that may give you the opportunity to seek a better one (…)

6. Resisting Collapse is Not a Good Idea (the Seneca Strategy). Collapse is the way the universe uses to get rid of the old to make space for the new. Resisting collapse means to strive to keep something old alive—you may succeed for a while, but often at the price of creating an even worse collapse. Often, you stick to your job, to your marriage, to your habits, as if your life were depending on not losing them, but you also know that, eventually, nothing can last forever. The Seneca Strategy consists in letting nature follow its course and let something go and disappear as it should. If you understand that, the bad effects of collapses can be reduced and, in some cases, you can even profit from them."

Bardi, Ugo (2020): *Before the collapse. Guide to the other side of growth*, **Springer, Cham, Switzerland.**

90. Anti-natalism

"Anti-natalism (…) implies that it would be better if there were no more humans. The further implication of this is that it would be better if humans became extinct, at least if extinction were brought about by not creating new members of the species (…) The world will someday be devoid of humans. This outcome is certain. The uncertainty concerns when this will happen. We do not know humanity's expiry date, but the earlier it is, the more suffering will be avoided."

"I shall argue that procreation is morally wrong. This is distinct from and does not imply the claim that we may prevent humanity from procreating. The absence of a moral right to procreate does not imply that there should be no legal right to procreate (…) The sad truth is that the human species is not voluntarily going to cease reproducing, and any attempt by a minority to prevent the rest from procreating is unlikely to work. That does not mean that individual humans will not desist from procreation. Some of them will desist as a result of considering arguments for anti-natalism. Every decision not to procreate is a decision to spare a potential person from serious harm and is thus to be welcomed."

"The conclusion that <u>coming into existence is always a harm</u>—astounding to many people—follows from an axiological asymmetry between harms and benefits

Benatar, David; David Wasserman (2015): *Debating procreation. Is it wrong to reproduce?*, Oxford University Press, New York.

91. Derek Parfit's (1984) repugnant conclusion on population ethics

The repugnant conclusion: "For any possible population of at least ten billion people, all with a very high quality of life, there must be some much <u>larger imaginable population whose existence</u>, if other things are equal, <u>would be better even though its members have lives that are barely worth living</u>." Parfit (1984, p. 388)

The conclusion is sustained by the following argument. The height of the bars on the chart represent the quality of life and their width the amount of people. Case A represents a society with a high standard of living. Case A+ comes from A by adding the same amount of people as in case A but with a slightly smaller standard of living. It appears that it is more desirable to have case A+ than A. Finally, case B arises from A+ by letting all the population in A+ to have the same standard of living, slightly above the average standard from A+. It also appears that B is more desirable than A+. Granted this, the repugnant conclusion follows by replicating the previous line of reasoning starting with B rather than A.
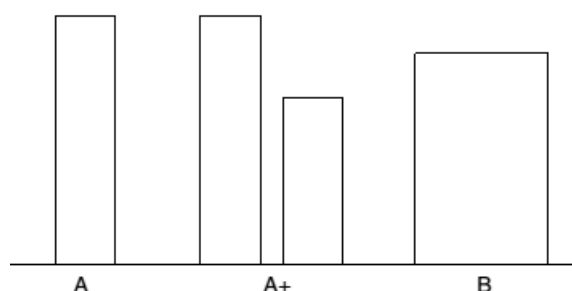
Parfit, Derek (1984): *Reasons and persons*, Clarendon Press, Oxford, UK.

92. The digital revolution, the future of work and the labour glut

"<u>The digital revolution is now teaching journalists and other workers of the rich world what a tectonic economic transformation feels like</u>. It is putting us in the shoes of our great-great-grandparents: those who first experienced the transmission of a human voice across an electrical wire, who watched as the time to travel from one city to a distant other shrank from weeks to hours, and who found themselves displaced from jobs as smiths or farmhands by fantastic new technologies. We have all found our working lives altered by it (…) Services such as Uber and Airbnb, virtually unknown at the beginning of this decade, are fundamentally transforming industries that employ millions of people."

"Our concerns are not simply about the <u>uncertainty of employment</u> in the years to come (…) Over the last couple of decades, <u>wages, adjusted for inflation, have scarcely grown</u> throughout a broad range of rich countries (…) <u>The share of income flowing to workers, as opposed to business and property owners, has fallen</u>. And, <u>among workers, there has been a sharp rise in inequality</u>, with the share of income going to those earning the highest incomes increasing in an astounding fashion."

"Wages have been rising in the fast-growing emerging economies, by contrast. But even there these other two trends – concentration of income in the hands of capital owners, and in the paycheques of the richest workers – are a growing source of concern."

"Then there is the sobering data on employment. In America, the share of adult men of prime working age who are working or actively looking for work has fallen steadily, and in some cases dramatically, over the last generation. <u>Among all men, the rate of participation in the workforce dropped from about 76 per cent in 1990 to 69 per cent in 2015</u>. That may not sound especially worrying, but it corresponds to a difference of about nine million men (…) This trend is not limited to America, and neither can it be explained away as the product of ageing and retirement. <u>In Europe, one in five adults under the age of twenty-five is unemployed</u>."

"For an awful lot of people, work has become a less certain and often less remunerative contributor to material security. It is a development that makes political forces of populist outsiders (…) Work is not just the means by which we obtain the resources needed to put food on the table. It is also a source of personal identity. It helps give structure to our days and our lives. It offers the possibility of personal fulfilment."

"<u>The digital revolution alters work in three ways. The first is through automation</u>. New technologies are replacing certain workers (…) At the same time, <u>the digital revolution has supercharged a second force</u>: <u>globalization</u>. It would have been nearly impossible for rich Western firms to manage the sprawling global

supply chains that wrapped around the world over the last twenty years without powerful information technology (…) Global employment grew by over one billion jobs over the last generation, with most of the growth occurring in emerging economies. Workers there are, on the whole, less skilled than those in the rich world, and their incorporation into the global economy has been felt more keenly by workers in middle-skill manufacturing or back-office jobs than by white-collar professionals. That need not last."

"Thirdly, technology provides a massive boost to the productivity of some highly skilled workers, allowing them to do work which it might previously have taken many more people to accomplish. Technology enables small teams of money managers to run vast funds; it is increasingly allowing highly skilled instructors to build courses that can be taken and re-taken by millions of students, potentially replacing hundreds or even thousands of lecturers. New technology is allowing fewer doctors and nurses to observe and treat many more patients, fewer lawyers to pour through vastly more trial-related evidence, and fewer researchers to sift through massive amounts of data and test more hypotheses more quickly.

These three trends – automation, globalization and the rising productivity of a highly skilled few – are combining to generate an abundance of labour (…) In its struggle to digest this unprecedentedly enormous ocean of would-be workers, the global economy is misfiring in worrying ways. And the institution of work – apart from family, our most important piece of social infrastructure – can no longer be counted on to fulfil its many crucial roles."

Avent, Ryan (2016): *The wealth of humans. Work, power, and status in the twenty-first century*, St. Martin's Press, New York.

93. The struggle for social wealth

"For modern economies with more labour than they know what to do with, technological abundance creates the possibility of such progress. Like a massive gold mine or oil strike, powerful new digital technologies are a potential source of enormous wealth."

"Wealth has always been social. The long process of cultural development that eventually yielded the industrial revolution was in many ways the process by which humanity learned ever better ways of structuring society in order to foster the emergence of complex economic activity. Wealth creation in rich economies is nurtured by a complex system of legal institutions (such as property rights and the courts that uphold them), economic networks (such as fast and efficient transportation and access to scientific communities and capital markets) and culture (such as conceptions of the 'good life', respect for the law, and the status accorded to those who work hard and become rich). No individual can take credit for this system; it was built and is maintained by society."

"The digital revolution is increasing the importance of social wealth in two key ways. Firstly, new technologies increase our potential productivity and output as a society (…) And secondly, the small-scale economic processes that generate new knowledge and turn it into profitable, welfare-enhancing activity are also becoming more social, and less individual, in nature. The value-generating pieces of successful companies were once satisfyingly tangible: consisting of buildings and machines, patents and people. That is ever less the case. Company cultures, which shape worker incentives and determine how a business reacts to changes in the marketplace, have become much more important in the digital age. Today, more than 80 per cent of the value of Standard & Poor's 500 firms is 'dark matter'."

"As social wealth becomes more important, fights about who belongs *within* particular societies – and can therefore share in that social wealth – will also intensify. Over the last generation, firms have grown ever leaner, aggressively outsourcing work not related to their 'core competencies' (…) Membership battles – fights over who belongs – are more pronounced in cities, where high housing costs prevent people from moving into and enjoying the benefits of the most productive parts of a country."

"National borders create the starkest divide between the rich and the rest. No form of exclusion is as consequential. In America, a typical household of immigrants from the Philippines earns about $75,000 per year, or more than ten times what they'd earn in their home country. There is no anti-poverty programme in the world as effective as access to American society – to its institutions and economy and opportunities."

"So these two kinds of conflict – between individuals and society, and between society's insiders and outsiders – create the fundamental tension presented by the digital revolution. To take full advantage of its promise,

countries must become better at sharing social wealth. Yet the better countries become at sharing social wealth among members, the greater the pressure to shrink the circle of social membership."

Avent, Ryan (2016): *The wealth of humans. Work, power, and status in the twenty-first century*, St. Martin's Press, New York.

94. The struggle for belonging

"The social battles of the industrial revolution era mostly focused on the proper role of the state. People organized and fought for a new social order (…) After a long and fitful social negotiation, most rich countries arrived at a social democratic model, in which the state to one degree or another helps to provide education, infrastructure, healthcare and social insurance to the old, poor and unemployed (…) The digital revolution will reopen these discussions, but it will also force a new argument into the light that will define the generation to come: who belongs? Societies will face the need to define the community of people entitled to share in the common, social wealth made possible by marvellous new technologies."

"The industrial revolution was an all-hands-on-deck effort; there were roles for even the least skilled of workers (…) The social contract built during this age was one that protected the safety of workers (…) But the promise of the digital revolution is an end to work. The logical endpoint is an economy in which clever software and dexterous machines and abundant energy mean that human work is unnecessary. We are generations away from realizing that promise (…) But the battle to create the institutions that will eventually support mass digital prosperity has begun. Creating mass digital prosperity is not about building institutions which ensure that all workers benefit from economic growth; it is about building institutions which provide for people who do not work because their work is not necessary to generate economic growth."

Avent, Ryan (2016): *The wealth of humans. Work, power, and status in the twenty-first century*, St. Martin's Press, New York.

95. The future of globalization

"Economic prosperity has been linked to globalization. The rapid global economic growth of the post-war period was accompanied by the fast expansion of international trade and investment (…) But trade expansion and the opening up of markets are stalling. The global trade system covering nearly all nations' exports and imports under the World Trade Organization (WTO) is fragmenting into a set of accompanying regional and bilateral free trade agreements."

"A couple of dramatic events in the past few years have highlighted a backlash against the uneven gains from globalization. Although there are numerous differences between Britain's decision to leave the European Union and the ascendancy of political outsider Donald Trump to the White House, the two events reveal a number of things about the electorate's discontent with the status quo, including globalization (…) Barack Obama attributes some of the discontent to globalization:

Globalization combined with technology combined with social media and constant information have disrupted people's lives in very concrete ways (…) When you see a Donald Trump and a Bernie Sanders – very unconventional candidates who had considerable success – then obviously there is something there that is being tapped into: a suspicion of globalization, a desire to rein in its excesses, a suspicion of elites and governing institutions that people feel may not be responsive to their immediate needs."

"The pursuit of massive regional FTAs [Free trade agreements] is a reaction to the World Trade Organization expansion stalling (…) These regional FTAs are not the best outcome relative to a multilateral agreement under the WTO, but perhaps they're better than not having any new trade deals at all (…) That's why Southeast Asia is also pursuing an ambitious free trade area."

"Economists attribute the stagnation of living standards to two main factors: globalization and 'skill-biased technical change'. The latter refers to technological progress benefiting skilled workers."

"*Helping the losers from globalization*

The question is how best to do so. This challenge isn't just for America but for any nation where the benefits of globalization have not been shared fairly."

"Brexit and Trumpism are among the most prominent political expressions of discontent with the status quo. Globalization's unequal impact, creating winners and losers, is part of that status quo. But there are other factors, such as robotics and automation, at play too."

Yueh, Linda Y. (2018): *What would the great economists do? How twelve brilliant minds would solve today's biggest problems*, Picador, New York.

96. This civilization is over

"… this civilisation is going down. It will not last. It cannot, because it shows almost no sign of taking the extreme climate crisis—let alone the broader ecological crisis—for what it is: a long global emergency, an existential threat. This industrial-growthist civilisation will not achieve the Paris climate accord goals; and that means that we will most likely see 3–4 degrees of global over-heat at a minimum, and *that* is not compatible with civilisation as we know it (…) By 'this civilisation' I mean the hegemonic civilisation of globalised capitalism—sometimes called 'Empire'—which today governs the vast majority of human life on Earth."

"As I see things, there are three broad possible futures that lie ahead:

(1) This civilisation could collapse utterly and terminally, as a result of climatic instability (leading for instance to catastrophic food shortages as a probable mechanism of collapse), or possibly sooner than that, through nuclear war, pandemic, or financial collapse leading to mass civil breakdown. Any of these are likely to be precipitated in part by ecological/climate instability, as Darfur and Syria were. Or

(2) This civilisation (we) will manage to seed a future successor-civilisation(s), as this one collapses. Or

(3) This civilisation will somehow manage to transform itself deliberately, radically and rapidly, in an unprecedented manner, in time to avert collapse.

The third option is by far the least likely, though the most desirable, simply because either of the other options will involve vast suffering and death on an unprecedented scale. In the case of (1), we are talking the extinction or near-extinction of humanity. In the case of (2) we are talking at minimum multiple megadeaths (…) Thus, one way or another, *this* civilisation is finished. It may well run in the air, suspended over the edge of a cliff, for a while longer. But it will then either crash to complete chaos and catastrophe (Option 1); or seed something radically different from itself from within its dying body (Option 2); or somehow get back to safety on the cliff-edge (Option 3)."

Read, Rupert; Samuel Alexander (2019): *This civilisation is finished. Conversations on the end of Empire—and what lies beyond*, Simplicity Institute, Melbourne.

97. Paradoxical big threats to the 21st century world economy

- Threat 1: the threat of scarcity. This threat is associated with a possible ecological catastrophe and how this will affect the future of life on Earth.

- Threat 2: the threat of abundance. This threat is created by automation and is defined in terms of how automation will affect the future of work.

98. Rodrik's (2018, ch. 10) new rules for the global economy

- 'Markets must be deeply embedded in systems of governance.' Markets are not self-regulated institutions: for proper functioning they need the support of other institutions (courts, legal systems, regulators, social insurance, redistributive taxation, infrastructure, public investment in R&D…). This applies to global markets as well as national markets.

- 'Democratic governance and political communities are organized largely within nation-states, and are likely to remain so for the foreseeable future.' 'The quest for extensive global governance is a fool's errand, both because national governments are unlikely to cede significant control to transnational institutions and because harmonizing rules would not benefit societies with diverse needs and preferences.' 'When international cooperation does "succeed," it typically codifies the preferences of the more powerful states or, even more frequently, of international corporations and banks in those states.'

- 'There is no "one way" to prosperity.' Since 'the core institutional infrastructure of the global economy must be built at the national level, it frees up countries to develop the institutions that suit them best.' Regulations

that cover labor markets, corporate governance, antitrust, social protection, and even banking and finance differ considerably in prosperous societies: US, Europe, Japan… 'The most successful societies of the future will leave room for experimentation and allow for further evolution of institutions over time. A global economy that recognizes the need for and value of institutional diversity would foster rather than stifle such experimentation and evolution.' The prosperity game never ends.

- 'Countries have the right to protect their own regulations and institutions.' 'The recognition of institutional diversity would be meaningless if nations were unable to "protect" domestic institutions.'
- 'Countries do not have the right to impose their institutions on others.' 'The recognition of institutional diversity would be meaningless if nations were unable to "protect" domestic institutions.' 'Nations have a right to difference, not to impose convergence.'
- 'The purpose of international economic arrangements must be to lay down the traffic rules for managing the interface among national institutions.'
- 'Nondemocratic countries cannot count on the same rights and privileges in the international economic order as democracies.' 'What gives the previous principles their appeal and legitimacy is that they highlight democratic deliberation—where it really occurs, within nation-states. When nation-states are not democratic, this scaffolding collapse.' 'These principles support a different model of global governance, one that would be democracy enhancing rather than globalization enhancing.'

Rodrik, Dani (2018): *Straight talk on trade: Ideas for a sane world economy*, Princeton University Press, Princeton, NJ.

99. The three phases of networks (Jeff Stibel, 2013)

"There are three phases to any successful network: first, the network grows and grows and grows exponentially; second, the network hits a breakpoint, where it overshoots itself and overgrows to a point where it must decline, either slightly or substantially; finally, the network hits equilibrium and grows only in the cerebral sense, in quality rather than in quantity."

"Internets, ant colonies, and brains all start small, grow steadily, and then explode into hypergrowth. In nature, all species multiply as much as resources allow. This expansion may start linearly, but it quickly becomes exponential. Populations of plants, animals, yeast, and brain cells grow unencumbered until they reach the maximum quantity that the environment can sustain, the carrying capacity of an ecosystem."

"Ant colonies, various other animal species, brains, and internets are all networks, and as such they follow the same pattern of growth, breakpoint, and equilibrium. They start out small and grow explosively to the point where they overshoot and collapse. A successful network has only a small collapse, out of which a stronger network emerges wherein it reaches equilibrium, oscillating around an ideal size (…) At the phase of equilibrium, networks continue to grow, but in terms of quality instead of quantity. When the size of a network slows, other things speed up—like communication, intelligence, and consciousness. At this point, the real magic begins. This last network phase is poorly understood, even by biologists. We are just beginning to learn about equilibriums in biological systems, let alone in technology."

Stibel, Jeff (2013): *Breakpoint. Why the web will implode, search will be obsolete, and everything else you need to know about technology is in your brain,*
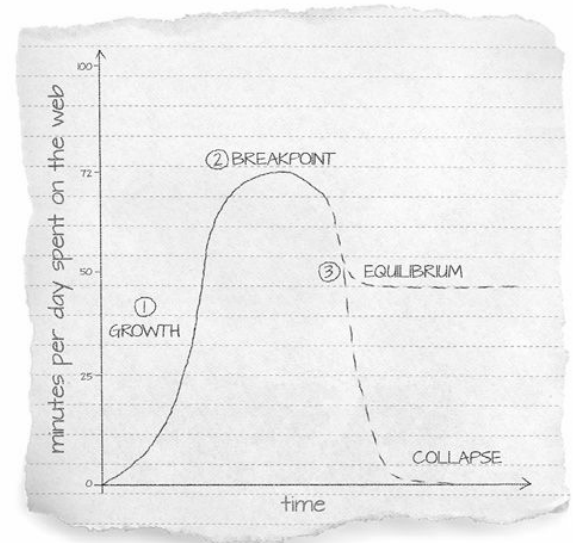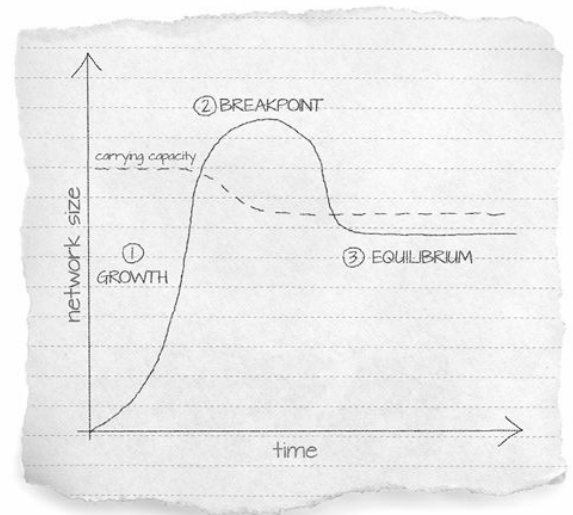
100. The six most important drivers of global change (Al Gore, 2013)

"In order to reclaim control of our destiny and shape the future, we must think freshly and clearly about the crucial choices that confront us as a result of:

- The <u>emergence of a deeply interconnected global economy</u> that increasingly operates as a fully integrated holistic entity with a completely new and different relationship to capital flows, labor, consumer markets, and national governments than in the past;

- The <u>emergence of a planet-wide electronic communications grid</u> connecting the thoughts and feelings of billions of people and linking them to rapidly expanding volumes of data, to a fast growing web of sensors being embedded ubiquitously throughout the world, and to increasingly intelligent devices, robots, and thinking machines, the smartest of which already exceed the capabilities of humans in performing a growing list of discrete mental tasks (…);

- The emergence of a completely <u>new balance of political, economic, and military power in the world</u> that is radically different from the equilibrium that characterized the second half of the twentieth century, during which the United States of America provided global leadership and stability—shifting influence and initiative from West to East, from wealthy countries to rapidly emerging centers of power throughout the world, from nation-states to private actors, and from political systems to markets;

- The emergence of <u>rapid unsustainable growth</u>—in population; cities; resource consumption; depletion of topsoil, freshwater supplies, and living species; pollution flows; and economic output that is measured and guided by an absurd and distorted set of universally accepted metrics that blinds us to the destructive consequences of the self-deceiving choices we are routinely making;

- The emergence of a revolutionary <u>new set of powerful biological, biochemical, genetic, and materials science technologies</u> that are enabling us to reconstitute the molecular design of all solid matter, reweave the fabric of life itself, alter the physical form, traits, characteristics, and properties of plants, animals, and people, seize active control over evolution, cross the ancient lines dividing species, and invent entirely new ones never imagined in nature; and

- The emergence of a radically <u>new relationship between the aggregate power of human civilization and the Earth's ecological systems</u>, including especially the most vulnerable—the atmosphere and climate balance upon which the continued flourishing of humankind depends—and the beginning of a massive global transformation of our energy, industrial, agricultural, and construction technologies in order to reestablish a healthy and balanced relationship between human civilization and the future."

Gore, Al (2013): *The future. Six drivers of global change*, Random House, New York.

101. Ulrich Beck's future scenarios of work

	Hope	Collapse
	1	2
Science-based information technologies	From the work society to the knowledge society	Capitalism without work
	3	4
Globalization	The world market – the neoliberal jobs miracle	The fixed location of work – a globalization risk
	5	6
Ecological crises	Sustainable work – the ecological economic miracle	Global apartheid
	7	8
Individualization	The self-employed – the freedom of insecurity	Individualization of work – disintegration of society

"If the framework of a full-employment society is replaced with that of a multi-activity society, the collapse scenarios become the occasion for a redefinition of work and of the necessary reforms. Three more future scenarios can then be developed (…):

9 Farewell to the work society: instead, the multi-activity society.

10 Condemned to leisure: the free-time society.

11 Post-national and political civil society: a European social model"

Beck, Ulrich (2000): *The brave new world of work*, Polity Press, Cambridge, UK.

102. Stephen Hawking (2018) on the survival of humanity

"I regard it as <u>almost inevitable that either a nuclear confrontation or environmental catastrophe will cripple the Earth at some point in the next 1,000 years</u> which, as geological time goes, is the mere blink of an eye. By then I hope and believe that our ingenious race will have found a way to slip the surly bonds of Earth and will therefore survive the disaster.

(…) I think we are acting with reckless indifference to our future on planet Earth (…) To leave Earth demands a concerted global approach—everyone should join in (…) The technology is almost within our grasp. It is time to explore other solar systems. Spreading out may be the only thing that saves us from ourselves. <u>I am convinced that humans need to leave Earth. If we stay, we risk being annihilated</u>." (ch. 7)

"When we invented fire, we messed up repeatedly, then invented the fire extinguisher. With more powerful technologies such as nuclear weapons, synthetic biology and strong artificial intelligence, we should instead plan ahead and aim to get things right the first time, because it may be the only chance we will get. <u>Our future is a race between the growing power of our technology and the wisdom with which we use it</u>. Let's make sure that wisdom wins." (ch. 9)

"The second development which will impact on the future of humanity is the rise of artificial intelligence (…) But <u>the advent of super-intelligent AI would be either the best or the worst thing ever to happen to humanity</u>. We cannot know if we will be infinitely helped by AI, or ignored by it and sidelined, or conceivably destroyed by it. As an optimist, I believe that we can create AI for the good of the world, that it can work in harmony with us. We simply need to be aware of the dangers, identify them, employ the best possible practice and management and prepare for its consequences well in advance." (ch. 10)

"I am advocating that <u>all young people should be familiar with and confident around scientific subjects</u>, whatever they choose to do. They need to be scientifically literate, and inspired to engage with developments in science and technology in order to learn more. <u>A world where only a tiny super-elite are capable of understanding advanced science and technology and its applications would be, to my mind, a dangerous and limited one</u>. I seriously doubt whether long-range beneficial projects such as cleaning up the oceans or curing diseases in the developing world would be given priority. Worse, we could find that technology is used against us and that we might have no power to stop it." (ch. 10)

Hawking, Stephen (2018): *Brief answers to the big questions*, **Bantam Books, New York.**

103. Is globalization prone to recurrently generate backlashes and collapses? (Harold James, 2009)

- "The phenomenon of globalization has today become a ubiquitous way of understanding the world, but people who used the concept as a tool of analysis <u>failed to understand its volatility and instability</u>."

- "Globalization not only involves international movements of goods, people, and capital, but is also associated with transfers of ideas and shifts of technology, which affect and restructure our preferences. In consequence, <u>globalization generates continuous uncertainty about values</u>."

- "<u>Globalization is vulnerable to periodic financial catastrophes</u>, which involve very sudden alterations of concepts of value. That is, our values themselves are reevaluated during such crises. During a crisis, unexpected and apparently random linkages become apparent. People begin to see in what complex ways the world has become interconnected."

- "The perception of instability calls into question the sophisticated techniques devised for monetary management (…) In the uncertainty of globalization setbacks, the experience of the past becomes a powerful template for understanding the contemporary predicament (…) Today, we look back to the Great Depression of the late 1920s and 1930s as a model for <u>what can go wrong when globalization breaks apart</u>."

- "<u>Politics and economics are inextricably and inherently linked</u>, and politics provides an alternative to market mechanisms for the management of globalization crises."

- "<u>When breakdowns occur, reconstruction is extremely difficult</u> and involves a <u>long and arduous effort for the rebuilding of social trust</u>. Value renewal takes time."

104. Globalization cycles: can the future of globalization be seen in its past? (Harold James, 2009)

- "Globalization is not only a process that occurs somewhere out there—in an objective and measurable world of trade and money. It also <u>happens in our minds</u>, and that part of globalization is often more difficult to manage. To understand both the process and our reactions to it, <u>we need a historical grounding</u>."

- "All of these previous globalization episodes ended, almost always with wars that were accompanied by highly disruptive and contagious financial crises. Globalization is often thought to produce a universalization of peace, since only in a peaceful world can trade and an interchange of ideas really flourish. But in practice, <u>a globalization of goods, capital, and people often leads to a globalization of violence</u>."

- "It is thus possible to speak of <u>globalization cycles</u>, with long periods of increased interchange of goods, and flows of people and capital. But then something happens. <u>People feel there has been too much interaction</u>; they draw back from the global setting and look instead for protected areas in which they can be safe from global threats and global devastation. The shock or trauma is often connected with financial collapse, especially the profound uncertainty that financial disaster brings."

James, Harold (2009): *The creation and destruction of value: The globalization cycle*, **Harvard University Press, Cambridge, MA.**

## 105. The long descent (John Michael Greer, 2008)

"This is the process I've named the Long Descent — the <u>declining arc of industrial civilization's trajectory through time</u>. Like the vanished civilizations of the past, ours will likely face a gradual decline, punctuated by sudden crises and periods of partial recovery. <u>The fall of a civilization is like tumbling down a slope, not like falling off a cliff</u>. It's not a single massive catastrophe, or even a series of lesser disasters, but a gradual slide down statistical curves that will ease modern industrial civilization into history's dumpster."

"At this point it's almost certainly too late to manage a transition to sustainability on a global or national scale, even if the political will to attempt it existed — which it clearly does not. It's not too late, though, for individuals, groups, and communities to make that transition themselves, and to do what they can to preserve essential cultural and practical knowledge for the future. <u>The chance that today's political and business interests will do anything useful in our present situation is small enough that it's probably not worth considering</u>. Our civilization is in the early stages of the same curve of decline and fall that so many others have followed before it, and the crises of the present — peak oil, global warming and the like — are the current versions of the historical patterns of ecological dysfunction. To judge by prior examples, we can't count on the future to bring us a better and brighter world — or even a continuation of the status quo. Instead, <u>what most likely lies in wait for us is a long, uneven decline into a new Dark Age from which, centuries from now, the civilizations of the future will gradually emerge</u>."

106. Catabolic collapse (John Michael Greer, 2008)

"The word "catabolism" comes from the Greek, by way of the life sciences. In today's biology it refers to processes by which a living thing feeds on itself. One of the most striking features of the dead civilizations of the past is that they go through precisely this process as they move through the stages of decline and fall."

"… <u>civilizations are complex, expensive, fragile things. To keep one going, you have to maintain and replace a whole series of capital stocks</u>: physical (such as buildings); human (such as trained workers); informational (such as agricultural knowledge); social (such as market systems); and more. If you can do this within the 'monthly budget' of resources provided by the natural world and the efforts of your labor force, your civilization can last a very long time. <u>Over time, though, civilizations tend to build their capital stocks up to levels that can't be maintained</u>; each king (or industrial magnate) wants to build a bigger palace (or skyscraper) than the one before him, and so on. That puts a civilization into the same bind as the homeowner with the oversized house."
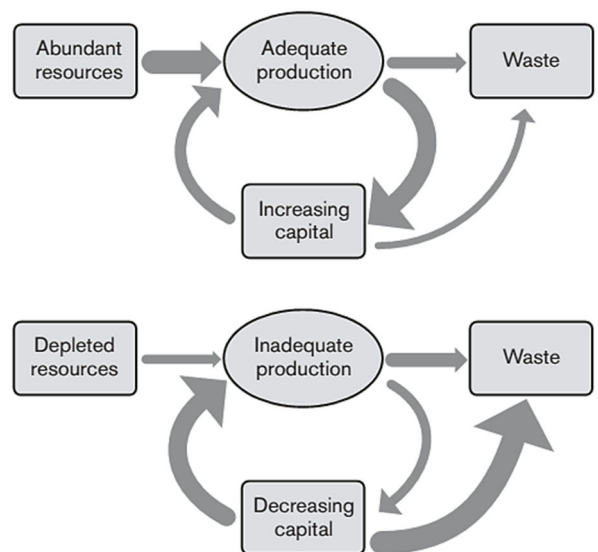
"In a <u>growing or stable society</u>, the resource base is abundant enough that production can stay ahead of the maintenance costs of society's capital – that is, the physical structures, trained people, information, and organizational systems that constitute the society. Capital used up in production or turned into waste can easily be replaced."

"In a <u>society in catabolic collapse</u>, resources have become so depleted that not enough is available for production to meet the maintenance costs of capital. As production falters, more and more of society's capital becomes waste, or is turned into raw material for production via salvage. If resource depletion can be stopped, the loss of capital brings maintenance costs back down below what production can meet, and the catabolic process ends; if resource depletion continues, the catabolic process continues until all capital becomes waste."

107. Four factors/horsemen of catabolic collapse

- <u>Declining energy availability</u>. "As oil depletion accelerates, and other resources such as uranium and Eurasian natural gas hit their own production peaks, the shortfall widens, and many lifestyles and business models that depend on cheap energy become nonviable."

- <u>Economic contraction</u>. "Energy prices are already beginning to skyrocket as nations, regions, and individuals engage in bidding wars driven to extremes by rampant speculation. The global economy, which made economic sense only in the context of the politically driven low oil prices of the 1990s, will proceed to come apart at the seams, driving many import- and export-based industries onto the ropes, and setting off a wave of bankruptcies and business failures. Shortages of many consumer products will follow, including even such essentials as food and clothing. Soaring energy prices will have the same effect more directly in many areas of the domestic economy. Unemployment will likely climb to Great Depression levels, and poverty will become widespread even in what are now wealthy nations."

- <u>Collapsing public health</u>. "As poverty rates spiral upward, shortages and energy costs impact the food supply chain; energy-intensive health care becomes unaffordable for all but the obscenely rich; global warming and ecosystem disruption drive the spread of tropical and emerging diseases; malnutrition and disease become major burdens. People begin to die of what were once minor, treatable conditions. Chronic illnesses such as diabetes become death sentences as the cost of health care climbs out of reach for most people. Death rates soar as rates of live birth slump, launching the first wave of population contraction."

- <u>Political turmoil</u>. "What political scientists call 'liberal democracy' is really a system in which competing factions of the political class buy the loyalty of sectors of the electorate by handing out economic largesse. <u>That system depends on abundant fossil fuels and the industrial economy they make possible</u>. Many of today's political institutions will not survive the end of cheap energy, and the changeover to new political arrangements will likely involve violence. International affairs face similar realignments as nations whose power and influence depend on access to abundant, cheap energy fall from their present positions of strength. Today's supposedly 'backward' nations may well find that their less energy-dependent economies turn into a source of strength rather than weakness in world affairs. If history is any guide, these power shifts will work themselves out on the battlefield."

Greer, John Michael (2008): *The long descent. A user's guide to the end of the industrial age*, New Society Publishers, Gabriola Island, Canada.

108. Is history repeating itself? (Parag Khanna, 2017)

"We live in what I call the New Gilded Age. <u>Today, we are recreating the terrible income inequality and economic divides that dominated the late nineteenth century</u> and created the violent responses that included the Haymarket bombing and the assassination of President William McKinley. <u>Once again, we have a society where our politicians engage in open corruption, where unregulated corporate capitalism leads to boom-and-bust economies that devastate working people, where the Supreme Court limits legislation and regulations meant to create a more equal society, and where unions are barely tolerated</u>. Life has become more unpleasant and difficult for most Americans in our lifetimes. This has already had a profound impact on American politics."

"What the 2016 election and its aftermath should reiterate to all of us is the <u>deep connection between who controls the government and the success of the labor movement</u>. As the historian Jefferson Cowie has written, there has only been one major period in American history when the power of workers coincided with the

power of government to help unions—from the 1930s to the 1970s or early 1980s. Other than this 'Great Exception,' we have struggled against a corporate dominated government."

"American history is a story of freedom and oppression, often at the same time. True freedom cannot come without economic emancipation. We came very far to gain that freedom through the struggles of workers in the two centuries before today. In the past four decades, we have given back much of our freedom. Only through our combined struggle to demand the fruits of our labor can we regain our lost freedoms and expand those freedoms into a better life for all Americans."

Loomis, Erik (2018): *A history of America in ten strikes*, **The New Press, New York.**

109. Two views on the history of humankind

"The theory of the noble savage revolves around the idea that primitive life was free of any aggression and cruelty, thus there was no reason for conflict. The supposedly non-violent nature of human beings and the peaceful natural world were said to complement each other 'ecologically.' (…) Two similar theories favor the notion that the first humans were peaceful. The religious viewpoint sees human destiny as a gradual deterioration: at the outset, humans inhabited a bucolic setting beside God, yet made the mistake of attempting to defy their Creator. Humans were thus expelled from Paradise and condemned to a life of toil and strife. The scientific view is that Paleolithic life was relatively easy since nature presented so many possibilities and, at this time, there were fewer populations to share them. Humans were, therefore, able to profit from the situation by balancing the many resources at their disposal (…) The arrival of the Neolithic tolled the knell of this golden age as humans became slaves to work: there was a regression of sorts as servitude began in earnest –a gradual descent into Hell.

The other view of the history of humankind is linked to the notion of progress. This viewpoint claims that savage man in his wild and shabby state, barely able to survive, gradually began to leave behind his inferior status through sheer persistence; by working hard and applying himself, man finally took control of nature. Thus, his destiny is one of continual improvement. Man is seen to be in control of his own plight and depends upon himself alone."

"What if humans never were the innocent lambs nor the violent brutes that certain caricatures have made them out to be? What if humans always were the same complex and emotional beings they are today, with a tendency attimes to react harshly or violently?"

Guilaine, Jean; Jean Zammit (2005): *The origins of war. Violence in prehistory*, **Cambridge University Press, Cambridge, UK.**

110. Three generalizations of historical dynamics (Peter Turchin and Sergey A. Nefedov, 2009)

- **Overpopulation.** "One generalization can be called the neo-Malthusian principle: during periods of sustained population growth, if the output of the agrarian economy does not keep pace with the population, a number of relative price trends will be observed. One trend is rising prices for basic foodstuffs, energy, and land. Another one is falling real wages for labor. These trends are simply a consequence of the law of supply and demand. Thus, as the supply of labor increases, and if the demand for it is limited (which it is in agrarian economies), the price of labor inevitably decreases."

- **Elite overproduction.** "Another generalization, dealing with the elite dynamics, is also a consequence of the law of supply and demand. The principal kind of wealth in agrarian societies is land. The elite landowners profit from overpopulation in two ways. First, they are consumers of labor: they need peasants to work their land, servants to carry out domestic chores, and craftsmen and artisans for producing items for status consumption. Second, their property, land, produces food and other commodities, such as fuel and raw materials, the demand for which increases together with the growing population. Because the items they consume become cheaper while the items they produce increase in value, the elites greatly profit from overpopulation (…) In the end, elite numbers and appetites outgrow their "carrying capacity" (based on the labor of commoners). Just as overpopulation results in large segments of commoner population becoming immiserated, elite overproduction similarly results in large segments of elites becoming impoverished (not in absolute terms, as with common populace, but relatively to the standards of consumption needed to maintain the elite status). This generalization thus may be called the principle of elite overproduction."

- **Sociopolitical instability.** "A third possible generalization deals with the <u>causes of sociopolitical instability</u>. The demographic-structural theory proposes three principal causes of the onset of a disintegrative trend (that is, a lengthy period of heightened instability): overpopulation, elite overproduction, and a fiscal crisis of the state. (…) Overpopulation and fiscal crisis are important contributing factors, but <u>the dominant role in internal warfare appears to be played by elite overproduction leading to intraelite competition</u>, fragmentation, and conflict, and the rise of counterelites who mobilize popular masses in their struggle against the existing order."

Turchin, Peter; Sergey A. Nefedov (2009): *Secular cycles*, Princeton University Press, Princeton, New Jersey.

111. Why complex societies collapse

"Scholars typically attribute collapse to one of four causes: <u>political or military forces, economic decline, social upheaval, or environmental/natural disasters</u> (…) Ancient China illustrates circumstances in which one political system collapsed, only to be replaced by another, usually dynastic, system, which resulted in a re-emergent state; the defeat of the Late Shang Dynasty by the Western Zhou is one example."

"The collapse of the Khmer Empire is perhaps one of the best illustrations of economic and social factors contributing to the dissolution of a state (…)Roman history featured several phases of social unrest and political change without complete decline. In Republican Rome, growing inequality between patricians and plebeians in the 5th century bce, combined with instances of public abuse of poor men and women (especially women) by elites, led to internal dissent that verged on rebellion. Government reforms were required to set the state back on solid footing."

"Though the extreme case of Easter Island's purportedly human-caused overexploitation of resources may be dismissed as a misreading of the evidence, numerous examples (…) indicate how deeply human groups are embedded within local environments, and the profound effect environmental crises may have on culture groups at all levels of complexity. A strong case may be put forward for the role of environmental crisis in the decline of Classic Maya civilization (…) The collapse of Mycenaean, Hittite, and Levantine societies at the end of the Late Bronze Age was affected by the migration of groups coming from more inland areas of Europe under circumstances of apparent subsistence stress."

Ross, Jennifer C.; Sharon R. Steadman (2017): *Ancient complex societies*, Routledge, New York.

112. The present civilization will fall as all others did previously

"<u>Modern civilization believes that it commands the historical process with technological power</u>. Allied to capitalist markets that foster continual innovation, this power will allow it to overcome the challenges I identify and thereby escape the common fate of all previous civilizations. <u>No longer bound by the past, or so we think, our future is infinitely bright</u>. The late futurist Herman Kahn, for example, claimed that by the year 2200, 'humans would everywhere be rich, numerous, and in control of the forces of nature.'

<u>I argue to the contrary that industrial civilization will yield to the 'same passions' that have produced the 'same results' in all previous times. There is simply no escape from our all-too-human nature</u>. In the end, mastering the historical process would require human beings to master themselves, something they are very far from achieving. (This is why democracy, considered by some to be an asset in the struggle against the forces that challenge industrial civilization, is in fact a liability.) Commanding history would also require them to overcome all of the natural limits that have defeated previous civilizations. As will be shown, this is unlikely. Hence <u>our civilization, too, will decline and fall. In fact, the process of decline is already well advanced</u>.

"The essential reason is contained in Gibbon's terse verdict on the decline and fall of Rome: immoderate greatness (…) In essence, immoderate greatness exemplifies what the ancient Greeks would have called <u>hubris</u>: '<u>overbearing pride or presumption</u>.' Civilization is *Homo sapiens*'s bold attempt to rise above the natural state in which the species lived for almost all of its two hundred thousand years on Earth. Unfortunately, by its very nature, this effort to become greater encounters four implacable biophysical limits. It also sets in motion a seemingly inexorable moral and practical progression from original vigor and virtue to terminal lethargy and decadence."

Ophuls, William (2012): *Immoderate greatness. Why civilizations fail*, CreateSpace, North Charleston, SC.

113. Systems self-organized critically

The property of self-organized criticality means that individual behaviour tends to cause a system both to self-organize and <u>converge to critical/tipping points where small events may have big global effects</u>.

- Example: sand falling on a fixed point in a table. The sand accumulates forming a pile until a state of repose is reached (at a certain angle of the pile). After that state, further grains create avalanches (a potentially catastrophic global event) and part of the sand falls off of the table.

- Is there an arrow of social time? Do societies necessarily, with time, increase their complexity? <u>If societies are self-organized critically systems, what feature(s) define then the critical points</u>?

114. Some complexity principles

- <u>Emergence</u>: the whole is not just the sum of its parts. Even if the characteristics of the individual components of a system are perfectly known, its interaction may give rise to systemic properties that are difficult to predict from the individual properties.
- <u>Red Queen hypothesis</u>: one must run to stay in the same place (do the same is a recipe for failure). A system consisting of adaptive, evolving organisms forces the players to adapt and evolve fast and continuously just to remain in the game. This permanent race between the players tends to increase the overall complexity of the system.
- <u>No free lunch</u>. To increase the efficiency with which a system operates, its resilience (to shocks or changes) must be reduced. Conversely, survival in an uncertain environment demands efficiency sacrifices.
- <u>The Goldilocks principle</u> (food cannot be too hot not too hold). In an open, dynamic and competitive environment, systems can operate only within a limited range of conditions: the 'edge of chaos'. Policymakers, for instance, must select the right mix of market freedom and market regulation: too much regulation may harm growth; too much *laissez-faire*, may be destabilizing.
- <u>Undecidability</u>: deductive reasoning (logic alone, rational argumentation) is not always enough to handle problems.
- <u>The Butterfly effect</u> (ripple, domino, snow-ball effect). Complex systems tend to be very sensitive to apparently minor changes: small changes may have large effects.
- <u>Law of requisite variety</u>: the control system has to be at least as complex (sophisticated) as the system to be controlled (higher complexity is required to manage lower complexity). Hence, to regulate a system, the complexity of the controller has to be at least as great as the complexity of the system to be controlled. Complexity gaps do not tend to last and its involuntary adjustement is likely to be traumatic for the system.

115. The standing ovation problem

It is an example that involves thoughtful and interacting agents in time and space and thereby captures basic features of complex adaptive social systems: learning, heterogeneity, incentives, networks… A public event has taken place before an audience: a university lecture, a musical concert, a play in a theatre, a basketball game, a political meeting… Then the audience starts applauding. The question is: for how long is the ovation to be sustained? At any point during the ovation, will it continue or end? The complexity of the problem comes from the fact that members of the audience in general do not decide to stand and applaud independently of what the other members choose to do: a seated attendant being surrounding by enough standing people is more likely to join the ovation and also stand (for several possible reasons: do justice to a good performance, avoid feeling awkward, accept the majority's opinion, possibly despite your own, that the performance deserves recognition…).

116. Diffusion processes and S-shaped curves

The standing ovation problem can be analyzed as a diffusion problem, like the spread of new technologies or commodities. A typical result in diffusion models is that an S-shaped curve fits the number of agents joining others in taking a certain action. Initially, the group of people taking the action is small. The size of the group

goes larger. After the group reaches a certain size, the group begans to shrink until it eventually becomes empty. The life cycle of many products also conforms to an S-shaped curve. Is the spread of globalization also S-shaped?

Miller, John H.; Scott E. Page (2004): "The Standing Ovation Problem", Complexity.

117. El Farol bar problem

100 people must decide independently whether to go to a bar for enterntainment. The stay is enjoyable if fewer than 60 come to the bar. Hence, a possible attendant chooses to go if he expects fewer than 60 to show up and refrains from going if at least 60 are expected to be present at the bar. The problem is that there is no correct model to define expectations; in fact, any such model is self-invalidating. For instance, if all believe that few will go, all will go and that will prove the belief incorrect; if all believe that the bar will be overcrowded, nobody will go, again invalidating the initial belief. All prophecies are self-defeating. This problem illustrates the difficulties of analyzing complex adaptive systems. It is an example of a minority game, where rewards accrue to a minority (political science focuses instead on majority games).

Arthur, W. B. (1994): "Inductive reasoning and bounded rationality", American Economic Review 84(2), 406-411.

118. The Seneca effect (Bardi, 2017)

"Increases are of sluggish growth, but the way to ruin is rapid." (*Nunc incrementa lente exeunt, festinatur in damnum*, Lucius Anneaus Seneca, Letters to Lucilius 91, 6.)

119. Taxonomy of collapses

- **Black elephants** (Donald Rumsfeld's 'known unknowns'). You choose to ignore (or understimate the effects of) an elephant that you know is in the room (a pyramid scheme).
- **Gray swans**. A specific occurrence of this kind of event cannot be predicted but its frequency can be determined (so precautions against it could be taken: earthquakes).
- **Dragon Kings**. They are outliers of a distribution in terms of their large size (the size of Paris in comparison with the rest of French cities). Though their existence is conceivable on the basis of some trend, they are largely unpredictable and no precaution against them is in practice feasible.
- **Black swans** (Donald Rumsfeld's 'unknown unknowns'). They lie outside the distribution: they are absolutely unpredictable (financial crashes, massive terrorist attacks) and are then capable of generating the biggest collapses.

120. X-events

X-events are high-surprise, high-impact events. In a society, the source of X-events is the 'complexity gap' between the complexity of the control system (the government) and the increasing complexity of the controlled systems (the citizens). The gap must be bridged: either the government forces a reduction in complexity in the population (repression) or raises its own complexity to match the population's higher complexity (free elections are held, civil rights and liberties granted, social mobility allowed, openness accepted). An X-event is the default path of bridging the complexity gap, the vehicle that narrows the different complexity levels of two interacting systems. When a government is not able to bridge the gap, a revolution (an example of an X-event) is likely to break out. The rules for dealing with normal events (for which there is abundant past experience) are different from those for handling X-events (which are rare and unexpected).

121. Examples of X-events

Examples of X events: supervolcano explosions (Toba, 74kya, probably responsible for the near extinction of humanity), the 1918 Spanish influenza epidemic, high magnitude earthquakes, bees massively dying off, 9-11 terrorist attack... The 2011 revolts in the Arab world are examples of X-events. Modern communication and

social-networking services (Google, Twitter, Facebook) have increased social complexity (citizens become more empowered, self-aware, informed, connected). Governments responding by restricting access to those services, or shutting them down, made the complexity gap widen to unsustainable levels. A complexity gap is synonymous with trouble and the political expression of trouble is revolt/revolution. The result in the Arab world was regime change in some countries (Tunisia, Libya, Egypt) and challenge to ruling elites (the Assad dynasty in Syria, the monarchy in Bahrain).

122. Outsourcing as an X-event

Manufacturing sectors in developed economies have become more complex (minimum-wage laws, health and safety standards, unionization) than those from developing economies. When both sectors interact through globalization, with a complexity gap becoming too large to be sustainable, the gap is closed by an X-event: outsourcing (manufacturing jobs transferred from developed to developing countries). This X-event downsizes by force the comparatively excessive complexity of the most developed sector. In this respect, globalization creates new X-events and magnifies the consequences of existing X-events.

123. Social complexity and X-events

Societies today are more vulnerable than ever to X-events: the complex structures of modern societies are extremely fragile. The increasing complexity of the global society is the direct cause of X-events. The complexity is expressed in many ways: integration, interdependence of systems and infrastructures; accumulation of bureaucratic layers; mismatch in complexity levels between interacting systems (national and foreign economies; governments and citizens; economies and ecosystems)...

124. Two scenarios for 2050 (Alexandru Vulpe, 2016)

- Open scenario. The world and its structures are open and continue to facilitate how people are actively involved in their management.
- Closed scenario. There is a differential access to almost everything: powerful players (big corporations, governments) regulate access and participation to organizations and structures

Alexandru Vulpe (2016): "Technology Advancements in 2050 and How the World Will Look Like", chapter 2 in *Wireless world in 2050 and beyond. A window into the future!*, Ramjee Prasad and Sudhir Dixit (eds.), Springer.

125. The Cassandra effect (Wierzbicki, 2016, p. 3)

The Cassandra effect: the more precise a forecast, the less likely it is believed ("the more precisely somebody forecasts future events, the less credibility is given to such forecast").
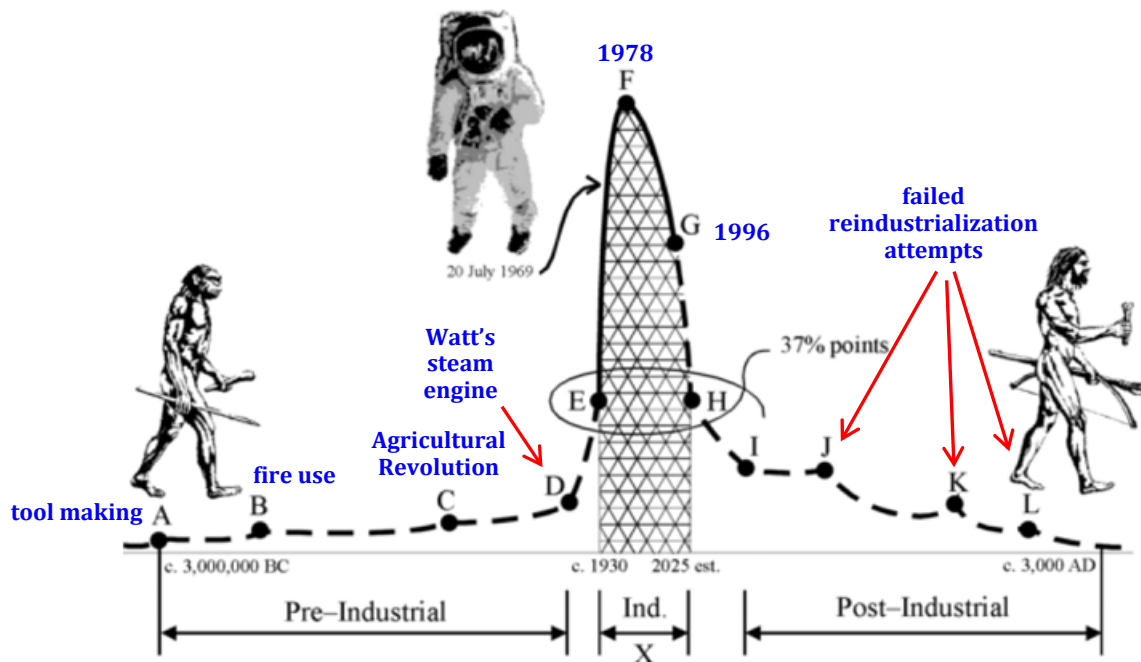
Wierzbicki, Andrzej Piotr (2016): *The future of work in information society. Political-economic arguments*, Springer, Switzerland.

126. The Olduvai theory of industrial civilization (http://www.hubbertpeak.com/duncan/olduvai.htm)

The Olduvai theory of industrial civilization holds that industrial civilizations last around one century. The variable that determines the rise and fall of an industrial civilization is energy production per capita.

"The Olduvai Theory states that the life expectancy of industrial civilization is approximately 100 years: circa 1930-2030. Energy production per capita (e) defines it. The exponential growth of world energy production ended in 1970... Average e will show no growth from 1979 through circa 2008... The rate of change of e will go steeply negative circa 2008... World population will decline to about two billion circa 2050... A growing number of independent studies concur..."

Richard C. Duncan (2005-2006): "The Olduvai Theory. Energy, population, and industrial civilization", The Social Contract, Winter 2005-2006.

The diagram shows a timeline of human sociopolitical development with labeled points:
- **1978** at F (top)
- **1996** at G
- **failed reindustrialization attempts** (arrows pointing to J, K, L)
- **Watt's steam engine** (pointing near D)
- **Agricultural Revolution** (C)
- **fire use** (B)
- **tool making** (A)
- 20 July 1969 (astronaut)
- 37% points
- Points: A, B, C, D, E, F, G, H, I, J, K, L
- c. 3,000,000 BC — c. 1930 — 2025 est. — c. 3,000 AD
- Pre–Industrial | Ind. (X) | Post–Industrial

127. Diamond's (2000) explanation of pre-industrial collapses: Societies tend to approach the margin of what the environment can support

"… people living in fragile environments, adopting solutions that were brilliantly successful and understandable in the short run, but that failed or else created fatal problems in the long run when confronted with external environmental changes or human-caused environmental changes that people without written histories or archaeologists could not have anticipated."

128. Tainter's (1988) theory of why societies collapse

Collapse means that a society experiences a rapid and significant <u>loss of sociopolitical complexity</u>. Tainter's explanation is based on four ideas.
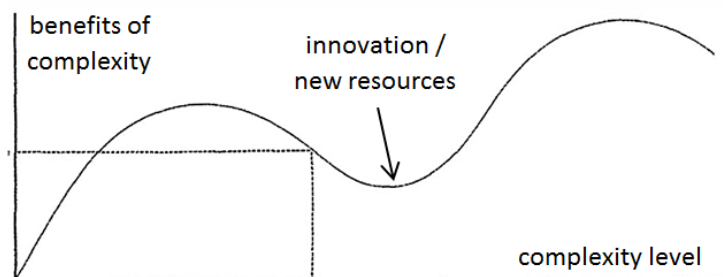
(1) Societies are problem-solving organizations.

(2) The sociopolitical organization of societies requires energy for its maintenance.

(3) Higher complexity levels of a sociopolitical organization correspond to higher per capita costs: a rising complexity is increasing costly for each member of the more complex system.

(4) Solving social problems by investing in sociopolitical complexity has diminishing marginal returns: each complexity upgrading is less capable of solving problems. The productivity (the benefits) of the investment in complexity is eventually declining.

Given (1)-(4), collapse arises when the benefits of investing in complexity are insufficient to cover its costs. Collapse is the natural mechanism to downsize a complexity level whose maintenance is excessively costly. Innovation or discovery of new resources (energy subsidies) are common ways to overcome the diminishing returns to investment in complexity.

Tainter, Joseph (1988): *The collapse of complex societies*, Cambridge University Press, Cambridge, UK.

129. Collapse

"[Joseph] <u>Tainter sees collapse very specifically as a political process connected to the degree of complexity of a society</u>. Human societies become more complex as a response to the problems and opportunities that they face, and through collapse they become less complex. Collapse then is a rapid process of simplification – where

rapid means not instantaneous, but perhaps a few decades. Importantly, <u>in Tainter's way of thinking, collapse itself is an adaptation not simply a failure</u>."

"Rome is a useful example of collapse because it teaches us that while historical change happens, modern attempts to explain it can involve seriously different interpretations of the same evidence. <u>Even with textual history and contemporary sources commenting on what was happening, in addition to archaeological evidence, Rome's collapse is still debated in terms of whether it even happened, whether there was a clean break, or whether we should think instead of a period and process of transition and transformation</u>. Having more evidence does not necessarily make it any easier to understand a collapse – it can make it much harder."

"…the message to take from many collapses is clear –<u>collapse cautions us to build fair and inclusive societies that minimise room for disaffection and for potentially harmful divisions to arise</u>. To create more sustainable societies we need not only to understand the natural environment , its impact on us and our impacts on it, and to live within our means, but also to realise true political and social sustainability , and consensus, in societies that ensures the well- being of all now and in the future. <u>Although looking at past collapses can teach us these lessons, we need only look around us today to see the truth of them</u>."

http://na.unep.net/geas/archive/pdfs/GEAS_Jun_12_Carrying_Capacity.pdf

Middleton, Guy D. (2017): *Understanding collapse: Ancient history and modern myths*, **Cambridge UP.**

130. The tragedy of the commons: 'freedom in a commons brings ruin to all'

The 'tradegy of the commons' is a parable questioning the idea that unregulated markets yield socially good outcomes: <u>self-interest is eventually inconsistent with social stability</u>. The tragedy applies to the exploitation of a free resource (a common), like a pasture. Self-interest compels every herdsman to maximize the cattle on the pasture. But if a sufficiently large number of herdsmen develop the same strategy of increasing the herd without restrictions, the pasture will be exhausted and all the herdsmen will be ruined for trying to take too much from the pasture. Hence, a commonly owned and freely accessible resource tends to be depleted when it is exploited by a sufficiently large number of people. Infinite demands are not consistent with a finite and fragile supply. The logic of the tragedy of the commons seems to explain resource depletion and environmental degradation: taking without concern for preservation (the present matters more than the future).

Hardin, Garrett (1968): "The tragedy of the commons", Science 162(3859), 1243-1248.

Machan, Tibor R. (ed) (2001): *The commons. Its tragedies and other follies*, **Hoover Institution Press, Stanford, CA.**

131. Punctuated equilibrium (Stephen Gould, Nils Eldredge)

The expression designates a theory of evolutionary processes according to which <u>evolutionary processes do not occur slowly and gradually, but quickly and suddenly</u>. Long periods of apparent stability and lack of significant change are suddenly followed by a period of radical, dramatic evolutionary changes take place (like the Cambrian explosion, 650 mya, where animals with shells and external skeletons appeared).

132. How similar are the biological and the historical evolutionary processes?

Historically, societies appear stable for long periods. Constant adaptation goes unnoticed until societies "go critical".

133. The Fermi paradox: How globalized is the galaxy?

Life seems to possess a tendency to expand everywhere and increase complexity. Technology also appears to possess a tendency to evolve and increase complexity. The universe is estimated to be some 13.8 billion years old. It is then reasonable to expect our galaxy to be full of advanced civilizations. The paradox is that we have not yet obtained solid evidence of their existence: the universe is silent. Where is everybody?

- **Basic resolutions of the Fermi paradox.** (1) Extraterrestrials are or have been already here. (2) Extraterrestrials civilizations exist but we have not yet been able to gather evidence of their existence. (3) We are essentially alone in the universe.
- **Webb's (2015) resolution.** Even if life may arise easily, intelligence is probably hard to emerge. Virtually all species on Earth did not need much intelligence to arise and prosper: in general, survival does not require intelligence. Intelligent living beings may be a rare exception in the universe. The development of intelligence may be such a protracted process that it becomes very vulnerable to events that could stop or delay its development (on Earth the process took billions of years).
- **Considerations on the Fermi paradox.** (1) As with many other basic phenomena (the emergence of life on Earth, consciousness, the industrial revolution, the scientific revolution...) we are trying to theorize from a single case/occurence. (2) Are technologically advanced societies inherently unstable? (3) Can technology sustain a high rate of change/progress? Is the acceleration of technological advance since the industrial revolution an exceptional event? A bubble that cannot last? (4) The conditions necessary for a phenomenon to emerge may be quite different from the conditions necessary for the phenomenon to last, develop or evolve (what works to make a poor economy prosper may not work to make it permanently prosperous; the way to become successful in globalization may be different from the way to remain successfully globalized).

Webb, Stephen (2015): *If the universe is teeming with aliens… where is everybody? Seventy-five solutions to the Fermi paradox and the problem of extraterrestrial life*, **2nd edition, Springer, Cham, Switzerland.**

134. Extraterrestrial civilizations

The Russian astrophysicist Nikolai Kardashev classified extraterrestrial civilizations in terms of the potency of their technology. A KI (Kardashev type 1) civilization could employ the energy resources of a planet (human civilization would be KI). A KII, the energy resources of a star. And a KIII, the energy resources of a galaxy. It has been claimed that most extraterrestrial civilizations in our galaxy are of a KII or KIII type.

Ernst Ulrich von Weizsäcker; Anders Wijkman (2018): *Come On! Capitalism, Short-termism, Population and the Destruction of the Planet.* **A Report to the Club of Rome, Springer, New York.**

135. Economists vs physicits

The world is facing a perfect storm of problems: overpopulation, overconsumption, environmentally malign technologies, inequalities. All of them seem sustained by the <u>irrational belief that permanent growth is possible in a physically finite economy</u>. They are also the expression of the <u>conflict between what economists believe and what physicists know</u>.

136. Empty world vs full world

The dominant economic views and theories were created in an '<u>empty world</u>': one in which population was small, natural resources did not represent a limit and the environment had enough capacity to absorb wastes. Economies in an empty world do not face planetary boundaries. If a '<u>full world</u>' damages to the environment

and wastes play a dominant role. On the right a projection of the world economy under a business-as-usual assumption: <u>the logic of an empty world is applied to a full world</u>.

137. A lesson of history?

The parallelism of ideas, processes, and developments in different civilizations from the past suggests that, in the presence of certain general conditions, <u>human socities tend to grow bigger, more complex and more environmentally demanding</u>.

138. The price of progress (or the price of not collapsing)

"<u>Each time history repeats itself, the price goes up</u>" (Ronald Wright, 2011). Progress allows civilizations to become bigger. More people may indeed be needed to run a more complex civilization and make it more durable. But then, when it fails, more people is affected (the fall of the first civilization, Sumer, affected hundreds of thousands; the fall of Rome, millions; ours, billions).
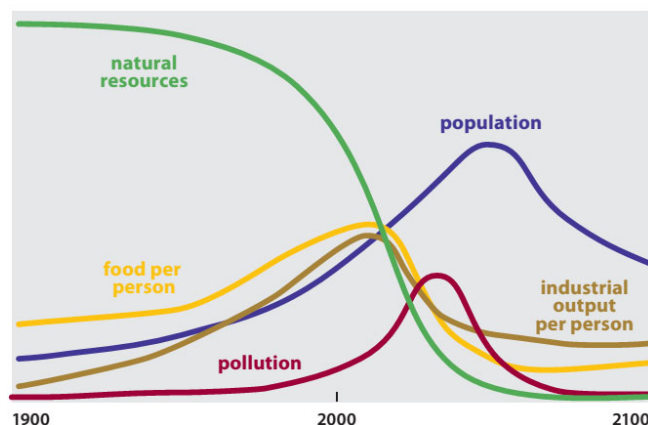
139. Is science coming to an end?

<u>Are there no new big discoveries possible</u>? Have we already converge as much as we can on the truth? Is the apparent strength and potency of present day science not an indication of its near death? As in the chart on the right, a system crashes just before the system is runs at the greatest speed.

- Another sign of the end of science is that most published research is false (John P. A. Ioannidis, 2005, "Why most published research is false", PLoS Medicine 2(8)): scientific research has become just a way of raising money and prestige; <u>pursuing the truth is secondary</u>.

Horgan, John (2015): *The end of science. Facing the limits of knowledge in the twilight of the scientific age*, Basic Books, New York.

140. Peter Frase's four futures

The future world can end up dominated by either scarcity or abundance (reflecting ecological limits) and also by either hierarchy or equality (reflecting the political limits of a class society). Equality + abundance = <u>communism</u> ('from each according to their ability, to each according to their need': the Star Trek world). Hierachy + abundance = <u>rentism</u> ('the techniques to produce abundance are monopolized by a small elite'). Equality + scarcity = <u>socialism</u> ('live within your means while providing everyone the best lives possible'). Hierachy + scarcity = <u>exterminism</u> ('communism for the few', awaiting a 'genocidal war of the rich against the poor': Neill Blomkamp's Elysium, 2013).

Peter Frase's scenario	**ABUNDANCE**	**SCARCITY**
EQUALITY	Communism	Socialism
HIERARCHY	Rentism	Exterminism

141. Robert Costanza's visions of the year 2100

The scenario matrix involves two dimensions: world views and policies (technological optimism vs skepticism) and the real state of the world (optimistics are right or skeptics are right). Technological optimism + optimistics right = <u>Star Trek</u> (resources are unlimited, technology can solve any problemability, economic competition is good). Technological skeptism + optimistics right = <u>Big Government</u> (resources are unlimited but governments regulate technological development to achieve social development). Technological optimism + skeptics right = <u>Mad Max</u> (resources are limited but free reign has been given to competition and

technological expansion, so the world is ruled by powerful corporations). Technological skeptism + skeptics right = Ecotopia (with resources being limited, markets and consumerism have been disciplined to achieve sustainability).

David Costanza's scenario	OPTIMISTS RIGHT	SKEPTICS RIGHT
TECHNOLOGICAL OPTIMISM	Star Trek	Mad Max
TECHNOLOGICAL SKEPTICISM	Big Government	Ecotopia

142. The five most important trends in the next 50 years (Watson, 2012)

- Ageing.
- Power (economic, political, military) shifting from West to East.
- Greater, global connectivity.
- Convergence of technologies (GRIN technologies = Genetics + Robotics + Internet + Nanotechnology).
- The environment (planetary conditions, resource exhaustion).

143. The five most important trends that will transform societies in the next 50 years (Watson, 2012)

- Globalization: everything to become hyperlinked.
- Localization: countertrend to globalization because not everyone will like globalization or homogenization.
- Polarization: middle classes will tend to disappear, either going up or down on the income scale (upwards to a new managerial elite or downwards to a enslaved working class or to the unemployed).
- Anxiety, resulting from greater uncertainty and vulnerability.
- Search for meaning: will science become the new religion or will traditional religions be reinforced?

144. The liberal, optimistic, convergent view of the future

Though the world is divided in peaceful and democratic regions and zones in conflict, the peaceful regions will remain prosperous and stable while the zones of turmoil will eventually develop and democratize to become members of the peaceful zone. It is just a matter that the poor economies emulate the rich ones. Economic convergence will gradually contract the turmoil zone.

145. Have we just been simply lucky? Is it time for humanity to pass from childhood to adulthood (from growth to maturity)?

"Imagine the last few hundred years of technological progress as a man spending an evening in a casino. He's had a remarkable run, one hot hand after another. There've been some losses along the way, sure, but he's always doubled down and made it back. Now, though, the bets are getting larger and larger, and his luck seems to be ebbing: if he doubles down again, he might lose it all. He sits and thinks a moment, and then, maybe, he takes his chips to the window and cashes them in, leaving with winnings that can secure the rest of his life (…) What if we collected our winnings from the last few hundred years and then decided we'd take a rest, play some lower-stakes hands for a while. Perhaps our job, at this particular point in time, is to slow things down, just as basketball teams do when they're ahead. If we don't screw up the game of being human, it could last for a very long time (…) Our task now should be to somehow *maintain the gains of the past* (…) Clearly there are plenty of places that need to catch up, whole continents full of people who haven't benefited much from the long, hot streak in the casino."

"Solar energy and nonviolence are technologies less of expansion than of repair, less of growth than of consolidation, less of disruption than of healing. They posit that we've grown powerful enough as a species, and that the job now is to make sure that that power is shared and controlled. They are (…) the technologies of *maturity*."

146. New words for a new world?

"People, *alone among creatures*, can decide to put such limits on themselves (...) Let's even tone down the language: *maturity* is perhaps a little stern and parental. Instead, <u>let's add another word to our lexicon: *balance*</u>. After forty years of libertarian dominance in our politics, ever since Ronald Reagan won by insisting that government was the problem and Thatcher by declaring that there was in fact no such thing as society, <u>it's hard for us to see quite how lopsided our politics has become</u>. The percentage of Americans who remember the New Deal grows tinier each day, and even Lyndon Johnson's Great Society seems from a different age (...) <u>*Scale* is the third and final word that seems crucial to me</u>. If the only things you wanted in the world were efficiency and growth, then you'd scale things up—and we have: large corporations, large nations. But we've reached the point where size hinders as much as it helps, where it reduces the many ways the human game might be played down to just a few (...) *Protectionism* is a vulgar word for economists because it's inefficient, but <u>*inefficiency* is often just another way of saying that you serve more than one end</u>. Amazon is incredibly efficient—I can have something that I may or may not need at my doorstep tomorrow—but when it puts actual stores out of business, it sacrifices the other services those actual stores provided: 'gossip, help for old people, surveillance of the street.'"

147. Growth externalities and moral hazard

"Let's say we cross the 50 *million* miles to Mars—then what? To survive, you'd need to go underground. But to what end? *You can go underground on Earth if you want*. And the multibillion-dollar attempts at building a "biosphere" here on our home planet (where building supplies arrived on a truck) ended in abject failure. Kim Stanley Robinson wrote the greatest novels about the colonization of Mars, a trilogy that dates back a quarter century. Now, says their author, he thinks the whole thing would be a mistake. 'It creates a moral hazard,' he says. <u>People imagine that if we mess up the Earth, we can 'always go to Mars or the stars. It's pernicious</u>.' In fact, it's worse than that. It distracts us from the almost unbearable beauty of the planet we already inhabit."

McKibben, Bill (2019): *Falter. Has the human game begun to play itself out?*, Henry Holt and Company, New York.

148. Values shape history: truth+reason vs geography+greed

"This book takes an approach to history that recognizes the power of the human mind to construct its own reality. It offers a simple thesis: <u>culture shapes values, and those values shape history</u> (...) In today's world, reeling from global crises and transfixed by the dazzle of technology, it is more important than it has ever been to <u>understand how values have shaped history</u> and, consequently, <u>how they might also shape our future</u>."

"<u>Why have the Eurasian civilizations been so successful in establishing hegemony over the people of other continents</u>? Diamond [*Guns, Germs, and Steel*, 1997] claims the reasons can be found not in genes or culture but in geography. For example, the broad east-west axis of Eurasia meant that newly domesticated crops could easily spread across zones with similar climates, whereas the north-south axis of the Americas prevented it. Similarly, new infectious diseases that arose in humans from animal domestication spread in waves across Eurasia, leaving survivors with immunity (...) Eurasia, however, includes not just Europe but China, Russia, and India. <u>If geography caused Eurasia's rise, why was it Europe that eventually established empires throughout the world</u>? (...) Kenneth Pomeranz argues in his acclaimed book *The Great Divergence* that it was England's easily accessible coal deposits and the proximity of Europe to the New World that gave it the impetus to achieve an industrial revolution and thereby dominate the rest of the globe."

"<u>The distinctive values and beliefs about human nature that form the bedrock of Western thought are silently assumed to be those that drive people all over the world and throughout history</u>. The underlying values that drove Europeans into these historical pathways are simply taken to be universal human norms, leaving the only remaining question: who got there first? This <u>reductionist approach to history—arguing that all the reasons for the direction of history can ultimately be reduced to material causes</u>—reached a kind of nadir in a book published in 2010 by Ian Morris entitled *Why the West Rules—For Now*, in which the author offers his own Morris Theorem to summarize the universal cause of social change in history: 'Change is caused by lazy, greedy, frightened people looking for easier, more profitable, and safer ways to do things.' To Morris, 'culture, values,

and beliefs were unimportant' in explaining the great currents of history, and instead we need to look for 'brute, material forces,' specifically those arising from geography. This book takes an entirely different approach from historical reductionism. Instead, it offers a <u>cognitive approach to history, arguing that the cognitive frames through which different cultures perceive reality have had a profound effect on their historical direction</u>."

"When drastic change occurs to a given society, its cognitive structures—and, ultimately, its entire worldview—can change equally drastically within a generation or two. When the Western powers installed their empires throughout the globe, humiliating traditional leaders and undermining established hierarchies, they overwhelmed the old cognitive patterns with new values and measures of success, which people in the conquered societies aspired to achieve. Through this process, I would argue that—especially since the mid-twentieth century—<u>what had once been the Western worldview has now become the dominant worldview of those in positions of wealth and power who drive our global civilization</u>, from Bangkok to Beijing and from Mumbai to Mexico City. For cognitive history, there's an important lesson to learn from this (…): <u>the relationship between cognition and history is not one-way but reciprocal</u>."

149. Nonlinearities, resilience, sledgehammer and threshold effects

"<u>The one thing we can rely on about humanity's future trajectory is its nonlinearity. That fact presents us with both humanity's greatest peril and our greatest reason for hope</u>. Our peril arises from the fact that we can't just look at the recent decades of prosperity enjoyed by much of the world and assume it will continue indefinitely; at the same time, we can glean hope from the realization that humanity's unsustainable growth in consumption, inexorable as it appears, will not necessarily continue until our global civilization is doomed."

"Critical transitions can occur for two kinds of reasons: sledgehammer effects and threshold effects. <u>A sledgehammer effect (…) arises when an outside force causes dramatic change in a system</u> (…) A good example of a sledgehammer effect is the asteroid that is believed to have wiped out the dinosaurs about sixty-five million years ago (…) <u>Threshold effects (…) refer to the critical transition that happens when a system changes from within</u>. One example of a threshold effect (…) is how language emerged from a feedback loop between the cultural and biological evolution of humans (…) In complex systems, critical transitions frequently arise from an interplay between threshold and sledgehammer effects (…) The resilience of a system determines whether it can withstand big shocks or is susceptible to collapse from a small disturbance. <u>Resilience can be understood as the capacity of a system to recover from a disturbance</u>."

150. Change in complex systems: the adaptive cycle model

"This model sees complex systems as passing through <u>four phases of a cycle</u>. The cycle begins with a rapid <u>*growth phase*</u>, during which innovative strategies can exploit new opportunities. In a capitalist system, this is the period when entrepreneurs thrive, developing new products and targeting new markets. Gradually, the system moves to a more stable <u>*conservation phase*</u>, when rules and established connections become more important. This phase can last for a long time, during which the future seems quite predictable, but as time goes on, the system becomes increasingly brittle and resistant to change. It becomes less resilient. At a certain point, a small disturbance can cause the entire system to collapse, which is the <u>*release phase*</u>. This could be the lightning igniting a forest fire or, in financial markets, a sudden loss of confidence leading to panic. Following the system's collapse, a period of chaos ensues, and uncertainty rules. New opportunities emerge for creativity, which is why the final stage in the cycle is called the <u>*renewal phase*</u>. In this period, small chance events can drastically shape the future. In an ecosystem, new species may emerge that had previously been suppressed (such as the mammals that took over from the dinosaurs). In social systems, this is the time when charismatic individuals might have an inordinate impact on public opinion, either for good or for evil. 'Early in the renewal phase,' experts note, 'the future is up for grabs.' (…) Which of these four phases best describes our current global system? There's no simple answer, partly because our global system is itself a network of different systems, each of which might be in a different phase of its own adaptive cycle. Those who focus on technology, for example, might argue we're still in a growth phase, with waves of progress resulting from innovation. On the other hand, the earth's natural systems appear to be entering the late stages of a conservation phase, coming precariously close to tipping points that could destabilize our civilization. Could our global civilization itself be in the late stage of a conservation phase and face imminent collapse? (…) The crucial question is <u>how</u>

much resilience is built into our global system. Unfortunately, much of it has been designed with short-term efficiencies in mind, which have tended to reduce resilience rather than increase it. In a resilient system, individual nodes—families or communities—need to be self-sufficient enough to survive in an emergency. In our modern civilization, most of us lack self-sufficiency."

151. Is the global system going to collapse like the Roman empire did?

"It's difficult to consider the collapse of the Roman Empire without drawing parallels to our own civilization. Whereas Rome's primary energy source was conquered nations, the primary energy source of our civilization is fossil fuels. But we're facing the same type of problems the Romans faced. Whereas they encountered increasing costs of administering their empire, we're confronted with the global impact of rising carbon emissions. Where they chose short-term solutions that created insurmountable problems for future generations, we're doing the same by permitting carbon emissions to keep increasing, even when we know it will lead in the future to runaway climate change. Where they were eventually driven to consume their own capital in desperation, squeezing their territories until they destroyed them, our civilization is unsustainably consuming the earth's resources while falsely claiming the results as current income (…) From a larger perspective, one could view the arc of our civilization as just another cycle in the sweep of history. If our civilization eventually succumbs, the logic goes, in time another one will surely arise, which may learn from our mistakes (…) If our current civilization collapses, the human race will continue, but we're most likely condemning our descendants for time immemorial to lives without the benefits we've enjoyed.

152. Bifurcation of humanity? Nothing new?

"We've been exploring vastly different scenarios for the human trajectory, from environmental collapse to dramatic possibilities of human transformation. Sometimes the visions are so far apart, it seems as if each group is talking about an entirely different world. But they're not. It's just one earth, containing more than seven billion of us, some working on trailblazing technologies, others (many more) struggling to survive one day at a time (…) The lives of affluent people in developed countries are so vastly different from the experience of billions in less developed regions that it already seems like two separate human systems (…) A member of the team that published *Limits to Growth*, Jorgen Randers, recently offered a view of the near future in a book entitled *2052: A Global Forecast for the Next Forty Years*. In it, he predicts a continuation of the global divide between rich and poor, with a minority securing affluent lives at the expense of the rest. Our current global system, he believes, promising prosperity through continued economic growth, offers false hope to most of the human race. 'To this day,' he warns, 'six billion people are being misled into believing that there are no natural constraints and they can have it all because human ingenuity will come to the rescue. The truth is they simply cannot.'"

153. Global scenarios

"In our current world, two important threshold effects are the exponential progress of technology and the ever-widening global wealth gap. There are also two major sledgehammer effects: climate change and the depletion of the world's natural resources. Under one scenario, the sledgehammer effects overwhelm the threshold effects, and our global civilization collapses (…) In another scenario—let's call it Techno Split—the sledgehammer and threshold effects work together to split apart the human race while maintaining some form of technological civilization. Continued exponential technological progress permits civilization, for the affluent minority, to keep advancing (…) Eventually, they would become—effectively, if not literally—two separate species. One species, genetically and technologically enhanced, exploring entirely new ways of being human; the other species, genetically akin to us, barely surviving within its collapsed infrastructure. Is this what we desire for humanity's future? Those who agree with Kurzweil that humanity's defining feature is the ability to reach beyond the limitations of biology might believe so and celebrate humanity's ultimate triumph: the unfettered progress of humanity's CONQUEST OF NATURE. But there's another view of humanity that permeates the modern world, one based on the "recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family." These words, from the UN's Universal Declaration of Human Rights, represent a different kind of progress: the progress of humanity's moral scope, which has expanded beyond tribal groupings to encompass the entire human race (…) From this viewpoint, the Techno

Split scenario would be a fundamental betrayal of human values. It would be, <u>as one critic said about Singularity visionaries, akin to 'rich people building a lifeboat and getting off the ship</u>.'"

154. The Great Transformation

"A scenario in which humanity remains resilient requires something greater than even the most compelling political and technological solutions to our current crises, such as a global price on carbon and massive investment in green energy. These are undoubtedly necessary to avert disaster, but, even if they're fully effective, they wouldn't be sufficient to avoid the Techno Split scenario. That would require a <u>more fundamental shift in the underlying values that drive our day-to-day decisions</u> about what we purchase, what we eat, how we earn our money, and how we seek fulfillment (…) Many have come to recognize the need for this fundamental change in values. It's been variously called the Great Transformation, the Great Transition, the Great Turning, and humanity's Great Work. Like the two earlier great transitions of human history, it would encompass a transformation of virtually every aspect of the human experience: our values, our goals, and our collective behavior.

There is a major difference, however, between this Great Transformation and the earlier ones. <u>Both agriculture and the Scientific and Industrial Revolutions were the result of generations of people merely acting in ways that made sense to them at the time, without necessarily holding a vision of where their collective actions were leading humanity</u>. It was only long afterward that people could look back and recognize the transformation. <u>This third great transition, by contrast, will only take place if enough people are conscious of its need and prepared to change their own values and behavior to affect humanity's direction</u>. It would be a unique achievement in humanity's history. A Great Transformation would need to be founded on a worldview that could enable humanity to thrive sustainably on the earth into the future."

"What values would arise from this worldview? Three core values emerge. The first is an <u>emphasis on *quality of life* rather than material possessions</u> (…) Secondly, we would base political, social, and economic choices on a sense of our *shared humanity*, <u>emphasizing fairness and dignity for all rather than maximizing for ourselves and our parochially defined social group</u>. Finally, we would <u>build our civilization's future on the basis of *environmental sustainability*</u>, with the flourishing of the natural world as a foundational principle for humanity's major decisions."

Lent, Jeremy (2017): *The patterning instinct. A cultural history of humanity's search for meaning*, Prometheus Books.

155. What lies ahead for the world?

"Crises, and pressures for change, confront individuals and their groups at all levels, ranging from single people, to teams, to businesses, to nations, to the whole world (…) Successful coping with either external or internal pressures requires selective change. That's as true of nations as of individuals (…) The challenge, for nations as for individuals in crisis, is to figure out <u>which parts of their identities are already functioning well and don't need changing, and which parts are no longer working and do need changing</u> (…) They must decide what of themselves still works, remains appropriate even under the new changed circumstances, and thus can be retained. Conversely, they need the courage to recognize what must be changed in order to deal with the new situation."

CAUSATION CHAIN OF GLOBAL CLIMATE CHANGE
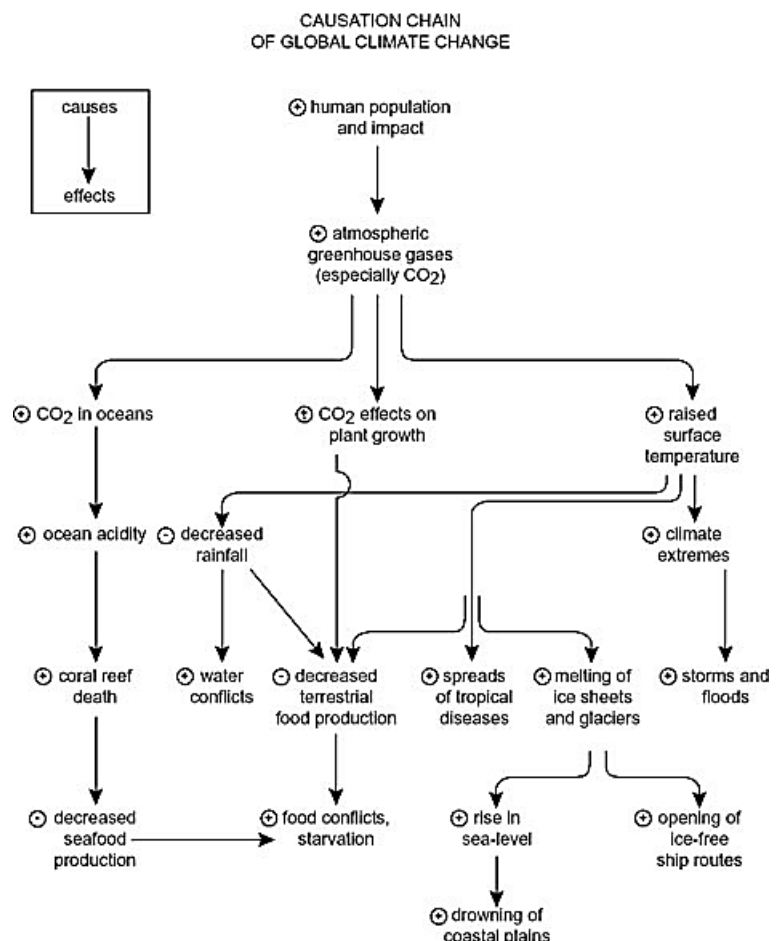
"... the difference between success and failure in resolving a crisis is often not sharp—that success may just be partial, may not last forever, and the same problem may return. (Think of the United Kingdom 'resolving' its world role by entering the European Union in 1973, and then voting in 2017 to leave the European Union.)."

"I identify four sets of problems with potential for worldwide harm. In descending order of dramatic visibility but not of importance, they are: <u>explosions of nuclear weapons</u> (...), <u>global climate change</u>, <u>global resource depletion</u>, and <u>global inequalities of living standards</u>. Other people might expand this list to include other problems, among which Islamic fundamentalism, emerging infectious diseases, an asteroid collision, and mass biological extinctions are candidates."

"<u>Each year the average American consumes about 32 times more gasoline, and produces 32 times more plastic waste and carbon dioxide, than does the average citizen of a poor country</u>. That factor of 32 has big consequences for how people in the developing world behave, and it also has consequences for what lies ahead for all of us."

"The reasons why <u>poor remote countries can now create problems for rich countries</u> can be summed up by the word 'globalization': the increased connections between all parts of the world. In particular, the increasing ease of communications and travel means that <u>people in developing countries now know a lot about the big differences in consumption rates and living standards around the world, and that it's now possible for many of them to travel to rich countries</u>.

<u>Among the ways in which globalization has made differences in living standards around the world untenable, three stand out. One is the spread of emerging diseases</u> from poor remote countries to rich countries. In recent decades, feared fatal diseases have often been carried by travelers to rich countries from poor countries where those diseases are endemic and public health measures are weak—cholera, Ebola, flu, (notably) AIDS, and others. Those arrivals will increase.

The spread of emerging diseases is an unintentional consequence of globalization, but the second of the three spreads made possible by globalization involves human intent. Many people in poor countries get frustrated and angry when they become aware of the comfortable lifestyles available elsewhere in the world. Some of them become <u>terrorists</u>, and many others who aren't terrorists themselves tolerate or support terrorists."

"... people with low consumptions want to enjoy the high-consumption lifestyle themselves. They have two ways of achieving it. First, governments of developing countries consider an increase in living standards, including consumption rates, as a prime goal of national policy. Second, tens of millions of people in the developing world are unwilling to wait to see whether their government can deliver high living standards within their lifetime. Instead, they seek the First World lifestyle now, by emigrating to the First World, with or without permission (...) <u>Is everybody's dream of achieving a First World lifestyle possible</u>?"

"In short, it's certain that, within the lifetimes of most of us, per-capita consumption rates in the First World will be lower than they are now. The only question is whether we shall reach that outcome by planned methods of our choice, or by unpleasant methods not of our choice (...) We already know enough to make good progress towards achieving them; <u>the main thing lacking has been the necessary political will</u>."

"There is already progress along three different routes towards solving world problems. One long-tested route consists of <u>bilateral and multilateral agreements between nations</u> (...) Another route towards solving world problems consists of <u>agreements among a region's nations</u>. There are already many such regional agreements

1. National consensus that one's nation is in crisis
2. Acceptance of national responsibility to do something
3. Building a fence, to delineate the national problems needing to be solved
4. Getting material and financial help from other nations
5. Using other nations as models of how to solve the problems
6. National identity
7. Honest national self-appraisal
8. Historical experience of previous national crises
9. Dealing with national failure
10. Situation-specific national flexibility
11. National core values
12. Freedom from geopolitical constraints

for North America, Latin America, Europe, Southeast Asia, Africa, and other regional groupings (...) The third route consists of <u>world agreements</u>, hammered out by world institutions."

"Globalization both causes problems and facilitates solutions of problems. One ominous thing that globalization means today is the growth and spread of problems around the world: resource competition, global wars, pollutants, atmospheric gases, diseases, movements of people, and many other problems. But globalization also means something encouraging: the growth and spread of factors contributing to solutions of those world problems, such as information, communication, recognition of climate change, a few dominant world languages, widespread knowledge of conditions and solutions prevailing elsewhere, and—some recognition that the world is interdependent and stands or falls together." *Diamond's 12 factors related to the outcomes of national crises*

Jared Diamond (2019): *Upheaval. Turning points for nations in crisis*, Little, Brown and Company, NY.

156. Diversity as the best survival strategy

"The apocalypse before us is one of a great homogenization. It is the result not of floods, asteroids, belching mountains, and tectonic collisions but of sadism and fatigue (…) Thetask at hand is not aided by acceleration or transcendence but by differentiation (…) If Earth's calamitous and creative history teaches us anything, it is that those who survive and thrive are not the fittest or even the survivalists. They are those creative forms of life that intensify their existence even if that intensity is only fleeting."

Grove, Jairus Victor (2019): *Savage ecology. War and geopolitics at the end of the world*, Duke University Press, Durham and London.

157. Collapse is difficult to recognize

"The comparatively slow pace of change in complex systems makes it very hard for those affected to understand what is happening. The changes seem so gradual, at least in human lifetime terms, that they come to appear normal to those in the midst of them. This lack of understanding also means that a collapse is very hard to stop or reverse. Even once a sufficiently large number of people understand what is going on, they find it extremely difficult to grasp the scale of the response needed to stop it. They find it very hard to understand how long it will take for their actions to have any impact, and how long these will need to last. They find it even harder to convince others that change is needed. This is because most people focus on the short term."

158. Collapse is already here

"The trends in human population, resource use, industrial output, food production and pollution over the last 50 years have been almost exactly as anticipated by the MIT team. The entire system of human development, which societies have crafted so carefully over so many centuries, is collapsing. While most people are still unaware of it, humanity is in the midst of a major crisis, driven by powerful long term social and environmental forces that are extremely hard to understand and even harder to manage. The most obvious sign that the collapse is happening is climate change (…) The problem of migration is another indicator. People are moving because of structural economic discontinuities and the effects of climate change. Accelerating species loss is another symptom, as is widespread ocean pollution. The rising number of conflicts over access to resources is another signal. The growth of political extremism, as well as the rise in populism, are signs too. So is widening inequality."

"… all these problems have the same root causes. They are all consequences of humanity pushing too hard on the economic and ecological gas pedal for too long. They are not warning lights, flashing red on the control panel, telling societies that they need to change. They are signs that the system is disintegrating."

"Rather than avoiding the collapse, as was possible in 1972, the challenge humanity faces today is to manage it, and to reduce its long term consequences. Neither is being done."

"For most of human history, societies have benefited from positive feedback loops, upward spirals of progress where one positive development leads to another (…) Because human activities have been within nature's boundaries, societies have assumed that they can do pretty much what they like. Unfortunately, this has recently changed."

"There are two major reasons why societies have reached this difficult place. The first is the rapid growth in the human population in recent decades, which has dramatically increased the ecological footprint. The second

is the dominant economic system, the neoliberal capitalist model, which worsens the problem while largely ignoring its consequences."

Maxton, Graeme (2019): *Change! Why we need a radical turnaround*, **2nd edition, Komplett-Media.**

"The chief cause of problems is solutions." —Eric Sevareid (journalist)