

Youth Ecological Revolution

A handbook for leaders

Frank Rotering

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Preface

The world's young people have been brutally betrayed by social leaders and now face an ecological crisis of existential proportions. International conferences, global agreements, government policies, corporate initiatives, scientific warnings, emergency declarations, and activist pressures have done nothing to avert this unspeakable tragedy. If the young are to survive, only one chance remains: rapidly form revolutionary movements, remove the ecocidal leaders from power, and implement the rational crisis response.

This book primarily addresses the prospective youth leaders of these movements. I assume they are deeply concerned about ecological collapse and outraged by the inaction of their elders. It is therefore likely that they are seeking fundamentally new approaches to salvage their future. In the following chapters I submit my proposal for their critical examination and potential guidance.

Given this orientation, the book is structured as a handbook: a succinct analytical and strategic guide. It thus provides clear explanations while avoiding unnecessary details. For deeper understanding, most chapters end with suggestions for further reading. Also included are several appendixes that might be useful to youth leaders. The most important of these is a proposed manifesto that outlines a militant program for youth ecological survival.

Who am I? A Dutch-born Canadian male in his early 70s who has been both cursed and gifted with a highly autonomous, Aspie-like mind. This means that, to an uncommon degree, I ignore conventional thought and reach independent conclusions. I have also avoided institutional and organizational affiliations that might distort or constrain my work. Because I have a profound ethical commitment to humankind and nature, I have studied the ecological crisis intensely for over thirty years.

My fervent hope is that this book, which presents my mature conclusions, will help the young survive the horrific crisis to which they have been viciously condemned.

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June, 2021
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Chapter 1

Ecological betrayal and its implications

A. THE BETRAYAL

Betrayal is the violation of a trust or confidence. Young people - those under about thirty years of age - have until recently trusted social leaders to protect the environment from serious damage and thus preserve their future. This confidence was justified for two reasons.

The first is **ethical**: just as our ancestors were responsible for passing a safe environment to us, we are responsible for passing a safe environment to our descendants. By any standard of intergenerational equity, social leaders have a moral duty to preserve the natural world for the civilized survival of the young and future humankind.

The second reason is **political**: an international climate agreement that was ratified by 197 countries in 1994 committed world leaders to maintaining safe greenhouse gas (GHG) concentrations in order to protect "future generations of humankind". Specifically, the UNFCCC agreement stipulated that GHG concentrations must be restricted to levels that would, "*prevent dangerous anthropogenic interference with the climate system.*"

Given today's catastrophic land, ocean, and climate degradation, it is beyond dispute that this commitment has been grossly violated. Because the resulting environmental threats are existential, this violation is potentially **genocidal** for the global young. This group comprises roughly four billion people, 90% of whom live precariously in the poor countries of the Global South.

Briefly stated, today's young people have been cruelly betrayed, both ethically and politically. If they want to survive, their strategic thinking must begin with this sobering realization.

NOTE: The term "social leaders", as used above, refers broadly to the holders of political power. In [chapter five](#) this group is accurately identified and a new term is introduced.

The violation of the UNFCCC agreement was of immense significance because it established the core falsehoods that underpin today's GHG-based disasters. The falsehoods are discussed in the next two chapters. Here I provide a brief account of the violation itself. For details see [section E](#).

In its second Assessment Report (1995) the Intergovernmental Panel on Climate Change (IPCC) took the position that determining "dangerous anthropogenic interference" is a task for policymakers, not scientists. The organization defended this stance in its third report (2001) with the following argument:

1. Danger is not objective, but instead varies with global location and social coping capacity;

2. Dangerous interference is therefore a "value judgment" that can't be scientifically defined;
3. Because dangerous interference determines unsafe GHG concentrations, these can't be scientifically specified.

The IPCC thus concluded that policymakers - non-scientific government representatives - must independently establish unsafe concentration levels based on local conditions, and that the IPCC's limited role was to propose emission scenarios to remain below them.

This argument and its conclusion are fraught with illogic and rich-world bias:

- If the policymakers of a poor country conclude that GHG concentrations are already unsafe and must therefore decline, the IPCC offers them no guidance. The organization provides only emission scenarios, but emissions are concentration additions, so all such scenarios lead to higher and even more dangerous levels.
- Although most GHGs are emitted in the Global North, they become uniformly distributed in the atmosphere. The rich countries will therefore impose their relatively high-concentration decisions on the poor countries, which need far lower levels to survive.
- Most fundamentally, objectivity in this context is irrelevant. ***GHG levels are unsafe when they cause harm to the world's most vulnerable populations.*** This is consistent with the IPCC's claims to social justice and global equity, and it firmly establishes the correct GHG approach: rapidly reduce concentrations to levels that are safe for the global poor.

Today's widely accepted target of net-zero emissions by 2050, which permits concentrations to rise for almost three more decades and virtually guarantees youth genocide, is a direct result of the IPCC's 1995 decision. ***In effect, the organization reversed the international community's commitment to safe concentrations.*** It was therefore a core contributor to the betrayal of "future generations of humankind".

B. STRATEGIC IMPLICATIONS

The first responsibility of youth leaders is to produce a workable strategy, or plan of action, for ecological survival. This will determine how their movements will be organized and directed. The betrayal of the young is a critical event with major strategic implications. The most significant of these are outlined below.

1. **The young have been ecologically abandoned.** The intentional reversal of the commitment to safe concentrations means that business as usual will be pursued until collapse occurs. *The young must therefore accept full responsibility for their ecological survival.* Others will likely support them once this responsibility is embraced, but the initial impetus must come from the young themselves.
2. **Because the young have been deceived, they must independently rethink the crisis and its solutions.** Until mid-2016 I made a serious mistake by uncritically accepting the assertions of the IPCC and climate scientists. I then discovered that basic facts about emissions, concentrations, geoengineering, etc. had been either ignored or flagrantly

distorted. One of this book's main aims is to use this unsettling experience to help the young gain an accurate understanding of the crisis they face.

3. **The environmental falsehoods are easily refuted, so powerful forces must be at work to maintain the genocidal pretense.** Intelligent and informed people could readily grasp that the IPCC's 1995 reversal was based on a false argument. They nevertheless went along with it, and have now defended this grotesque act for more than twenty-five years. Without powerful forces acting to degrade their judgment, such shameful behavior would be impossible. The most significant of these forces are humankind's material interests, which have biological roots, and the thought control imposed by social leaders to preserve their power and privileges.
4. **Because climate science has been intellectually corrupted, "trust the science" is a dangerously misleading slogan.** Although some trust in science is necessary, this must be restricted to empirical research. Anything beyond this - framing, interpretations, conclusions, strategies, solutions, etc. - must by default be rejected.
5. **Older generations have largely acquiesced in the betrayal, indicating their broad support.** This means that, as with climate scientists, the older must by default be distrusted with respect to the crisis. However, many possess indispensable knowledge and experience, and some will be eager to assist the young in their quest for a sustainable world. Discerning friend from foe among the older will therefore be a critical leadership task.
6. **Reformist youth movements must be replaced by militant youth movements.** Current movements are pressuring today's social leaders, under the current economic system, to decisively address the crisis. *Recent history has conclusively demonstrated the futility of this approach.* Youth survival entails revolutionary change through militant movements, not incremental change through reformist movements.

To recap the betrayal's primary strategic implications, the young must:

- Accept full responsibility for their ecological survival;
- Independently rethink the crisis and its solutions;
- Acknowledge that material interests and political power support business as usual;
- Strictly limit their trust in climate science;
- By default distrust older generations;
- Shift from reformist to militant movements.

C. LEADERSHIP CONSIDERATIONS

NOTE: My task as a theorist is to develop the concepts required for a solution to the crisis and the transition to a sustainable world. The tasks of youth leaders are to modify these concepts as they deem necessary and then apply them to their concrete situations. Although the two roles are

distinct, a theorist inevitably has insights about the leadership function. In most chapters I therefore present general advice for those who will assume this role. In these sections I address youth leaders directly.

1. The main error you must avoid is *fighting the last war*: applying the ideas, strategies, and tactics used in previous struggles on the false assumption that conditions are essentially unchanged. *There has NEVER been a struggle like the one for youth ecological survival*. This is not a fight for civil rights, economic equity, or gender equality. It is not the Depression, World War II, or the 2008 financial crisis. Today's leadership must be grounded in today's utterly unique conditions.
2. The young are entitled to feel intense anger at social leaders for their failure to effectively address the crisis, and at the older for their contemptible silence. This rage can and should be used to motivate movement members. As leaders, however, you must not allow emotions to distort your analytical and strategic thought. Given the situation's complexity and the strength of opposing forces, your leadership challenge is among the most imposing in history. Let the anger spur you, but then push it aside and think as dispassionately as you can. In a similar vein, blaming and shaming the guilty generations can be useful as motivators, but don't let vitriol displace effective action.
3. Be aware that there are two distinct reasons for focusing on the young. The first, as noted above, is that prior generations ethically and politically owe them civilized survival. The second is strategic: the young have the most to lose from ecological collapse, thus have the most compelling reasons to overcome the crisis, and are therefore the logical instigators of fundamental change. They have recently (pre-COVID) underscored this potential by loudly protesting the ongoing environmental destruction.
4. One of your biggest challenges will be to maintain a disciplined ambivalence towards climate scientists, other academics, and intellectuals generally. Collectively they are causing your demise, but many will likely assist you in your survival struggle. My suggestion is to think of the supporters as your employees: competent workers who can carry out assigned tasks such as climate research and developing a sustainable economic theory, but who by default have no place in the boardrooms where you frame the issues and make your strategic decisions.
5. Distinguishing friend from foe among the older is crucial because very few young people have the knowledge and experience required to produce a workable strategy. I suggest you apply at least the following criteria for allowing older thinkers to engage in your strategy development. They must:
 - a. Firmly reject the standard environmental falsehoods. For example, if someone accepts net-zero emissions as the GHG goal, dismiss them immediately - they are not on your side.
 - b. Adopt a militant posture. Because today's ecocidal order is ultimately maintained by violence, committing to nonviolence is a white flag that negates any chance of avoiding ecological collapse. Whether they realize it or not, those who wave this flag represent the forces of expansion and youth genocide.
 - c. Demonstrate deep and genuine concern for the ecological well-being of the young. This is a character judgment that you as leaders must reliably make.

6. Progressivism will likely be an impediment to your movement because its primary goal is social justice within the existing social order rather than sustainability within a new order. Its thinking and activism are therefore reformist rather than revolutionary. Keep in mind, however, that progressives fight for social justice, which will be a major issue as consumption declines in the transition to a sustainable society.

D. KEY POINTS

- The young have been ecologically betrayed and abandoned. They must therefore assume full responsibility for their ecological survival.
- The environmental deceptions are numerous, and derive from two strong and deeply entrenched forces: the material interests of all and the social control of the powerful.
- Climate science has been intellectually corrupted and should be trusted only to the extent that it honestly conducts climate and Earth-system research.
- Older people have largely acquiesced in the environment's destruction. They should therefore be strategically trusted only to the extent that they unambiguously demonstrate their support for the young's ecological survival.
- Because progressivism arose to fight for social justice within the prevailing order, it is reformist rather than revolutionary. However, the struggle for equity will loom large in an ecologically constrained world, so progressives will continue to play a significant role.

E. FURTHER READING

WEBSITE DOCUMENTS

[UNFCCC agreement](#) (1992) - A highlighted copy to identify key statements. The original document is [here](#).

[The IPCC's Interpretation of UNFCCC Article 2](#) - Extracts from the IPCC's second, third, fourth, and fifth Assessment Reports (ARs) that address the organization's interpretation of "dangerous anthropogenic interference with the climate system." The full reports are [here](#). (Note that "SAR" means "Second Assessment Report", and "TAR" means "Third Assessment Report". The report abbreviations then switch to AR4 and AR5.)

WEBSITE POSTS

["Net-zero Emissions" is Genocide of the Young](#) - An argument that the goal of net-zero emissions is tantamount to youth genocide: "the deliberate killing of a large group of people".

Chapter 1 - Ecological betrayal and its implications

[The Young Desperately Need an Ecological Advocate](#) - Criticism of an Australian climate conference in early 2020 that clearly demonstrated the youth betrayal.

[The IPCC's Disastrous Refusal to Specify Unsafe GHG Concentrations](#) - Some details on the organization's betrayal of the young.

[The Scientific Misconduct of Climate Scientists](#) - An argument that climate science, through its intellectual corruption, is violating its own codes of conduct and ethics.

Chapter 2

The environmental calamity you face

A. THE ECOLOGICAL CRISIS

In [chapter one](#) I focused on the climate system as the primary example of youth betrayal. However, this accusation applies to the ecological crisis as a whole. As shown in figure 2-1, this far broader crisis is rooted in the over-expansion of the global economy.

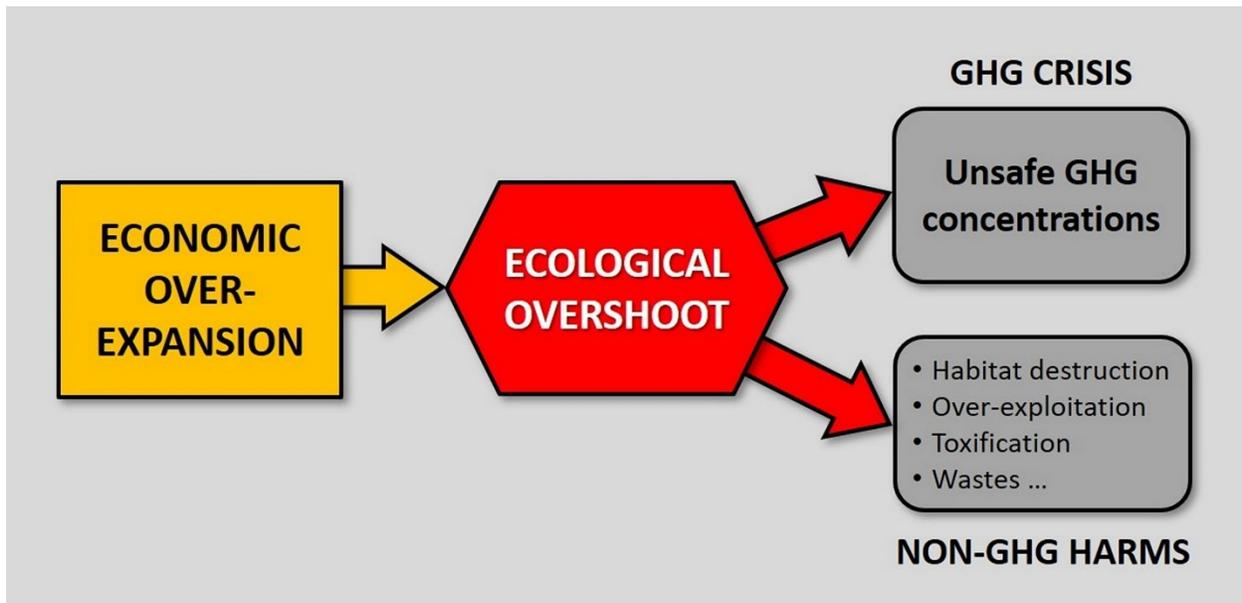


Figure 2-1. The ecological crisis

Centuries of rapid economic growth under capitalism placed increasing pressures on the environment, and in the 1950s critical limits were violated. Most significantly, the atmosphere's CO₂ concentration shot past its long-term maximum of 300 parts per million (ppm). Collectively these violations are called *ecological overshoot* or simply *overshoot*.

The environmental damage associated with overshoot can be divided into the *GHG crisis* and *non-GHG harms*. The GHG crisis is the full set of damaging environmental effects from unsafe concentrations. It poses an immediate existential threat and is therefore discussed further below. Non-GHG harms include habitat destruction, the over-exploitation of renewable resources, chemical and radiological toxification, and various forms of pollution and waste. These contribute to biodiversity loss and species population declines, and could soon become existential threats themselves.

B. THE GHG CRISIS

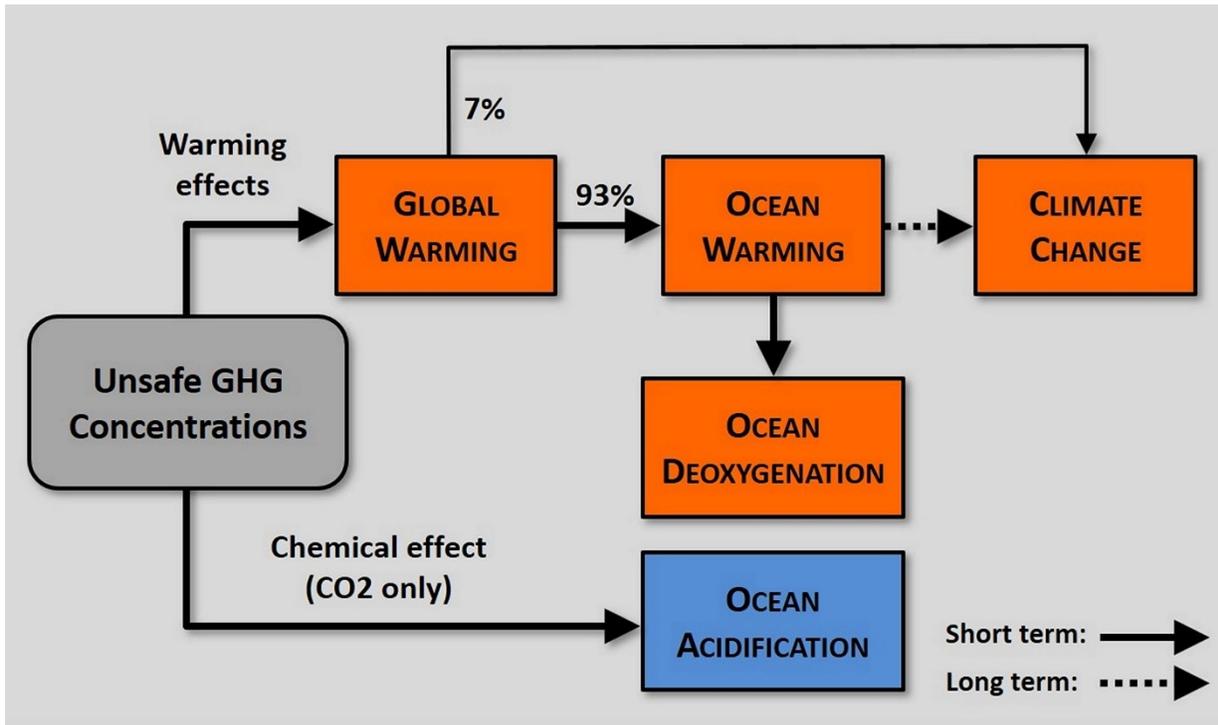


Figure 2-2. The GHG crisis

Figure 2-2 depicts the environmental harms caused by unsafe GHG concentrations. Collectively these harms are called "climate change" by conventional sources. As the diagram makes clear, however, their scope is far broader. Because all harms can be traced back to elevated GHG levels, this book uses the term "GHG crisis" instead.

The GHG crisis is critically important for two reasons. The first is that rising concentrations can cause Earth systems to reach tipping points and points of no return. These are extremely dangerous and are therefore discussed in [section D](#). The second reason is that this crisis is at the heart of the betrayal discussed in [chapter one](#). As a result, virtually all discussions on the topic are false or misleading - including the terminology employed. These deceptions are summarized in [section E](#).

As previously stated, GHG levels are unsafe when they cause harm to the world's most vulnerable populations. Using this criterion, the atmosphere's CO2 concentration likely became unsafe when it exceeded its long-term maximum of 300 ppm around 1950. The GHG crisis thus started during this period and accelerated sharply thereafter.

Unsafe GHGs concentrations have several warming effects and one chemical effect. The warming effects are caused by all GHGs: CO2, methane, nitrous oxide, and several minor gases. The chemical effect is ocean acidification, which is caused by CO2 alone.

The initial warming effect is an increase in the Earth's average surface temperature. This is global warming, and it destroys the Earth's *energy balance* - a key concept for understanding geoen지니어ing. (See [chapter three](#).) As shown in figure 2-2, about 93% of the excess heat from

global warming enters the ocean. This causes ocean warming, which in turn causes ocean deoxygenation. All three ocean effects - warming, acidification, and deoxygenation - severely harm marine life. After a delay of several decades due to the ocean's immense mass, this heat enters the atmosphere and drives the bulk of climate change. This term refers to a prolonged change in the mean and variability of key weather components.

The remaining 7% of the incremental heat warms the land and atmosphere. This makes a small contribution to climate change in the short term, and also damages lands through desertification, flooding, avalanches, etc. For simplicity, land damage is omitted from figure 2-2.

C. THE ECOLOGICAL DAMAGE FUNCTION

A remarkable fact about climate science is that it has never formalized the relationship between global warming and the resulting ecological damage. This formalization, here called the *ecological damage function*, relates the various warming factors to the environmental damage they cause. In its absence an analyst cannot know, for example, if stabilizing the global temperature anomaly at 1.5°C or 2°C suffices to solve the GHG crisis.

In its 2018 report, *Global Warming of 1.5°C*, the IPCC accurately states that, “Future climate-related risks depend on the rate, peak *and duration* of warming.” (Summary for Policymakers, p. 8, emphasis added) Unfortunately this is an isolated assertion that is ignored in the rest of the report and that remains virtually unacknowledged by climate scientists.

My proposed ecological damage function is a minor restatement of the above: *the environmental damage from global warming is a function of the speed, magnitude, and duration of the unsafe temperature.* See figure 2-3.

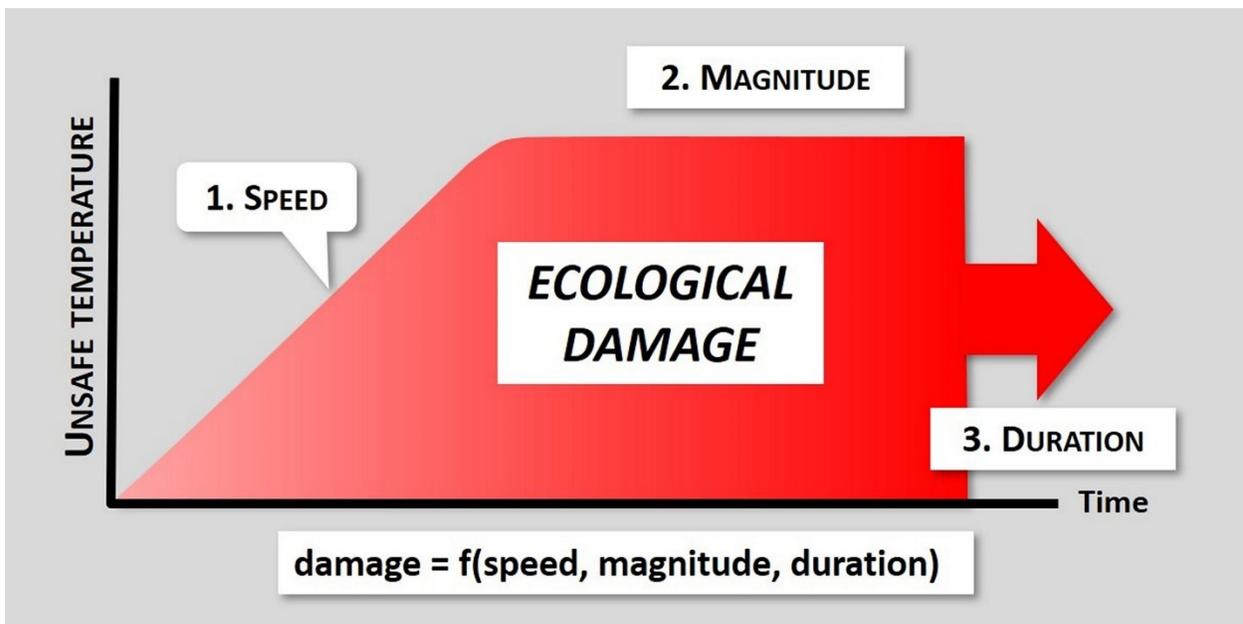


Figure 2-3. The ecological damage function

Warming speed is a damage factor because many species cannot adjust quickly enough to rising temperatures, and will therefore be adversely affected. Magnitude is important because a higher temperature means a greater energy imbalance, hence increased global warming. The duration of warming is critical because this determines the total heat absorbed by polar ice and other Earth systems.

The first two damage factors - speed and magnitude - are recognized by climate science, but duration is rarely mentioned. This is why the field can credibly propose a temperature target such as 1.5°C or 2°C as the crisis solution. If duration were considered, climate scientists would be forced to acknowledge that heat will continue to accumulate in Earth systems for as long as the temperature anomaly exists. This would invalidate the current focus on emissions reductions, which cannot eliminate the elevated temperature and its associated damage.

A crucial implication is that *ecological damage from global warming is graphically represented by the area under the temperature-time curve*, as shown in figure 2-3. The survival chances of the young are therefore maximized when this area is minimized. This implies that the warming speed must be aggressively slowed and the global temperature returned to a safe level as soon as possible.

D. TIPPING POINTS AND POINTS OF NO RETURN

The ecological damage function reveals that environmental damage from global warming increases rapidly over time, even if the elevated temperature remains constant. This means that, until safe concentrations are reached and global warming is eliminated, the risk of ecosystem collapse will continue to escalate. Two concepts that pertain to this risk are tipping points and points of no return.

A *tipping point* is the stage in an ecosystem's degradation where damage suddenly increases due to positive feedbacks, cascading effects, or other factors. At this stage human agency still exists and collapse can be prevented with an adequate response. A *point of no return*, or *PONR*, is reached when damage is so advanced, or time is so short, that human agency no longer suffices to prevent collapse. Reaching a tipping point is therefore a warning that emergency action is immediately required because the countdown to a possible PONR has begun.

A limitation of the ecological damage function is that it expresses only the quantifiable, underlying risk of collapse. To this must be added the massive and highly unpredictable risks of non-linear events like tipping points and PONRs. Figure 2-4 is my crude attempt to visually depict the total environmental risk now facing the young.

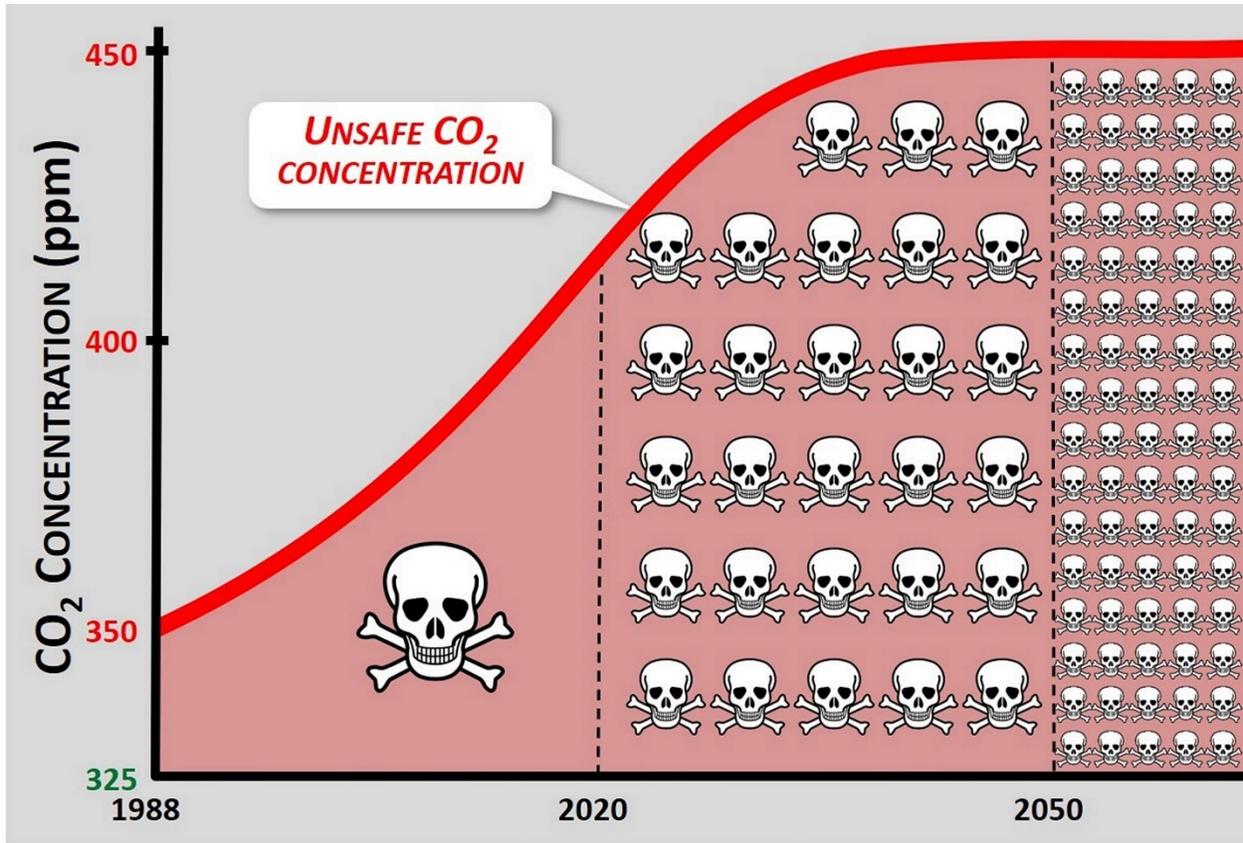


Figure 2-4. Ecological risk

This graph depicts the historical rise in the atmosphere's CO₂ concentration from 1988 until 2020. It then follows a trajectory that achieves net-zero emissions by 2050. A concentration of 325 ppm is assumed to be safe, although the actual number could be 300 ppm or even lower.

Because the global temperature rises as GHG concentrations increase, the area under the curve represents ecological damage, and thus the quantifiable risk to humankind and nature. The skulls depict humankind's total risk. The one skull at left represents the relatively minor destruction and deaths from global warming thus far. The many skulls between 2020 and 2050, and the numerous skulls thereafter, represent the exponential increase in suffering and deaths as tipping points and PONRs are increasingly encountered.

As with emissions and concentrations, climate scientists address tipping points and PONRs in a confused and misleading manner. In most cases the distinction between the two is ignored: a tipping point is treated as a sudden and irreversible ecosystem shift. Another approach, frequently used by the IPCC, is to acknowledge tipping points when describing GHG problems, but to disregard them when proposing solutions. In other cases the concepts are ignored altogether. This is the *linear fallacy*: the unscientific assumption that an increased impact always results in a proportional increase in environmental harms.

E. DECEPTIONS: THE GHG CRISIS

The GHG crisis has been profoundly distorted with respect to both terminology and concepts. Below I summarize the main deceptions relating to the problem side - the crisis itself. In [chapter three](#) I address the falsehoods relating to its solutions.

- **MISLEADING TERMINOLOGY**

- a. The GHG crisis is officially called "climate change" even though this is only one of the disasters caused by unsafe GHGs. Ocean acidification makes it particularly obvious that the standard term is a misnomer. Acidification is a purely chemical effect that is distinct from global warming and changing climates, but which is nevertheless included in the term.

- b. "Climate change" and "global warming" are frequently used interchangeably, despite the fact that climate change is a lasting change in weather patterns whereas global warming is a rise in the average global temperature. Conflating these terms erases this clear distinction and negates the causal relationship between them.

- **NO ECOLOGICAL DAMAGE FUNCTION**

The absence of this function allows climate scientists to ignore the duration factor, which would invalidate temperature targets and the goal of net-zero emissions. It would also expose the fact that GHG concentrations must be stabilized *at safe levels*, as stipulated in the UNFCCC agreement, and not simply stabilized.

- **THE LINEAR FALLACY**

If tipping points and PONRs are ignored, the possibility of sudden and rapid increases in environmental damage is swept under the rug. The actual risks facing the young are thereby massively understated.

- **AVOIDANCE OF THE ENERGY-BALANCE CONCEPT**

This concept is essential for understanding both global warming and its solutions - particularly geoengineering. Because this understanding would undermine the deceptions, energy balance is rarely mentioned in the public domain.

- **CLAIMS OF A POSITIVE CARBON BUDGET**

A carbon budget refers to GHGs that can still be safely emitted. However, as climate scientists themselves acknowledge, the GHG crisis is *now* a planetary emergency. Any net emissions must therefore be unsafe. As shown in figure 2-4, this has been true for several decades.

F. LEADERSHIP CONSIDERATIONS

1. You face three critical problems: the ecological crisis itself, the genocidal inaction of social leaders, and the deceptions implanted by these leaders to prevent rational action by others. When forming a militant youth movement you must begin by renouncing the

deceptions. As in my proposed manifesto ([appendix A](#)), immediately replace the standard terminology and refute the pervasive lies. Unless these steps are taken, rational thought and meaningful dialogue with your supporters will be impossible, and your movement will founder before it begins.

2. Be aware that speaking the scientific truth about the ecological crisis is a revolutionary act. As a primary example, acknowledging the duration factor in global warming changes the GHG goal to safe concentrations, which implies the shift from growth to contraction, the end of capitalism, and the replacement of today's social leaders. Expect extreme reactions when you speak the truth, and be prepared for decisive action to back it up.
3. It is impossible to overstate the urgency of revolutionary change if the young are to survive. There is absolutely no doubt that, without such change, PONRs will be reached and your civilized existence will brutally end. When people talk about "bold climate action", insist that this refers to the fundamental transformation of the prevailing order, not to government policies that offer cosmetic reforms.
4. ALWAYS frame the ecological crisis as the result of economic over-expansion driven by global capitalism. NEVER accept the framing that the crisis results from unspecified "human activities". Aside from historical accuracy, this is *strategically* necessary to identify the economic system and social leadership that must be replaced with their sustainable counterparts.

G. KEY POINTS

- The ecological crisis, which was caused by the over-expansion of the global capitalist economy, resulted in ecological overshoot around 1950. Its two components are the GHG crisis and various non-GHG harms.
- The GHG crisis comprises global warming and its harmful effects, which are caused by all GHGs, and ocean acidification, which is a chemical effect of CO₂ alone. This crisis is existential and must be immediately and effectively addressed.
- Non-GHG harms include habitat destruction, the over-exploitation of renewable resources, chemical and radiological toxification, pollution, and wastes. Their combined adverse effect is rapidly increasing and could soon rival the GHG crisis for existential significance.
- The ecological damage function formalizes the environmental damage from global warming. It states that damage is a function of the speed, magnitude, and duration of the unsafe temperature. The omission of the duration factor by climate science underpins several of its deceptions.
- Tipping points and PONRs sharply increase the likelihood of ecological collapse, hence genocide of the global young. The IPCC and climate scientists (particularly the conservative followers of Michael Mann - see [appendix D](#)) typically obfuscate these concepts and ignore their horrifying consequences.

H. FURTHER READING

EXTERNAL BOOKS

[*The Discovery of Global Warming*](#) - Spencer R. Weart (2003)

Weart's book provides three important insights. First, scientists have long known that the climate system is highly sensitive to small perturbations that can trigger massive changes. This is particularly true for the polar regions. Second, anything to do with the GHG crisis was suppressed and distorted when conservative forces began their ascent in the 1970s. Third, the IPCC was established in 1988 not to solve the GHG crisis, but to seize control of the issue from the independent scientists who were frantically raising the alarm.

[*A History of the Science and Politics of Climate Change: The Role of the Intergovernmental Panel on Climate Change*](#) - Bert Bolin (2007)

Bolin was the IPCC's first chair and held this post for almost a decade. In this book he recounts the organization's history and the opposition it encountered. Despite his vaunted reputation, Bolin was a central figure in establishing the IPCC's core falsehood: the solution to the GHG crisis is to bend the emissions curve to zero rather than the concentrations curve to a safe level.

[*Storms of my Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity*](#) - James Hansen (2009)

Hansen provides a solid scientific explanation of the GHG crisis, but his naivety on other issues is extreme. He reduces political power to special interests and money, seeks "healthy economic growth", and claims that the solutions are enlightened government policies and political will. None of this is tenable. The crucial lesson is this: even the best climate scientists are economically and politically mystified, and cannot be trusted beyond their scientific competencies.

[*A Farewell to Ice: A report from the Arctic*](#) - Peter Wadhams (2017)

The author's main technical assertion is that a tipping point occurred in the Arctic around 2005 when ice disappeared from shallow Siberian seas. As a result the area's air temperature rose rapidly and its albedo (reflectivity) declined sharply, thereby threatening a devastating methane pulse from melting permafrost and seabed hydrates. Wadhams is virtually alone among climate scientists in condemning the IPCC for its multiple failures on the Arctic's disintegration, and for the "collective failure of nerve" by his fellow scientists to recognize the post-2005 reality. Regarding solutions, his main conclusion is that we must quickly find ways to remove GHGs from the atmosphere at scale. Because Wadhams often speaks the painful truth, he has been ostracized by climate scientists and is largely ignored by the capitalist media.

[*Trajectories of the Earth System in the Anthropocene*](#) ("Hothouse Earth" report) - Will Steffen, Johan Rockström, et al. (2018)

This is a highlighted copy of an important paper that appeared in a journal sponsored by the U.S. National Academy of Sciences (NAS). The original document is [here](#). The authors state that 2°C of global warming could *irreversibly* send the Earth on a pathway to catastrophic temperature increases. Their conclusion is that, "**The challenge that humanity faces is to create a 'Stabilized Earth' pathway that steers the Earth System away from its current trajectory. ... Incremental linear changes [reforms] to the present socioeconomic system**

[capitalism] are not enough to stabilize the Earth System. Widespread, rapid, and fundamental transformations [revolutionary change] will likely be required ..." (Emphasis added; my comments in square brackets.)

WEBSITE POSTS

[Nature's Mortal Wound](#) - Describes my shock at discovering that the ecological crisis is so far advanced that geoengineering is required to solve it, and that humankind's extinction will doom the biosphere because we have *already* inflicted a mortal wound on nature.

[The Point of No Return](#) - Makes the distinction between a tipping point and a PONR, notes that a proposed environmental solution is invalid unless it can be implemented before a PONR is encountered, and states that the widespread avoidance of the PONR concept is due to the suppression of urgency by conventional forces.

Chapter 3

The measures you desperately need

A. THE RATIONAL GOAL

Given the advanced stage of the ecological crisis, the rational goal for the young is tragically modest: *ecological survival*. This refers to the non-extinction of our species and, if possible, the preservation of civilized human life. Because survival will entail massive social shifts, I assume that a sustainable civilization will differ significantly from today's expansionary version, and that the global population will be sharply reduced.

To maximize its survival chances, humankind must adopt a dual goal: (1) ***minimize our current environmental impact***, and (2) ***repair the damage we've already done***. I call these imperatives the *rational response* to the ecological crisis. The measures discussed below are components of this response.

The environmental goal that is typically promoted by conventional sources, especially with respect to the GHG crisis, is to "avoid the worst consequences". However, "worst" is never defined, so this formulation is meaningless. If we assume that it refers to the consequences of complete inaction, then any mitigating action will qualify, even if this postpones collapse for only a brief period. The conventional goal, like conventional thought and action, is therefore consistent with youth genocide.

B. THE IPAT FORMULA

As noted above, a core aspect of the rational response is to minimize humankind's current environmental impact. The [IPAT formula](#) addresses this issue. The formula is a mathematical identity (two equivalent expressions) that disaggregates impact into three components: population (P), affluence (A) and technology (T). Affluence here refers to average per-capita consumption, and technology to ecological efficiencies.

The IPAT formula is important because two of the three factors - consumption and population - are sensitive topics that are generally avoided in environmental discussions. One reason for this avoidance is that economic growth requires increases in both factors, so decreasing them would violate the logic of capitalism and other expansionary economies. A second reason applies specifically to population. Some people fear that population reductions will be ruthlessly aimed at the global poor, and are thus a form of *ecofascism*. (See [chapter five](#).) The IPAT formula helps us look beyond these issues and to objectively consider population as an impact factor.

Figure 3-1 provides a visual image of the roles played by the three IPAT factors in driving humankind's environmental impact.

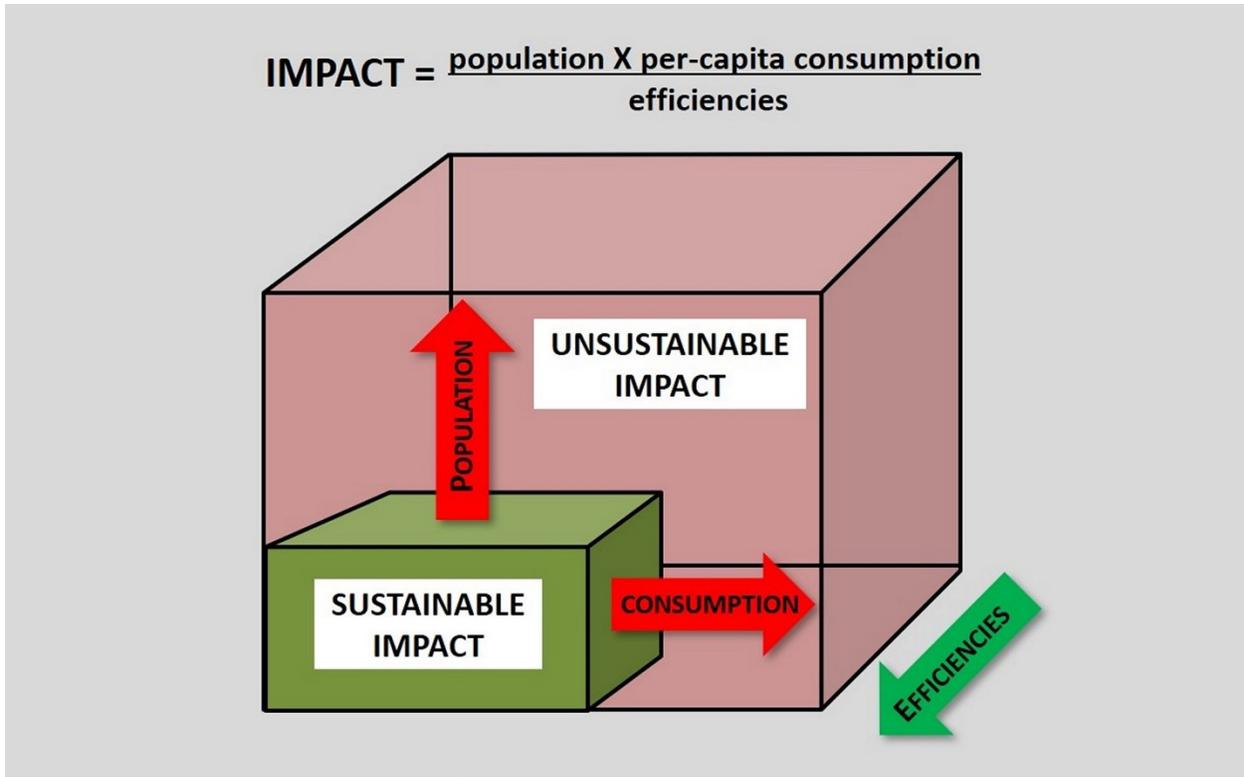


Figure 3-1. The IPAT formula

In this diagram the two boxes represent sustainable and unsustainable impact levels. The three IPAT factors are represented by the three dimensions of each box. Their overall environmental impacts are represented by their volumes.

Starting with the box representing sustainable impact, an increase in per-capita consumption will increase its width, hence its volume and total impact. Increasing population will increase the box's height, thus again volume and impact. Increasing efficiencies, however, will reduce the box's depth, which means that both volume and impact will decrease. Briefly stated, humankind's environmental impact increases when either per-capita consumption or population increases, and decreases when efficiencies increase. Because the IPAT factors apply to both the GHG crisis and non-GHG harms, they are central to the rational crisis response.

C. RATIONAL MEASURES FOR THE GHG CRISIS

The futility of GHG measures to date is clearly evident in the [Keeling curve](#), which tracks the atmosphere's CO₂ concentration over time. See figure 3-2.

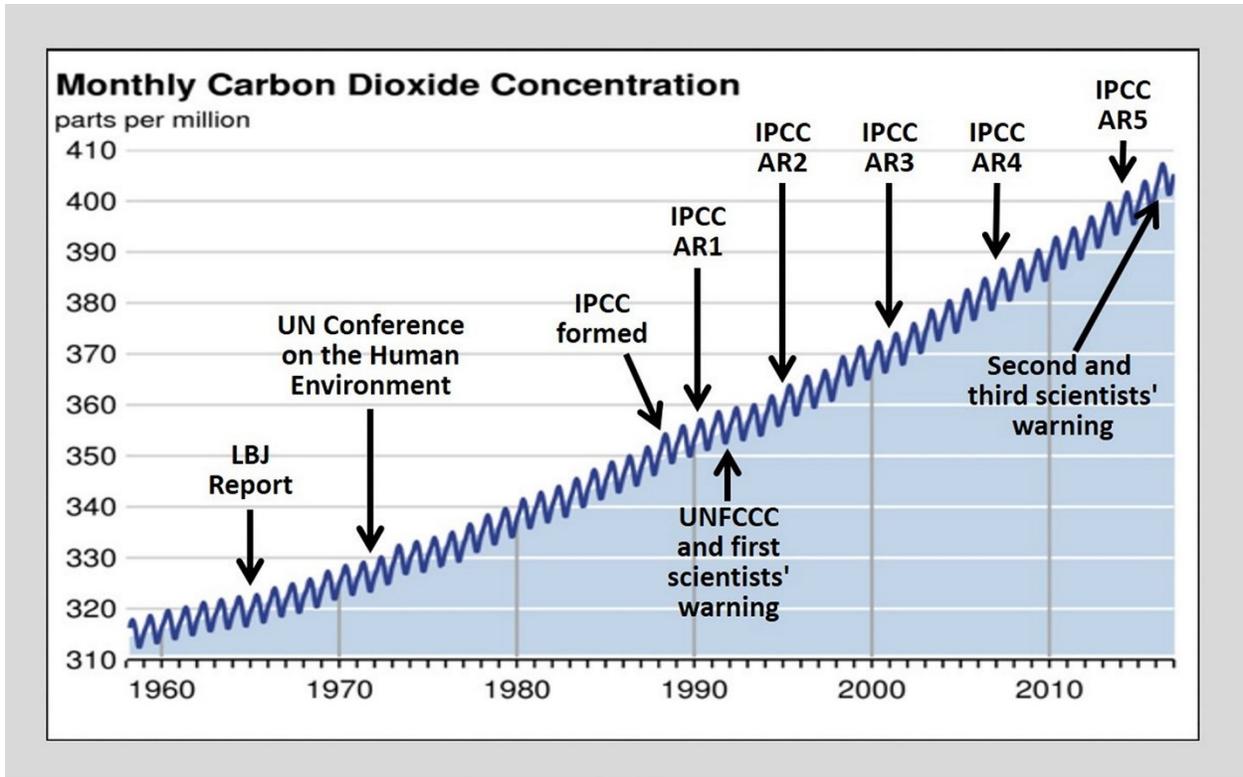


Figure 3-2. The Keeling curve

Note that the level has risen rapidly and consistently, at a slightly accelerating rate. This occurred despite an authoritative warning to the U.S. government in 1965 (the [LBJ report](#)), the formation of the IPCC in 1988, the UNFCCC's ratified commitment to safe concentrations in 1994, countless scientific and diplomatic conferences, numerous research reports, and increasingly panic-stricken warnings from scientists. ***There is no indication whatsoever that this futility will end.*** Unless rational measures are quickly implemented, PONRs will soon be reached and youth genocide will unfold. For the young, the Keeling curve is the curve of betrayal, suffering, and death.

What is the rational way forward? First, divide the problem into its two basic categories: current impact and past damage. Then, apply the IPAT measures to current impact and whatever remedial measures are necessary for damage repair. See figure 3-3.

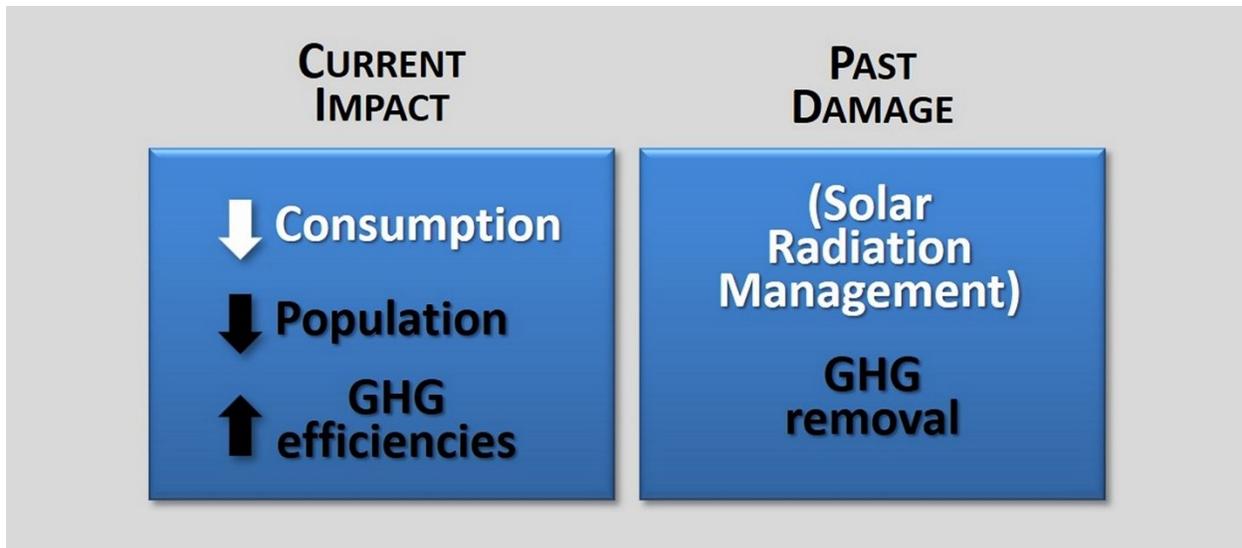


Figure 3-3. Rational measures for the GHG crisis

For the GHG crisis, current impact means emissions. These can therefore be reduced through the IPAT measures, as shown at left. Reduced consumption is listed first because of its massive potential for moderating the crisis. The rich world currently overconsumes to an obscene degree. Given a revolutionary shift and sound social leadership, this behavior and its associated emissions could be swiftly and sharply curtailed.

The white font for reduced consumption indicates that this measure can be implemented relatively quickly: a sustainable leadership could simply decree that superfluous and environmentally dangerous outputs will no longer be produced. Reducing population, by contrast, involves major shifts in social policy and personal behavior, and would likely take decades to have a significant impact effect. The third measure, higher GHG efficiencies, has long been a social focus, so further improvements will likely be gradual.

Despite its delayed effect, the long-term potential of population reductions in the rich world must be fully exploited. A [2017 study](#) showed that, for individuals, the decision to have one less child was by far the most effective way to reduce emissions. Annually this would save about 59 tonnes of CO₂-equivalent emissions per year. The next most effective measure was living car-free, which would save 2.4 tonnes per year. This is a ratio of almost 25-to-1.

Let me now turn to past damage from GHGs. This refers to the emissions that have accumulated in the atmosphere since the Industrial Revolution, resulting in today's unsafe concentrations. The two measures listed in figure 3-3 are solar radiation management (SRM), which blocks solar radiation, and greenhouse gas removal (GGR), which extracts GHGs from the atmosphere. In combination these are called *geoengineering*. Because this topic has been wildly distorted, let me present the basic science. See figure 3-4.

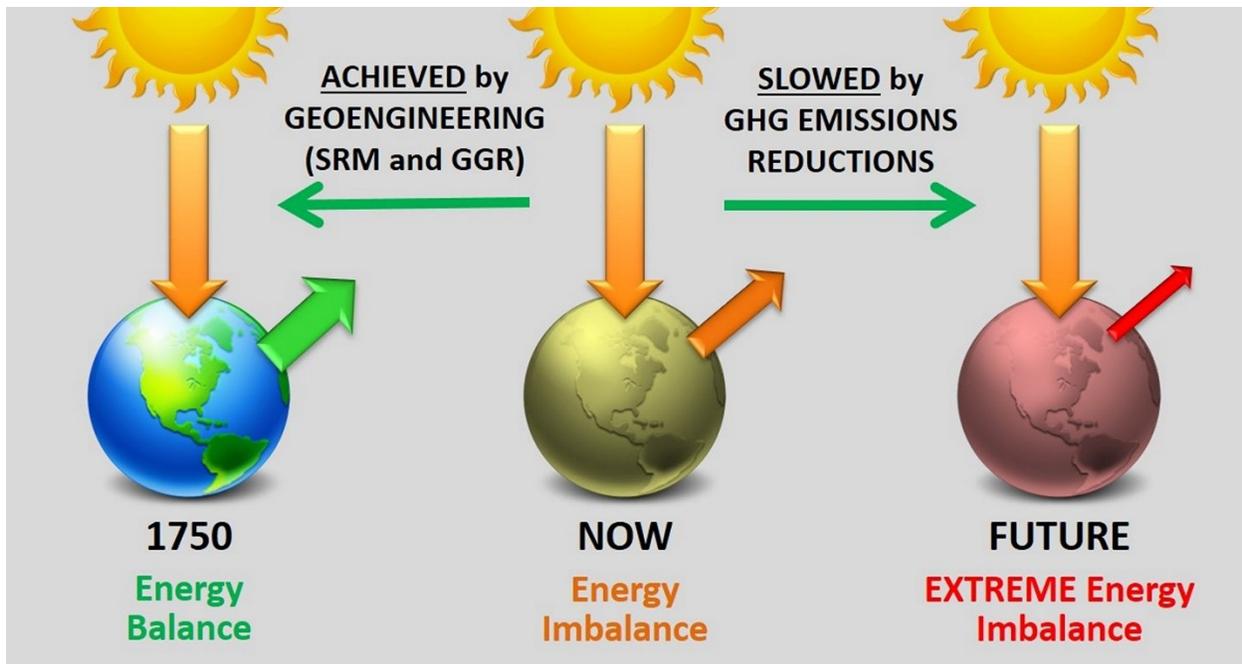


Figure 3-4. Energy balance and geoengineering

The key concept is *energy balance*. In the pre-Industrial period, as shown at left, the energy flowing from the Sun to the Earth was equal to the energy flowing from the Earth to space. The planet's energy was therefore in balance, which means there was no global warming. As emissions piled up and concentrations rose, the heat escaping the Earth was increasingly blocked. As shown at center, this resulted in today's disastrous energy imbalance and its associated global warming. Further increases to this imbalance, as shown at right, would be calamitous.

The two green arrows at top are critical for developing rational measures. The arrow at left shows what geoengineering accomplishes: *it restores the energy balance that was lost as concentrations rose*. The arrow at right shows what GHG emissions reductions achieve: *they slow the increase in the energy imbalance*. To restate these critical facts:

1. Geoengineering restores the Earth's energy balance and thus *reverses* global warming;
2. Emissions reductions *slow the rate* of global warming, but cannot reverse it.

Returning to the measures in figure 3-3, note that SRM is in brackets and printed in a white font. As with consumption reductions, the white font indicates that SRM can be implemented almost immediately. There are few technical impediments, and the cost is strikingly low. The brackets indicate that SRM is not a true solution. It is instead a stopgap measure to prevent runaway global warming and thus buy humankind the time it needs for emissions reductions and GGR.

Another important point is that the GGR component of geoengineering will to some degree reverse ocean acidification. Withdrawing CO₂ from the atmosphere will cause a portion of the dissolved gas to be expelled from ocean waters. This means that *the combination of SRM, emissions reductions, and GGR will address the full range of harmful GHG effects, and thus the GHG crisis as a whole*.

Numerous objections to geoengineering have been raised. The most important of these are discussed in my post, "Geoengineering: the Arguments" ([section I](#)). Be aware, however, that this approach is seldom addressed in an honest and objective manner. This is particularly true for SRM, which is typically isolated from the other GHG measures and then demonized as a crazy "techno-fix". The plight of the young as they move unprotected into a perilous future is never seriously considered. The fact that most of them live in the Global South, which is highly vulnerable to GHG-based disasters, is widely ignored.

An important complication must be addressed before I proceed to non-GHG harms. Above I have been careful to refer specifically to GHG emissions. This is because "emissions" by itself typically refers to both GHGs (gases) and aerosols (suspended solids or liquids). Unlike GHGs, aerosols have a cooling effect. This means that lowering emissions as a whole will reduce the warming from GHGs, but also the cooling from aerosols. On this basis, the document "Climate Reality Check 2020" ([section I](#)) alarmingly states that reducing fossil-fuel emissions will have little or no impact on the current warming trend for at least the next two decades.

D. RATIONAL MEASURES FOR NON-GHG HARMS

These measures follow the same pattern as for the GHG crisis: first divide the problem into current impacts and past damage, and then apply IPAT measures to the first and remedial measures to the second. See figure 3-5.

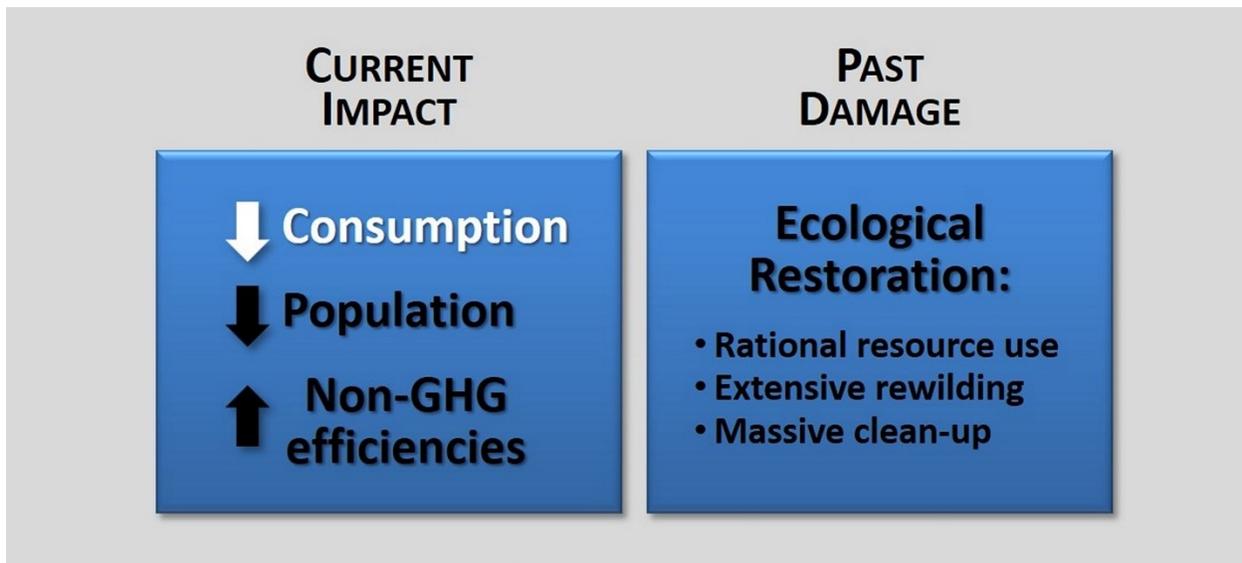


Figure 3-5. Rational measures for non-GHG harms

The three IPAT measures at left differ from the GHG crisis only in that increased efficiencies apply to non-GHG factors. Examples include reduced land and water inputs for the same food outputs, and less environmental degradation for the same forest, fishing, or mining production.

Regarding past damage for non-GHG harms, this includes habitat destruction, ocean degradation, chemical toxification, and atmospheric pollution, all of which are now undermining

the fabric of life. Repairing such damage, to the degree this is feasible, is called *ecological restoration*. Among the required measures are the abandonment of industrial modes of resource extraction and the Earth's extensive *rewilding*: the return to nature of the land and ocean spaces that have been so destructively colonized by humankind. It will also be necessary to remove wastes such as plastics from the ocean, pollutants from lakes and rivers, and industrial chemicals from landfills and dumps.

E. THE RATIONAL CRISIS RESPONSE

The combination of rational measures for the GHG crisis and non-GHG harms constitutes the rational response to the ecological crisis. See figure 3-6.

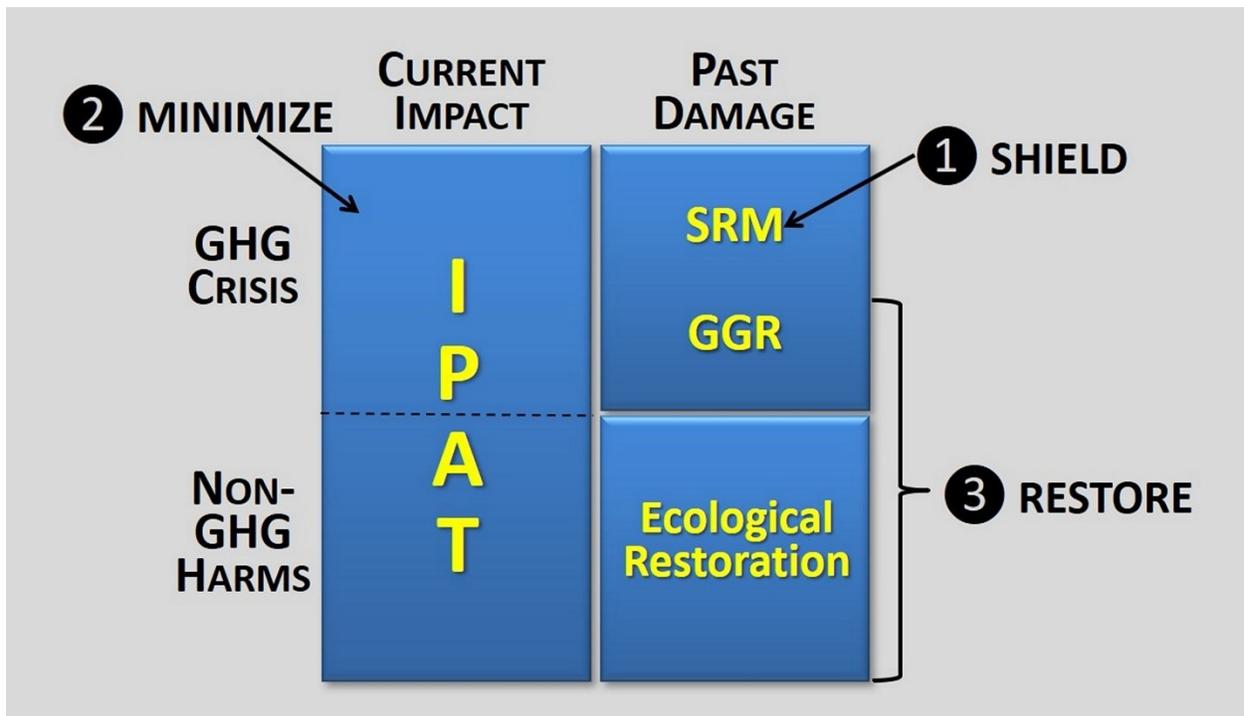


Figure 3-6. The rational response to the ecological crisis

For simplicity, the three IPAT factors have been combined. The rational response is therefore reduced to four broad measures: IPAT to address humankind's current impact, SRM and GGR to address past GHG damage, and ecological restoration to address past non-GHG damage.

The rational response can also be presented through the slogan, "Shield, minimize, and restore". As shown in the diagram, "shield" refers to stopgap SRM protection, "minimize" to the IPAT factors, and "restore" to the combination of GGR (which restores a safe atmosphere) and ecological restoration in the broader sense.

The rational response is based on two assumptions: the measures are treated as a coherent solutions set and not as isolated measures, and capitalism has been replaced by a post-expansionary economic system.

These assumptions mean that measures such as SRM and CCS (carbon capture and storage) cannot be treated as standalone solutions, and they cannot be evaluated within the capitalist context. As an example of the latter, the standard progressive objection to CCS is that fossil-fuel companies will use increased carbon efficiencies as an excuse to continue fossil-fuel extraction. Under capitalism this is likely true, but it is irrelevant to the rational response. Like SRM, CCS makes sense only in the context of the response as a whole, and only under rational economic conditions.

F. DECEPTIONS: SOLUTIONS TO THE GHG CRISIS

In [chapter two](#) I summarized the main deceptions relating to the problem side of the GHG crisis. Here I outline those relating to its solutions. As before, I start with terminology because this establishes how we communicate and understand.

- **MISLEADING TERMINOLOGY**

- a. The IPCC defines "mitigation" as a human intervention to reduce GHG emissions or enhance their sinks by natural or technical means. Despite this, many climate scientists use the word in reference to reduced emissions alone. GGR, which is necessary for youth survival, is thereby expunged. As well, when scientists tell us to "mitigate and adapt", we cannot know what they actually mean, or even if they have a consistent understanding among themselves.

- b. "Negative emissions" has entered the GHG lexicon as an alternative to GGR. This term is potentially misleading because it falsely suggests that emissions must decline to zero before GGR is implemented. I strongly urge the young to use "GGR" exclusively.

- **EMISSIONS FALLACY**

The core deception about the GHG crisis is the *emissions fallacy*: the false claim that the crisis can be solved by reducing emissions instead of concentrations. For example, Michael Mann has said that the drive to reduce emissions means that "the fire brigade has arrived". However, reducing emissions simply means that *the intensity of the planetary fire will increase more slowly*. Mainstream climate scientists either don't know, or don't care, that this "solution" implies the incineration of the young.

- **NET-ZERO EMISSIONS AS GOAL, NOT MILESTONE**

Reaching net-zero emissions would be a joyous occasion because it is a milestone on the road to safe concentrations. However, it is not a valid goal. Emissions are concentration additions, so deadly concentrations will continue to rise until net-zero is achieved.

- **CONCENTRATION STABILIZATION AS THE GOAL**

The 1992 UNFCCC agreement committed the world to stabilizing GHG concentrations "at a level that would prevent dangerous ... interference with the climate system." Today many climate scientists drop the "level" part and treat stabilization itself as the goal. This

is absurd because, as noted next, it falsely assumes that an elevated but stabilized temperature is safe.

- **TEMPERATURE TARGETS**

Temperature targets are invalid for the simple reason that they ignore the duration factor in the ecological damage function. Recall that there are three damage factors: speed, magnitude, and duration. Ignoring the last of these is like a physicist dismissing the third dimension of space.

- **LIMITING GGR TO TEMPERATURE OVERSHOOTS**

The IPCC's [1.5° C report](#) finally admitted that GGR is an essential measure, but only because several of its emission scenarios exceeded the 1.5° target. The organization's GGR support is thus restricted to upholding its bogus temperature targets, not extracting the unsafe GHGs that threaten the global young.

- **SRM DENIAL**

Conventional sources correctly point to denial of the GHG crisis as a scourge, but they exclusively criticize *problem* denial. Today the far more dangerous form of denial is the refusal to seriously consider workable *solutions*. The most significant refusal relates to SRM - the only measure that can save the young from runaway warming while concentrations are slowly reduced. The absence of any rational, youth-oriented discussions on this topic is an unmistakable sign that social leaders are committed to their ecocidal path and must be replaced through revolutionary action.

G. LEADERSHIP CONSIDERATIONS

1. Recall from [chapter one](#) that, with respect to the ecological crisis, climate science can be trusted only for its honestly conducted research. Because the rational response also requires careful economic, political, and strategic analysis, formulating this response is well beyond its purview. Science will be necessary to develop and implement the technical solutions, but you and your carefully vetted supporters must decide what these solutions will be.
2. Several of the diagrams in this chapter are simple but useful conceptual tools. As with the ecological damage function in [chapter two](#), these would be widely employed if sustainability were the true goal. Because this is not the true goal they are typically ignored, which means you must introduce them yourself. If you fail to do so, you and your movement will be conceptually handicapped.
3. Don't be fooled by scientists who tout solutions that may be technically feasible under ideal conditions, but that cannot be implemented either in the time available or in the capitalist context. Such claims are common because they maintain public confidence in the prevailing order and avert your gaze from revolutionary change. A related ploy is to insist that more research is needed to predict precisely how environmental degradation will proceed. Although this has some value for adaptation purposes, it leads to passive observation as the disaster unfolds.

H. KEY POINTS

- Humankind's rational response to the ecological crisis is to minimize our current environmental impact and repair the damage we have already done.
- Based on the IPAT formula, environmental impact can be lowered by reducing consumption and population, and by increasing efficiencies. Sharp reductions in rich-world consumption are especially important because they can happen quickly and would significantly decrease both GHG emissions and non-GHG harms.
- In addition to GHG emissions reductions through CCS and other efficiencies, solving the GHG crisis will require massive GGR to reduce concentrations to safe levels, plus SRM to minimize the risk of tipping points and PONRs while GGR proceeds.
- Reducing non-GHG harms will require the three IPAT measures, but also ecological restoration: the abandonment of industrial modes of resource extraction, the Earth's extensive rewilding, and the removal of wastes and pollutants.
- Solutions to the GHG crisis have long been subject to a wide range of deceptions. The key ones are the emissions fallacy, which claims that the solution is reduced emissions instead of safe concentrations, and SRM denial, which robs the young of their only chance to avert ecological collapse as unsafe GHGs are removed.
- Briefly stated, the rational response to the ecological crisis is to ***shield, minimize, and restore***. Humankind must first shield itself from dangerous solar radiation with SRM. It must then minimize its current environmental impact while also repairing the damage it has already done.

I. FURTHER READING

EXTERNAL BOOKS AND DOCUMENTS

[*Green Illusions: The Dirty Secrets of Clean Energy and the Future of Environmentalism*](#) - Ozzie Zehner (2012)

The first half of this book is an excellent critique of "green" energy. The second half, which discusses the future of environmentalism, is far weaker. For a synopsis of Zehner's views on "green" energy, see the documentary film, [*Planet of the Humans*](#).

[*A Case for Climate Engineering*](#) - David Keith (2013)

Keith is a leading voice on climate engineering (SRM). Here he discusses the most prominent method, stratospheric aerosol injection, which spreads sulfate particles high in the atmosphere and blocks a small fraction of the sun's radiation.

[*Climate Restoration: Solutions to the greatest threat facing humanity and nature today*](#) - The Foundation for Climate Restoration (2019)

This document candidly asserts that CO₂ must decline from its current level to around 300 ppm, which will require the removal of a trillion tons of CO₂ from the atmosphere. It then presents

the technologies that are *currently available* for achieving this monumental task. The document thus counters those who insist that GGR relies on futuristic, unproven methods.

[Climate Reality Check 2020](#) - Breakthrough: National Centre for Climate Restoration (2020)
This is a useful synopsis of the GHG crisis, in part because it highlights the dilemma posed by aerosol pollution, which has a cooling effect but impairs human health.

[Global Warming Acceleration](#) - James Hansen and Makiko Sato (2020)
The authors state that global warming has recently accelerated, and that only aerosols can explain this sudden change. Their estimate of the "masking" effect of aerosols is roughly double that of the IPCC.

WEBSITE POSTS

[The Emissions Fallacy](#) - Explains that a dual strategy was required once concentrations became unsafe: reduce emissions AND concentrations.

[Mainstream emissions reductions, or how to do NOTHING](#) - Demonstrates that the standard approach, emissions reductions, addresses *less than one percent* of unsafe GHG concentrations.

[Geoengineering: The Facts](#) - Uses several official documents to explain the basic facts about geoengineering.

[Geoengineering: The Arguments](#) - Examines the valid and invalid arguments surrounding this controversial measure.

[Bending the Wrong Curve: the IPCC's Ecocidal Strategy](#) - Criticizes the IPCC's fatal approach: bending the emissions curve to net-zero rather than the concentrations curve to a safe level.

[The IPCC's 1.5 Report is a Strategic Lie](#) - Refutes the concept of a temperature target and establishes the validity of the safe-concentrations goal.

[The True Danger is SOLUTIONS Denial](#) - Asserts that the critical problem today is not denial of the GHG problem, but of its valid solutions. The post also points out that the IPCC avoids solutions analysis, which allows it to ignore critical issues like the Arctic meltdown.

[Net-zero Emissions is a Milestone, not a Goal](#) - Proposes a rational plan for emissions reductions and GHG removals.

Chapter 4

Aspects of human nature you must consider

Human nature refers to our biologically evolved attributes - both mental and physical. This topic is addressed here for three reasons:

1. Two of these attributes, our material interests and mental capacities, are highly relevant to sustainability. They must therefore be carefully considered by youth leaders in developing and implementing a survival strategy. These aspects are addressed in the present chapter.
2. Humankind's innate tendencies have been systematically exploited by social leaders to shape the populace's thought and behavior so as to prevent revolutionary change and the rational crisis response. These methods are examined in [chapter five](#) in the context of political power and social control.
3. Assuming their survival, the young will have to transform today's societies into ecologically and socially viable societies. This fundamental restructuring can succeed only if the core realities of our species are fully acknowledged. I consider this aspect of human nature in [chapter eight](#) when discussing the post-capitalist world.

A. HUMANKIND AS A BIOLOGICAL SPECIES

Modern humankind has a biological heritage that goes back roughly five million years. For over 99% of this time we lived as hunter-gatherers, starting in East Africa. Only in the last 10,000 years, as a globally dispersed species, have we adopted an agricultural and civilized (city-based) mode of life. Karl Marx made a gross error when he ignored these realities and defined human nature purely in terms of social relations. ([Theses on Feuerbach](#) - 160KB PDF)

This blunder was adopted by progressive thinkers and now infects many of the young as well. Peter Singer is therefore correct in saying that, "It is time for the left to take seriously the fact that we are evolved animals, and that we bear the evidence of our inheritance, not only in our anatomy and DNA, but in our behavior too." (*A Darwinian Left*, p. 6 - see [section G](#))

Joel Kovel, a prominent ecosocialist, echoes this view in *The Enemy of Nature*: "... the notion of human nature is necessary for any in-depth appreciation of the ecological crisis, and its lack is a sign of the crisis itself. In the absence of such a view, humanity is severed from the remainder of nature, and a genuinely ecological view is replaced by mere environmentalism." (p. 107)

Briefly stated, all organisms are self-interested with respect to their survival, shelter, consumption, etc. Human beings are no exception, so our material interests are both necessary and inherent. They can be shaped and inflamed, but they can't be extinguished.

Also significant is the fact that human nature has a wide range of expression, and that some people are more self-interested than others. To quote Singer again, "... many people will act competitively in order to enhance their own status, gain a position of power, and/or advance their

interests and those of their kin." (p. 61) Under an expansionary system like capitalism such tendencies are often dangerously intensified.

B. BIOLOGICAL HUMANKIND: STRATEGIC IMPLICATIONS

1. Given their material interests, the global poor seek economic growth to achieve adequate consumption, and the global rich seek growth to maintain or increase their overconsumption. Economic expansion is thus universally desired, which means that the contraction required for sustainability will meet widespread opposition. A survival strategy must therefore exploit humankind's *non-material* motivations. Among these are the anger and defiance of the young, the ethical commitments of the older, and the military's professional duty to protect the populace from existential threats.
2. Because economic expansion is driven by human nature, ecological overshoot was virtually impossible to avoid. This implies that today's social leaders must be removed from power not because they caused overshoot, but because they failed to respond rationally once it had occurred.
3. In the rich world, authoritarian measures will initially be required to reduce consumption to sustainable levels. Eventually, population can be reduced and various social and personal activities can replace overconsumption as sources of human satisfaction. In the short-to-medium run, however, strict regulation of consumption will be unavoidable. This will likely trigger strong and perhaps violent opposition that must be anticipated and humanely but firmly subdued.

C. HUMANKIND AS AN ECOLOGICAL SPECIES

The longstanding story about modern humankind's gestation in East Africa is called the [savannah hypothesis](#). This states that, as the regional climate became cooler and dryer millions of years ago, several ape species left the dwindling forests, shifted from knuckle-walking to bipedalism, and started new lives on the sparsely-treed plains. Their struggle to survive among the dangerous creatures that shared this habitat sharpened their wits and produced the language, culture, and tool-making that characterize our species, *Homo sapiens*.

This hypothesis has been strongly challenged in recent decades, most notably by paleoanthropologist Rick Potts, who directs the Human Origins Program at the Smithsonian Institution. His conclusion, based on decades of field research in East Africa, is that the decisive factor in our development was not adaptation to a specific environment like the African savannah, but rather adaptation to the region's rapid environmental changes.

According to this *variability hypothesis* of human evolution, we developed a highly flexible, general-purpose brain that could extensively modify our surroundings to maintain survivable conditions in the face of extreme environmental instability. See figure 4-1.

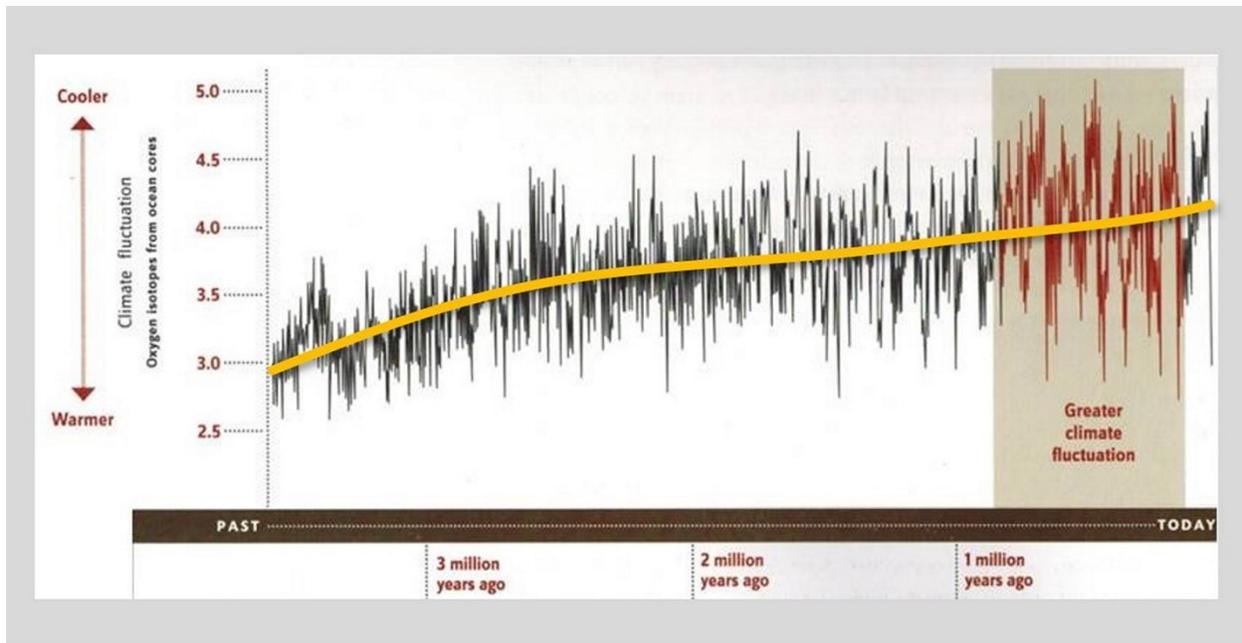


Figure 4-1. Humankind's ecological nature

This graph depicts the major environmental changes in East Africa over the last 3.5 million years. Two distinct patterns are visible: a long-term trend towards cooler and wetter conditions (yellow curve), and sharp variations around this trend. The savannah hypothesis assumes that the long-term trend is the only evolutionary force, and that the variations are inconsequential noise. The variability hypothesis instead considers both signals, with the sharp variations playing the dominant role in humankind's early development.

This fairly recent proposal helps us identify the evolutionary roots of ecological overshoot. Humankind's flexible and powerful brain permitted our adaptation to a wide range of conditions, and our biological drives impelled us to colonize the entire planet. Because there are no evolutionary pressures to keep our impact within the Earth's environmental limits, our expansion was unimpeded and overshoot was almost impossible to avoid.

D. ECOLOGICAL HUMANKIND: STRATEGIC IMPLICATIONS

1. The variability hypothesis contradicts the frequent claim that humankind evolved to deal effectively with immediate threats - the proverbial tiger in the bush - but that we are incapable of dealing with slow-moving, long-term perils such as environmental degradation. The new hypothesis by contrast indicates that our brains evolved not just to evade dangerous animals, but also to carefully consider the future, produce detailed plans, and act judiciously. This implies that, at least with respect to our mental abilities, we have the capacity to both cause *and solve* the crisis we face.
2. The new hypothesis accurately locates humankind within the natural realm. We are deeply embedded within nature, but in a manner that differs decisively from all other species. Ours is the only general-purpose, highly intelligent brain with the capacity to

rapidly transform the global environment. We are therefore a unique species within the animal kingdom.

3. The variability hypothesis is also significant because it suggests that our adaptive flexibility is not boundless. Humankind evolved to deal with natural environmental variations, not with those that have been strongly amplified by our own actions. It is thus likely that the speed and scale of these changes will soon overwhelm our evolved capabilities. The clear implication is that we must do everything possible to prevent or moderate these changes by quickly implementing the rational crisis response.

E. LEADERSHIP CONSIDERATIONS

1. Don't be swayed by progressive arguments that human nature doesn't exist or is irrelevant, and that only social and cultural factors matter. Progressives typically ignore human nature because it restricts the social improvements they seek. You, on the other hand, must carefully consider biological realities because they will severely constrain the fundamental social shifts required for ecological survival and a sustainable future.
2. Avoid the error I made in my 2013 book, [Contractionary Revolution](#) (2MB PDF). At that point I still had a progressive mindset and thus envisaged a bottom-up revolution similar to the working-class revolutions of the past. Soon after completing the book I realized that workers were spurred primarily by the poverty and squalor of early capitalism. They revolted to take control of the capitalist growth machine in order to channel the material benefits to themselves. Because such pro-growth motivations are disastrous in the environmental realm, a different mode of revolutionary change is now required.
3. Reject the conclusions of conservative academics if these are inconsistent with the scientific evidence, as they frequently are. For example, both E.O. Wilson and Steven Pinker make a logical error about human nature that reflects their conservative bias. (See [section G](#).) They correctly state that social choices are biologically constrained, but then claim that, given these constraints, contemporary societies cannot be radically altered. This is a non sequitur. As explained above, the human lineage spent 99% of its history as hunter-gatherers. This is the past that is most indelibly imprinted on our genes and brains. If Wilson and Pinker were consistent, they would acknowledge that capitalist civilization is an extreme departure from this ancient heritage, and that revolutionary change might allow us to reconnect with our deepest biological traits.
4. As just indicated, human nature is a vexed topic that is strongly tied to personal views. Be aware of this debate, but don't become ensnared by its subtleties. Whatever the complex truth about human nature, your practical task is clear: achieve rational control of our economies and societies so that overshoot can be reversed for youth survival.

F. KEY POINTS

- Humankind is a biological species with a long history as hunter-gatherers: "carnivorous primates of the African plains". ([Wilson, p. 97](#)) This past is imprinted on our genes

and brains, and interacts in numerous ways with the social and cultural influences we daily experience.

- Given their material interests, both the global poor and global rich seek to increase their consumption. This strong tendency runs directly counter to the economic contraction required for sustainability. A youth survival strategy must therefore exploit our non-material motivations.
- Humankind's material interests strongly imply that the initial phase of the transition to sustainability will be authoritarian. Before our species can adjust socially and culturally, reduced consumption must be strictly but humanely enforced by social leaders.
- The human brain evolved in part to deal with rapid climatic changes in East Africa during our hunter-gatherer stage. This resulted in a powerful, general-purpose brain that is capable of both destroying the environment and formulating a rational survival plan. It also means that, although humankind is part of the natural world, it is an exceptional and dominant part.
- Just as natural limits constrain our ecological freedom, human nature constrains our social freedom. To be workable, a survival strategy must carefully consider these restrictions.

G. FURTHER READING

EXTERNAL BOOKS AND DOCUMENTS

[*On Human Nature*](#) - Edward O. Wilson (1978)

Wilson rejects the dominant assumption of the social sciences: that our social behavior is purely cultural rather than resting on a genetic foundation. Like Pinker (below), he uses his valid biological conclusions to defend the ecocidal status quo.

[*Humanity's Descent: The Consequences of Ecological Instability*](#) - Rick Potts (1996)

As described above, Potts outlines his research in East Africa, which led him to conclude that humankind's unique brain is a consequence of the region's rapid environmental changes.

[*A Darwinian Left: Politics, Evolution, and Cooperation*](#) - Peter Singer (1999)

This slim but significant book offers a clear explanation of human nature by a progressive thinker. This is a key statement: "Belief in the malleability of human nature has been important to the left because it provided grounds for hoping that a very different kind of human society is possible. Here, I suspect, is the ultimate reason why the left rejected Darwinian thought. It dashed the left's Great Dream: The Perfectibility of Man". (p. 24)

[*The Blank Slate: The modern denial of human nature*](#) - Steven Pinker (2002)

Although Pinker is highly conservative and strongly opposes environmentalism, his book is a lucid companion to Wilson's *On Human Nature* (above).

[*A Short History of Progress*](#) - Ronald Wright (2004)

Wright fully accepts humankind's biological nature, but emphasizes that culture has become a powerful force leading our species to ecological destruction. Citing the Mayan collapse as a precedent, he warns that social leaders will respond to the ecological crisis by digging in their heels and doing what they have always done, only more so.

WEBSITE POST

[The Material Interests Driving IPCC Support](#) - Explains that the global rich continue to support the IPCC despite its objective failure because the organization safeguards their current overconsumption.

Chapter 5

The political realities you must confront

This chapter is longer than the rest because its subject matter is rarely addressed and is thus unfamiliar to most. I apologize for the length, but feel that the information provided is indispensable for revolutionary change and youth survival.

A. THE STRUCTURE OF CAPITALIST POWER

To this point I have referred to the holders of political power as "social leaders". This term was adequate for previous discussions, but it is unsuitable for strategic purposes. Figure 5-1, which depicts the structure of power in a capitalist society, identifies these leaders with greater precision.

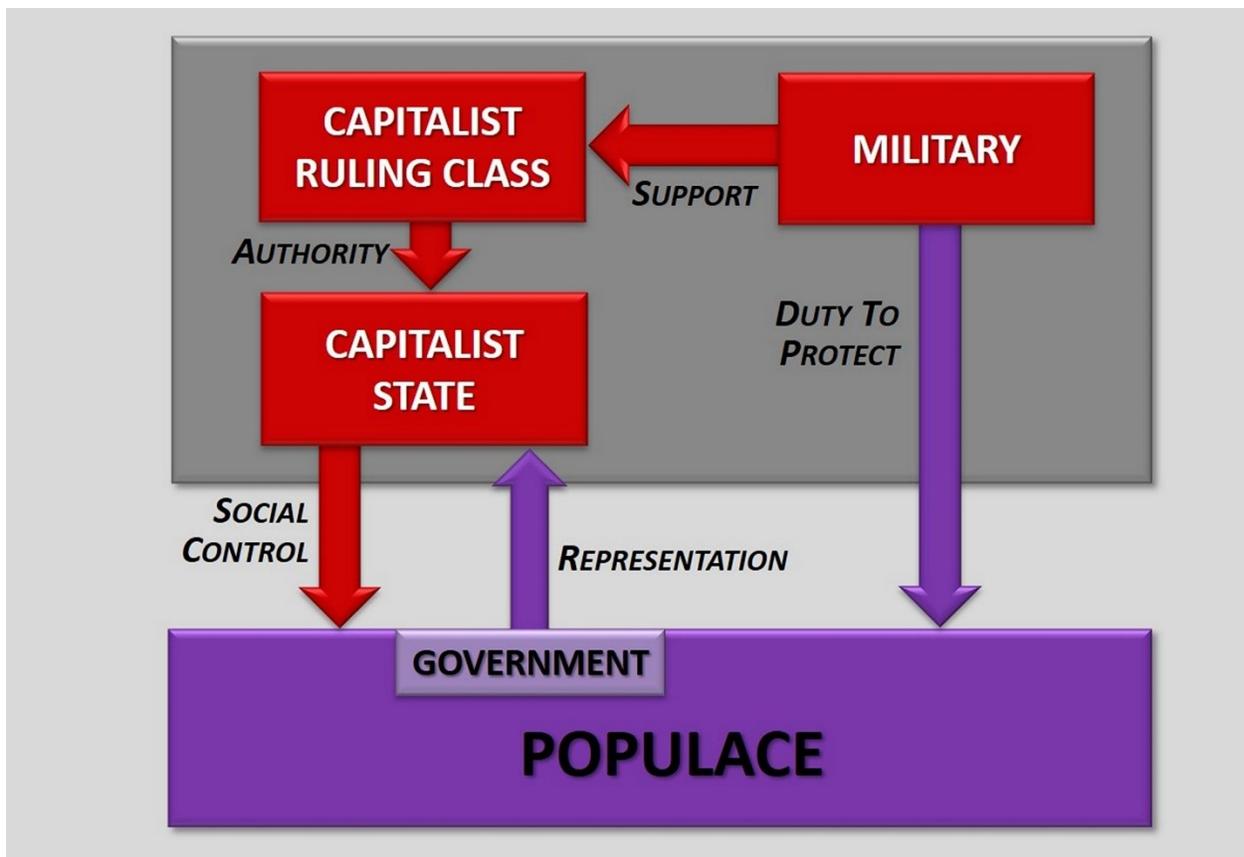


Figure 5-1. Political power under capitalism

At the bottom of this diagram is the familiar world of electoral politics. The standard story is that government holds political power, the populace elects government, so the populace

indirectly rules society. If people are dissatisfied they can elect a new government with better policies. The ecological crisis can thus be solved through electoral politics and "political will".

This story is categorically false, and probably the most significant impediment to the ecological survival of the young. History makes it abundantly clear that, although governments have influence, they lack political power. Whenever a government has seriously thwarted dominant social groups it has been replaced by a more compliant version. If the young fail to see where power actually lies they will be unable to identify both the social elements driving their genocide and those that might help prevent it.

The top part of figure 5-1 depicts the reality of political power in a capitalist society. I will first present the overall structure by identifying its components and then add some clarifying comments. For details see my document, [A Political Primer](#).

CAPITALIST RULING CLASS

The core element is the *capitalist ruling class*: society's major capitalists organized as a political force to advance their shared interests. This group rules in the sense that it imposes its worldview, economic logic, social structure, and chosen path of historical development on the rest of society. Its members are those previously referred to as "social leaders".

MILITARY

The *military* has both a critical role and a core responsibility. Its critical role is to provide the physical force that underpins the political power of the ruling class. Its core responsibility is to safeguard the populace from existential threats. As will be explained in [chapter six](#), the relationship between the military's role and its responsibility is now of great strategic significance.

CAPITALIST STATE

The ruling class asserts its social dominance by delegating authority to the *state*. This term refers to the economic and political institutions, administrative structures, and instruments of coercion that implement social control, and that regulate a society's functioning in accordance with capitalist interests. Although the military is part of the state, it is separated here to underscore its unique political and strategic roles.

SOCIAL CONTROL

Social control refers to the state's management of the populace's thoughts and behavior for capitalist ends. Because revolutionary change is possible only if this control is overcome, it is discussed in more detail in [section C](#).

GOVERNMENT

Government serves both the populace and the ruling class. It serves the populace by allowing people to express their views, concerns, and demands, thereby pressuring the state to make the desired changes. It serves ruling-class interests primarily by facilitating the *democratic illusion*: the deeply entrenched but mistaken belief that the populace holds political power.

The following are important points of clarification:

- The young are not threatened by the above political *structure*. A ruling class or group is unavoidable in a complex society, a state is necessary for social regulation and stability, a military must support the rulers and protect society, and a government must represent the populace. *The political problem for the young is the social force that currently dominates this structure: an ecocidal ruling class instead of a sustainable ruling group.*
- Various terms are used to refer to society's dominant figures, including the 1%, the elite or elites, the oligarchy, the establishment, and the ruling class. In my view the latter is the most accurate and useful of these, and thus replaces the previous term, "social leaders".
- The capitalist class gained political power not by popular choice, but through a protracted and often violent struggle against the former rulers: Europe's feudal landowners. Because capitalists were not elected, they cannot be replaced by electoral means.
- Although the two are distinct, "government" and "state" are typically used interchangeably. This massively mystifies political reality by merging the instrument of popular representation with the delegated authority of the ruling class. To support this conflation, the state is frequently misrepresented as government agencies, the civil service, the federal bureaucracy, or - as in the U.S. - the executive branch of government.
- Government is a two-edged sword for the ruling class. It is essential for maintaining the democratic illusion, but it becomes dangerous if politicians assert their independence from the rulers. To minimize this threat, the ruling class heavily influences government through lobbying, financial payoffs, promises of lucrative positions, and by infiltrating government itself through the election of ruling-class members or subservient stand-ins.
- Two key terms can now be accurately defined. A *coup* is the replacement of a government, typically by military force, when it threatens the power or privileges of the ruling class. A *revolution* is the replacement of the ruling class itself when it threatens the people. In brief, a coup replaces a government to benefit the ruling class, whereas a revolution replaces the ruling class to benefit the populace. A third term, *rebellion*, is less clear-cut but typically refers to the populace's non-electoral replacement of an unpopular government.

B. CAPITALIST POWER: STRATEGIC IMPLICATIONS

Given the above power structure, the young must carefully consider the following implications for their development of a survival strategy.

1. The military is the decisive social element in supporting the ruling class. *The primary strategic requirement is therefore to shift military allegiance from this class to the populace.* As discussed below, this shift is also required to reduce the risk of fascism.

2. *A government cannot implement the rational response to the ecological crisis.* The capitalist state will initially ignore or resist the fundamental changes it proposes. If the government persists, it will be quickly neutralized. Past methods include discrediting it through economic sabotage to ensure its electoral defeat, fomenting a popular or plutocratic rebellion against it, and replacing it through a military coup.
3. Corporations are not the holders of political power. They are *economic* entities and compete with each other on this basis. A revolutionary strategy must focus on the ruling class - the group that *politically* represents the shared interests of society's major capitalists and their allies.
4. The state strongly supports its ruling class. Replacing the latter is therefore insufficient for revolutionary change - the state must be transformed as well.
5. Legal challenges (suing governments, adding ecocide to international law, enshrining rights for nature, etc.) cannot achieve fundamental change. The capitalist state, which controls a society's legal system, will never oppose or undermine its ruling class. The international order, which is based on the global capitalist economy, will never favor sustainability over economic growth. (For a useful overview of the legal strategy by two proponents, see the Guardian articles [in section H](#).)
6. The rational response to the ecological crisis will require the replacement of the capitalist ruling class with a sustainable alternative. My proposed strategy to achieve this aim is discussed in [chapter six](#).

C. METHODS OF SOCIAL CONTROL

Recall from [section A](#) that the ruling class authorizes its state to control the populace for capitalist ends. Because this control underpins ruling-class power, its methods have been perfected by the best minds that capitalist money can buy. It is therefore ingenious, virtually invisible, and devastatingly effective. Unless some light is shed on this dark realm, the young will stumble ineffectually instead of striding with some confidence to their survival goal.

A fundamental point about social control is that its methods, especially in the rich world, are largely psychological rather than coercive. The populace is typically controlled not through physical or mental compulsion, but through the careful exploitation of human nature. Our inherent drives and tendencies provide the psychic energy that is cleverly redirected for social-control purposes. For some fascinating and disturbing details, see the books by Rushkoff and Macknik/Martinez-Conde ([section H](#)).

Figure 5-2 depicts the major social-control methods employed in the capitalist world. It is intended to explain the arrow marked "social control" in figure 5-1 above.

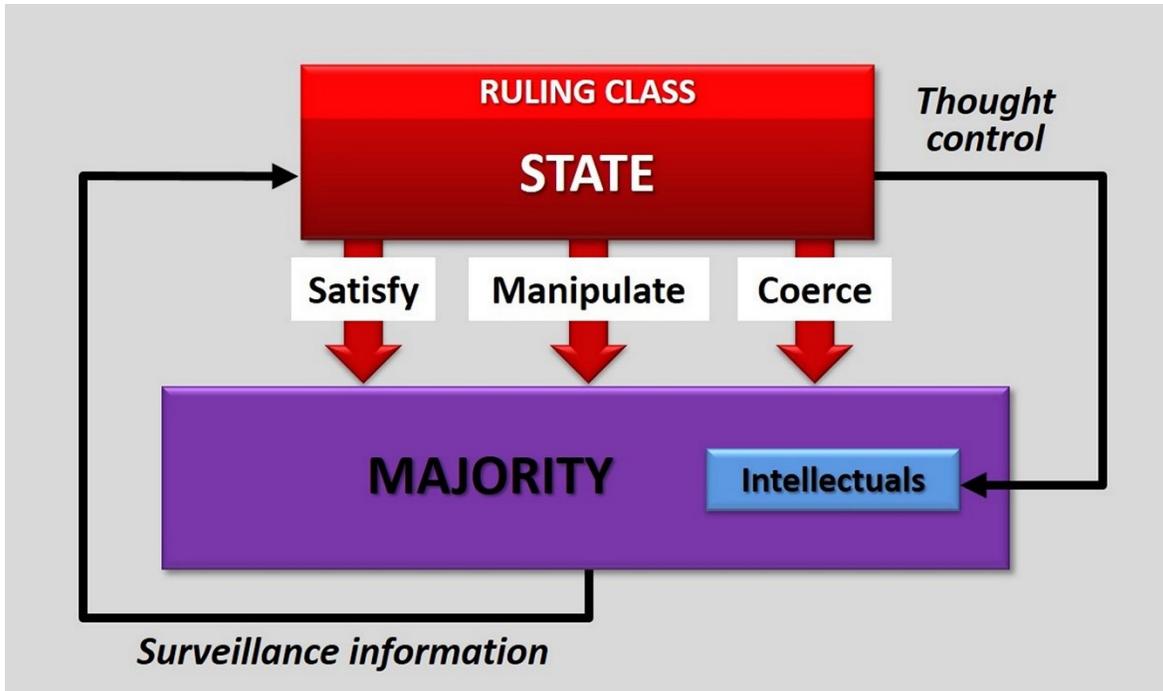


Figure 5-2. Methods of social control

As before, capitalist power is represented by the rectangle at top, and the populace - here divided into intellectuals and the majority - by the rectangle at bottom. The populace as a whole is controlled through four methods: satisfaction, manipulation, coercion, and surveillance. Intellectuals are additionally managed through thought control. The following are brief explanations of these five components. Because coercion is a special case, it is addressed last.

SATISFACTION

The populace's most basic desires are to satisfy their core material interests: survival and life enjoyment. This is sometimes expressed as giving the people "[bread and circuses](#)": sustenance and entertainment. Satisfying these desires is therefore the most basic method of social control. People with full bellies and diverted minds rarely revolt, and they will likely be predisposed to following ruling-class leadership.

MANIPULATION

The satisfaction of basic desires is a solid foundation for social control, but much more is required to make the populace fully useful to the capitalist class. People are thus extensively manipulated, first to remove any remaining revolutionary threats, and second to shape their minds for effective participation in a capitalist economy. The following are the main forms of manipulation:

The pyramid of privileges: Crudely stated, if you serve the capitalist class you will be rewarded, and if you serve it well you will be amply rewarded. This logic leads to a pyramid of privileges that keeps people chasing the next carrot dangled before them, and that deepens their loyalty as they approach the peak.

Social division: A longstanding method of social control is [divide and rule](#): pitting segments of the populace against each other on the basis of race, gender, mode of life,

political orientation, etc. so they don't unite against the rulers. Racism is an instructive example because it derives from the fear of strangers that is rooted in human nature. This fear can be largely negated by a secure and beneficent ruling class, or it can be sharply intensified by one that perceives threats to its power or wealth.

Propaganda: Despite its reputation, "propaganda" is a neutral term that refers to an organized effort to disseminate a belief or doctrine. The capitalist state uses propaganda profusely in education, the media, popular culture, etc. to disseminate the ideas, views, and perspectives that are favorable to capitalism and its ruling class. As discussed in [chapter eight](#), a post-capitalist state will also use propaganda, but with a different set of aims.

Deception: This refers to propaganda falsehoods that are intended to disorient and misdirect the populace. For the young the most significant of these are the democratic illusion and the environmental lies previously discussed. Other deceptions include [false-flag](#) operations and various medical falsehoods that serve power and profits instead of health and well-being.

Fear: Fear impairs rational thought and makes people psychologically dependent on the ruling class for protection. It can be manufactured through inflated threats from foreign enemies, internal saboteurs, disease outbreaks, etc., and it can be deeply implanted through dramatic events. Machiavelli (see [section H](#)) provides a piquant example of the latter. After describing how the powerful Borgia family disposed of a rival by cutting his body in two and placing it in a public square, he commented, "The brutality of this spectacle kept the people of Romagna for a long time appeased and stupefied."

THOUGHT CONTROL

In addition to the control methods that shape the populace as a whole, intellectuals are managed through selection, reward, and punishment. They are carefully selected for their cleverness and compliance, which together determine their potential for serving capitalist interests. They are then rewarded with professional applause and advancement for their ongoing contributions, and punished in various ways if they stray too far from the approved path. This combination establishes a distinct boundary between *permissible thought*, which has ruling-class approval and can be safely expressed, and *impermissible thought*, which lacks such approval and is socially and professionally perilous.

SURVEILLANCE

The state scrupulously monitors the thoughts and activities of the populace for two reasons: to respond quickly to incipient revolutionary threats, and to strengthen its methods of social control. Given today's computer and communication technologies, surveillance is highly intrusive and shockingly comprehensive.

The four social-control methods described above are intended to produce *legitimacy*: the populace's willing support for the ruling class and its social guidance. When this relatively benign approach fails and support is withheld, coercion is used instead.

COERCION

This can be psychological, material, or physical. Examples of psychological coercion are the real or threatened loss of social status, professional shunning in response to

impermissible statements, and the looming possibility of physical violence. Material coercion refers to the threatened loss of income, wealth, security, etc. Physical coercion, which is generally a last resort, involves physical compulsion or violence: prison, injury, or death.

If coercion becomes extreme and democratic rights are routinely violated, capitalist democracy has mutated into *fascism*. This means that fascism is not a standalone ideology, as it is usually portrayed, but rather an alternative mode of capitalist rule. The capitalist class employs the velvet gloves of legitimacy and democracy when possible, but resorts to the iron fists of coercion and fascism when necessary.

In addition to the above, social control is exercised by corporations through their employment practices and their ownership of media and technologies. It is greatly facilitated by family and peer pressures based on the widespread desire to "go along to get along".

D. SOCIAL CONTROL: STRATEGIC IMPLICATIONS

- The populace has been profoundly influenced by the capitalist class and state. This influence will cease only when a new ruling entity is in power and a new mode of social control is applied. Any revolutionary strategy that relies on the prior transformation of the populace's attitudes, values, or worldview is therefore unworkable.
- Because social division exploits deep-seated aspects of human nature, it is highly effective in keeping the populace fixated on superficial conflicts. The young must be taught to look beyond electoral rivalries, race-based conflicts, differences in social attitudes, etc. to focus on the underlying class realities and power relations.
- Because thought control has an iron grip on the minds of intellectuals, few can contribute significantly to the young's strategic development. This underscores my suggested attitude towards them: by default distrust intellectuals for strategic purposes, but treat them as educated employees who can competently perform well-defined tasks. See [chapter six](#) for a preliminary task list.
- The young must urgently shift the military's allegiance from the ruling class to the populace in order to prevent or delay fascism. Democratic norms must be preserved as long as possible for two reasons: to permit the formation of revolutionary movements, and to minimize the human suffering that inevitably accompanies a fascist regime.
- To maintain its ecocidal rule the ruling class regularly employs violence even under democracy, and it will use extreme violence under fascism. It is therefore in no position to condemn the violence that will likely be required for its overthrow. Any such protestations should be dismissed as rank hypocrisy.
- The young should assume that surveillance is pervasive and that their deliberations are carefully monitored by state actors. This means that revolutionary change must be based on an open declaration of principles ([appendix A](#)) and a massive uprising by the young and their supporters.

E. CASE STUDY IN SOCIAL CONTROL: THE IPCC

As noted above, two widely-used social control techniques are propaganda and deception. For young people facing ecological collapse the most significant purveyor of both is the IPCC. Recall from [chapter one](#) that, in 1995, this organization effectively reversed an international commitment to avoid unsafe GHG concentrations. Today it provides pseudo-scientific justification for the genocidal target of net-zero emissions by 2050. The young should therefore understand the specific control methods it regularly employs.

1. **Claiming the mantle of scientific authority (PROPAGANDA)**

The IPCC asserted in 1990 that its first Assessment Report was, "... the most authoritative and strongly supported statement on climate change that has ever been made by the international scientific community." Such self-aggrandizing claims escalated over the years as more scientists became involved. Newspapers like The Guardian have uncritically gone along, repeatedly stating that the IPCC is, "the world's leading authority on the climate". The message to the young is clear: don't even think about questioning this bastion of scientific knowledge and expertise.

2. **Using spurious arguments (DECEPTION)**

The IPCC's 1995 reversal was achieved by telling the world that "dangerous interference with the climate system" can't be objectively defined, hence unsafe concentrations can't be scientifically determined, therefore only emissions reductions can be scientifically addressed. This is a ludicrous argument, and it takes only a moment of honest thought to expose it as a hideous lie.

3. **Sowing confusion #1: good cop/bad cop (DECEPTION)**

This offers the young a false choice with respect to the GHG crisis. A valid choice would include safe concentrations. The choice they are presented with, however, is between the IPCC's emissions reductions (good cop) and the inaction of climate denial (bad cop). Both serve capitalism and growth, which is the point.

4. **Sowing confusion #2: relative improvement vs. absolute solution (DECEPTION)**

Closely related to good cop/bad cop, this approach urges the young to choose the better of two disastrous measures while the rational solution is ignored. For example, sea-level rise of one meter is better than two meters, but both will devastate coastal communities. The ignored solution is to stop the rise by returning to safe GHG concentrations and thus a safe global temperature.

5. **Endlessly repeating "emissions" (PROPAGANDA)**

This is embarrassingly simple, but it works. In the key documents arising from the UNFCCC-based negotiations (CoP meetings) the word "emissions" appears numerous times, but "concentrations" is seldom mentioned. Specifically, the combined ratio for the original UNFCCC Agreement (1992), the Kyoto Protocol (1997), and the Paris Agreement (2015) is an overwhelming 104-2 in favor of "emissions". The same pattern holds for most books, media articles, and scientific papers about the GHG crisis.

6. **Avoiding basic realities (DECEPTION)**

This is again simple but highly effective. The IPCC doesn't want you to think about the collapsing Arctic, so its last Assessment Report (AR5 in 2014) completely ignored the issue. The organization doesn't want you to rationally examine geoengineering, so the

indispensable energy balance concept is never discussed. The IPCC desperately wants you to ignore GHG concentrations, so safe-concentration scenarios are strictly taboo.

To the best of my knowledge, no scientist, journalist, or activist has ever exposed these and other genocidal travesties. *Social control is devastatingly effective.*

In [chapter one](#) I used the term "social leaders" when discussing the IPCC. That term is now obsolete, so let me briefly re-examine the organization's role with reference to the above power structure. Although many ruling classes and states were involved, I simplify by treating them as a single entity.

By the 1970s the capitalist class was fully aware that the atmospheric build-up of GHGs would devastate the biosphere. However, because its power and privileges were tied to the economic system that caused the accumulation, it chose to continue with business as usual. To conceal this monstrous act it needed a credible organization to distort the science and mystify the populace. It therefore directed its state to form the IPCC: the Intergovernmental Panel on Climate Change.

The word "government" was used in the name to make it appear that the organization serves the populace rather than the ruling class. The term "climate change" was used because this reduces the problem's scope and creates terminological confusion. Despite these deceptions and the business-as-usual decision, both of which existentially threaten the populace, the military's support for the rulers remains strong.

F. LEADERSHIP CONSIDERATIONS

1. The most serious obstacle to youth ecological survival is the democratic illusion: the belief that government holds political power and therefore has both the responsibility and the capacity to rationally address the crisis. This illusion is deeply ingrained and extremely tenacious, so you must constantly enlighten your members about the true nature of power and control. When referring to politicians, emphasize that they hold office, represent the populace, and can influence the state, but they are not society's dominant force and do not wield power.
2. Other political errors you must avoid are the following:
 - Ascribing political power to the populace. It is a humbling but undeniable fact that the vast majority of people are members of a subordinate class. We are the ruled, not the rulers. The well-connected among us may have *influence*, but unless we hold high-ranking positions within the state we have no meaningful *authority*, and if we are not part of the ruling class we have no *power*.
 - Treating the state as an impartial body. The state is currently a capitalist state that serves capitalist ends. In performing this function it must ensure social stability and smooth social functioning, so it is easily perceived as supporting the populace. This is

the basis for progressivism's commitment to "government" action over market-based results. Although the state can be more humane than chaotic and competitive markets, the underlying power relations must always be kept firmly in mind.

- Perceiving the military exclusively as a supporter of ruling-class power. The military's professional responsibility is to safeguard the populace. When the ruling class threatens the populace's survival, as it clearly does today, it is the military's duty to replace it with a more rational group. This is one of the few points of strategic leverage you have, so you must earnestly appeal to the military's honor and loudly insist that it fulfill this core commitment.
 - Referring to the *corporate* media instead of the *capitalist* media. It is true that media companies are commercial entities that are driven by profits and influenced by advertisers. However, they perform a key function in social control by buttressing the democratic illusion and deeply instilling capitalism's worldview and economic logic. They should therefore be seen primarily as political rather than economic forces.
3. Unless the military's allegiance is quickly shifted from the ruling class to the people, fascism is inevitable. A rapidly degrading environment will trigger unprecedented social chaos and resistance, which the rulers will ruthlessly tackle using the state's coercive forces. Emphasize to your followers that their grim choice is between youth genocide under the jackboot of fascism and possible survival through revolutionary change.
 4. Strictly avoid the term "ecofascism". This is used in at least four ways and is thus wildly ambiguous. In the right-wing context it can refer to an early [German movement](#), to politicians who use environmental pretexts to implement racist policies, and to environmentalism as a movement - for example [this book](#) by climate denier James Delingpole. In addition, progressives sometimes use the term to rebuke those who cite population as a factor in environmental impact.
 5. Also avoid using "deep state". This originally referred to senior state members who remain staunchly loyal to the capitalist class and thus resist fundamental change. The term was modestly useful for this purpose, but Donald Trump then applied it to state actors who resisted his proto-fascist proposals. Because "ruling class" and "state" suffice for the young's strategic purposes, "deep state" should be left to Trump and his supporters.

G. KEY POINTS

- The capitalist class holds political power and is therefore society's ruling entity.
- Under normal conditions the military supports this class, but its ultimate responsibility is to safeguard the populace.
- The state, including the military, controls the populace and regulates society on behalf of the capitalist class.
- The populace expresses its will through government, which enacts laws and formulates policies for implementation by the state. The state will cooperate with government to the extent that the proposed initiatives are consistent with capitalist power, privileges, worldview, and economic logic.

- The young are threatened by the current holders of political power rather than the power structure. Given human and social realities, the latter will remain largely unchanged in the post-capitalist world.
- The democratic illusion is the main impediment to youth survival. Pressuring government and politicians to implement the rational crisis response is not just futile, it is a fatal diversion from militant organization and action.
- Social control is achieved by satisfying, manipulating, and coercing the populace, and by tightly restricting intellectual thought. Pervasive surveillance is used to quash incipient revolutionary challenges and to strengthen social-control techniques.
- When the capitalist class determines that standard social control is inadequate for its purposes, it will seek to replace democracy with fascism. This refers to coercive state measures that violate democratic norms. To prevent or stall this development, the young must shift military allegiance from the ruling class to the populace. As will be seen in [chapter six](#), this is also essential for revolutionary change.

H. FURTHER READING

EXTERNAL BOOKS AND DOCUMENTS

[The Prince](#) - Niccolo Machiavelli (1532)

This small book unflinchingly examines political power: "I have thought it proper to represent things as they are in real truth, rather than as they are imagined." The author thus openly discusses *deep politics* while avoiding the superficial electoral politics that dominates today's discussions. (The word "prince" in the title refers to a political ruler, and by extension a ruling class.)

[Propaganda](#) - Edward Bernays (1928)

If you are short of time and need a quick introduction to political power under capitalism, this book is your best bet. Bernays understood that the populace is easily led, and that an "invisible government" of powerful figures is society's actual ruling force.

[1984](#) - George Orwell (1949)

This is not primarily a dystopia, but rather a treatise on political power and social control. Orwell's main message is that the populace is easily managed through heavy work, entertainment, lotteries, sports, etc., but that intellectuals require intense thought control to keep them in line. They are therefore taught to avoid thoughtcrimes by applying several self-deception techniques: doublethink, blackwhite, and crimestop. The latter is the most significant, and refers to, "the faculty of stopping short, as though by instinct, at the threshold of any dangerous thought ... Crimestop ... means protective stupidity."

[The Conservative Mind: From Burke to Eliot](#) - Russell Kirk (1953)

This is a classic work on the traditional conservatism that is rooted in pre-capitalist feudalism. Its adherents fully understand that capitalist democracy is fraudulent and that "public opinion" is not formed autonomously, but is instead implanted through control of the media by powerful

forces. The overlaps between traditional conservatism and the views of Edward Bernays (above) are many and striking.

[Coercion: Why we listen to what "they" say](#) - Douglas Rushkoff (1999)

Rushkoff is politically weak, but his insights about the manipulation of people for commercial gain are outstanding. He details the various methods used by capitalists to make shoppers buy more stuff: disorientation, redirection, capture, regression, etc. He notes that many of these methods exploit healthy psychological features or social behaviors, thereby producing distrust and eroding community spirit.

[Sleights of Mind: What the neuroscience of magic reveals about our everyday deceptions](#) - Stephen L. Macknik & Susana Martinez-Conde (2010)

The authors are academics who study the psychological aspects of magic. This is important work because magic is the source of several highly effective social-control techniques. The most prominent of these is the *diversion of attention*: fixate on emissions so you don't notice the concentrations that are killing you. Shockingly, the authors found that scientists are even more susceptible to magic-based deceptions than the general public. For an entertaining example, see [this video](#) of [James Randi](#) performing a simple trick that fooled several physicists at Lawrence Livermore National Laboratory in the U.S.

GUARDIAN ARTICLE

[To stop climate disaster, make ecocide an international crime. It's the only way.](#)

- Jojo Mehta and Julia Jackson

(For an update, see [Legal experts worldwide draw up 'historic' definition of ecocide.](#))

WEBSITE POSTS

[The Economic Roots of the IPCC's Failure](#) - Asserts that the IPCC has failed to maintain safe GHG concentrations in order to protect capitalism and growth.

[The Manipulations Driving IPCC Support](#) - Reveals how the techniques of magic and the good cop/bad cop stratagem have allowed the IPCC to take an ecocidal stance while retaining both public and intellectual support.

[The IPCC's Long Escape from Ecological Reality](#) - Outlines the history of the IPCC's deceptions since abandoning the rational goal of safe concentrations in 1995.

[Confession of an Environmental Thought Criminal](#) - My mock confession that, as an independent environmental thinker, I have committed serious thoughtcrimes.

Chapter 6

A strategy for revolutionary change

A. PRELIMINARIES

The previous chapters have set the stage for the burning topic presented here: a strategy for revolutionary change. Below is a quick recap before I proceed.

[Chapter one](#) introduced the ecological betrayal of the young by "social leaders", who have now been identified as the capitalist ruling class. [Chapter two](#) described the ecological crisis and the deceptions used to mystify it, and [chapter three](#) presented the rational response and the lies used to avert it. In both cases the falsehoods were used to prolong economic expansion and capitalist power. I then addressed the key factors bearing on revolutionary change. [Chapter four](#) outlined the aspects of human nature that youth leaders must carefully consider. In the [last chapter](#) I examined the structure of capitalist power and its social control.

The task now is to draw strategic conclusions. How can the required revolutionary shift be accomplished? Given the betrayal, the crisis, ongoing expansion, human nature, and capitalist dominance, what is a logical plan of action? A few preliminary points will help me sharpen this crucial question.

- *Now is the moment of conscience and truth:* the time to acknowledge that the ecological crisis is unprecedented, existential, and exceedingly urgent; that conventional thought is largely obsolete, corrupt, and compliant; and that the rational strategy lies outside the well-lit social tent in the dark realm of impermissible thought. *Summon all your moral courage now.*
- It is highly likely that environmental tipping points have already been reached, particularly in the Arctic. PONRs, if not reached already, are only a few years away. In these calamitous circumstances the appropriate strategic goal is to find the *best* chance for youth survival that is still available at this late date.
- Defeatists insist that humankind's chance of survival is nil, and that a strategy for revolutionary action is therefore pointless. This stance is morally obscene. An all-out attempt to salvage the biosphere for the young, future generations, and non-human species is a profound ethical obligation, especially for the overconsuming rich. *Our personal assessment of the survival chance is relevant to the optimism or pessimism we feel, but not to the ethical responsibility we bear.*

Given the above, the fundamental strategic question is this:

In the brief time that may still be available, how can the capitalist ruling class be replaced with a sustainable ruling group that will immediately implement the rational crisis response?

The first step in answering this question is to determine which aspects of humankind and society resist this replacement, and which potentially support it. Once these factors have been identified and their relative strengths assessed, reasonable conclusions can be drawn.

B. NEGATIVE AND POSITIVE FACTORS

The following are clearly *negative* factors with respect to revolutionary change:

1. **The biological side of human nature.** This refers to the material interests that are necessary for human survival and life enjoyment, but that in many cases have been inflamed by capitalism. These interests drive the global rich to maintain their unsustainable lifestyles, and the global poor to seek adequate consumption.
2. **The power and control of the capitalist class.** This class has reached a historical dead end: it cannot exist economically without growth, and it will collapse ecologically with growth. Facing its doom and desperately maximizing its wealth and remaining pleasures, it will ruthlessly cling to power. To keep an increasingly angry and disillusioned populace at bay, it will brutally intensify its social control.
3. **Military support for this class.** Because of its capacity for physical force, the military is the ultimate arbiter of political power. Unfortunately it remains under the deep influence of the capitalist class, which has carefully cultivated its unquestioning allegiance. Military support for this class thus remains strong.

Below are some potentially *positive* factors:

1. **The ecological side of human nature.** Humankind has long possessed a uniquely intelligent and flexible brain that can readily formulate the rational crisis response. At least for now, our intellectual capacity is not the issue. The real question is this: do we have the will to do this thinking and then urgently apply our conclusions? Thus, ultimately: *does our species have sufficient moral courage to summon this will?*
2. **Non-material motivations.** Among these are concern, anger, panic, fear, defiance, compassion, love of nature, religious commitments, parental concerns, and ethical standards. The strongest motivation is probably the outrage of the young as they consider the existential betrayal of their elders.
3. **The military's professional responsibilities.** The military has two honor-bound duties: to safeguard the populace from existential threats, and to support the ruling class so long as it serves the populace's interests. The populace is now existentially threatened, so an honorable military should be motivated to replace the capitalist class with a sustainable alternative. It is thus encouraging that, after the assault on the U.S. Capitol on January 6, 2021, the country's military publicly stated that it was loyal to the people and the Constitution, not corporations and the ruling class.

To summarize, the negative factors with respect to revolutionary change are material interests, capitalist power, and continuing military support for this power. The positive factors are

humankind's advanced brain, our non-material motivations, and the military's professional responsibilities.

Three conclusions can reasonably be drawn:

1. The negative factors currently overwhelm the positive factors. Brains, emotions, and duties are no match for interests, power, and loyalty. ***Thus, if the young are to survive, a fundamental social reorientation must occur to decisively alter this unfavorable balance.***
2. The most promising social group to instigate this reorientation is the young themselves. Because many now grasp the depth and extent of their ecological peril, they may soon seek to militantly defend their future. Sympathetic members of older generations, especially concerned parents, will likely offer their support, but the young are unique in their visceral motivations to revolutionize a disintegrating world.
3. The military's professional responsibilities, its humanitarian missions, and its recent public statements all imply that it can potentially be persuaded to intervene on the populace's behalf.

These conclusions underpin my proposed strategy for youth ecological survival.

C. THE YOUTH-MILITARY STRATEGY

Note that the following strategy is based on global conditions in 2021. Given the COVID pandemic, accelerating environmental collapse, the toxic politics of recent years, and the unanticipated events that will surely come, youth leaders must be prepared to adjust this approach as necessary. See figure 6-1.

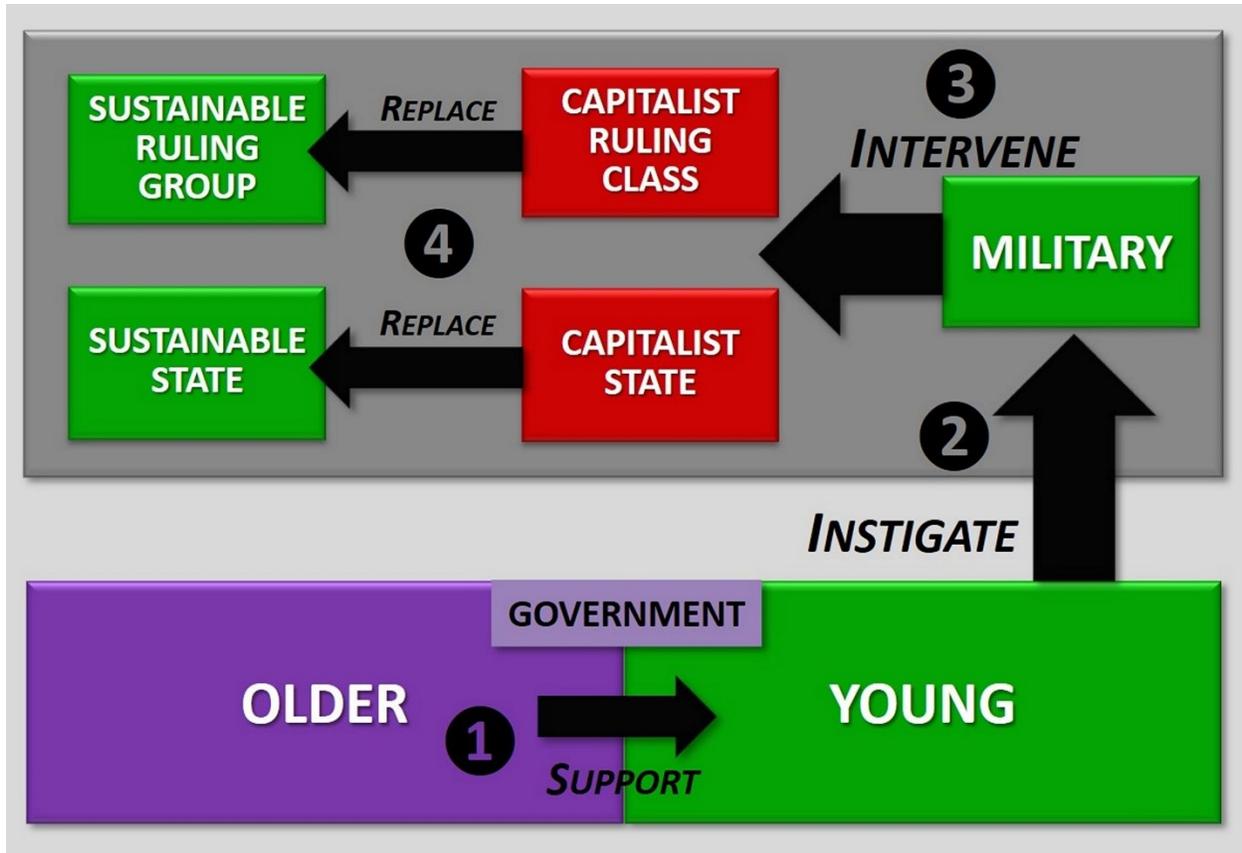


Figure 6-1. The youth-military strategy

This diagram is a modification of the capitalist power structure discussed in [chapter five](#). The strategy comprises four steps:

1. Ethical and committed members of older generations throw their political and practical support behind the militant young;
2. The young and their supporters instigate military intervention by persuading the military to honor its professional responsibilities;
3. The military responds by shifting its loyalty from the capitalist class to the populace and then intervening politically;
4. This intervention replaces the capitalist class with a sustainable ruling group and initiates the transformation of the capitalist state into a sustainable state.

Once their power and authority have been consolidated, the new ruling group and its state will implement the rational crisis response outlined in [chapter three](#). It will then initiate the economic shift to a sustainable economy as discussed in [chapter seven](#). For my proposed public statement by the military shortly after such an intervention occurs, see [appendix B](#).

The following are important points of clarification:

- Military intervention can be direct or indirect. Direct intervention means that the military initially serves as the ruling group because no qualified civilian group is

available. Indirect intervention means that this role is played by a civilian group that has earned the military's confidence as sustainable social leaders.

- Given the corrupt state of civilian thought, direct military intervention appears more likely at this stage. If this occurs, the military should relinquish political power as soon as a qualified civilian group appears.
- Government plays little or no role in the revolutionary process itself. Once a sustainable state is established, however, government will again play its crucial role of representing the views, concerns, and interests of the populace. Briefly stated, electoral politics subsides during revolutionary change, but revives when this process is substantially complete.
- Recall from [chapter five](#) that a coup replaces a government to benefit the ruling class, whereas a revolution replaces the ruling class to benefit the populace. The military intervention proposed here is thus the initial stage of a revolution. It is not a coup.

D. TASKS FOR INTELLECTUALS

Although academics and other intellectuals are indispensable for youth survival, they are tightly constrained by capitalist thought control. I therefore suggested that you think of them as your employees: people who can competently carry out assigned tasks, but who by default should be excluded from strategic decisions. Among these tasks are the following:

- Objectively re-analyze the ecological crisis by ignoring the conventional deceptions and addressing the problem with independent minds. The main aim is to produce a reliable body of environmental understanding to guide a sustainable ruling group and state.
- Write a constitution and formulate the basic laws for a sustainable society. Whether military intervention is direct or indirect, these will be needed soon after it occurs.
- Develop a post-capitalist economic theory to guide a sustainable economy. This critical requirement has been consistently overlooked by economic thinkers. My proposed starting point is briefly discussed in [chapter seven](#).
- Conceptualize the economic and political institutions that will be required to coordinate a sustainable society. For example, what new institutions will be needed to implement the new economic theory? Which institutions should be modified, and how? Which should be scrapped?
- Propose methods to acclimate the populace to the new constraints. The only way to achieve sustainability is to sharply reduce rich-world consumption. How can this be accomplished while minimizing mental distress and social conflict?
- Propose a soft landing for the capitalist class and its allies. What will happen to these formerly powerful and influential people? How can their likely efforts to restore capitalism be thwarted with minimal violence? What constructive roles might they play in a business-friendly but post-capitalist economy?

E. LEADERSHIP CONSIDERATIONS

1. The three basic requirements for revolutionary change are ideas, leaders and events. **Ideas** are the theoretical foundation - the analysis and broad strategy. **Leaders** transform the ideas into specific strategies and tactics based on concrete conditions, and organize movements to implement them. **Events** are social or environmental changes that alter the political landscape and create obstacles to, or opportunities for, revolutionary change. This book is intended to provide the key ideas. The disruptive events are occurring on a daily basis. *The crucial missing element is effective youth leadership.* If you have anything to contribute in this area, step forward now.
2. To repeat my advice in [chapter one](#): *don't be a bad general by fighting the last war.* The youth struggle for ecological survival is historically unique. Avoid the temptation to simply transplant the strategies and tactics developed for social justice or other causes. Mahatma Gandhi and Martin Luther King were activist heroes, but they faced social injustice, not ecological collapse. If you have a progressive background you will likely have to struggle psychologically to transcend your reformist past.
3. Two approaches for instigating the military should be considered. The first is to praise any environmental awareness it demonstrates while correcting its misconceptions and directing it to the rational response. The second is to emphasize its responsibility not only to the people, but also to the national territory. You could point out that the homeland is now being "invaded" by rising seas and degraded by elevated temperatures, and that the military is duty-bound to help prevent such destruction.
4. As much as possible, avoid self-pity about concrete conditions, no matter how distressing these may become. An effective movement leader accepts environmental and social conditions as givens: the gritty real world in which carefully formulated strategy and tactics must be courageously applied.
5. Revolutionary change for ecological survival shares an important feature with past working-class revolutions: it replaces the capitalist class with another social entity. Leaders should exploit this overlap by carefully studying these revolutions and absorbing the valid lessons they offer. See John Reed's book in [section G](#).
6. Adopt the *principle of distrust*: This is the idea that the capitalist class and its representatives - particularly the media - cannot be relied on for the truth on any matter of social or environmental significance. All such statements should be treated as pro-capitalist deceptions until their objective validity is independently established.
7. Learn from the mistakes made by pioneering activist groups such as [Extinction Rebellion](#) (XR). These groups cannot be effective because they embrace the democratic illusion. As previously described, this is the false belief that government (which in this view includes the state) holds political power. XR co-founder [Roger Hallam](#) thus claims in [Common Sense for the 21st Century](#) that, "Government is the institution that makes the rules of society and has the monopoly of coercion to enforce them." (p. 4) As shown in [figure 5-1](#), this is a profound mystification of political reality. It ignores both the capitalist ruling class and its supporting military, and it incorrectly implies that the state is an instrument of the people rather than the rulers.

Based on its faulty political analysis, XR has adopted an unworkable strategy: to compel government to become more participatory through citizens' assemblies that will, "... take over the sovereign role from a corrupted parliamentary system." (p. 6). This is a fantasy scenario because the capitalist state and military will immediately crush any attempt by such assemblies to assert meaningful control over society and the economy. In doing so it will liberally employ the violence that XR dogmatically and irrationally rejects.

8. Don't be confused by the moral claims of the [environmental justice](#) and [climate justice](#) movements. There is a clear distinction between (a) responding rationally to the ecological crisis and (b) equitable treatment of the global populace while the crisis unfolds. The progressive fixation on justice tends to erase this critical distinction. This erasure was one of the main effects of Naomi Klein's 2014 book, [This Changes Everything](#), which urged progressives to *use the GHG crisis* as leverage to advance equity issues. (p. 7)

Given the goal of youth ecological survival, I believe the following establishes the correct relationship between sustainability and justice:

- a. Until youth survival is assured, sustainability takes strategic precedence because sustainability is required for survival, and survival is required for justice;
- b. During this period justice can be a valid objective, but only insofar as it advances the survival cause;
- c. Once youth survival is assured, justice is subject to social neutrality (see [chapter seven](#)) and progressive pressures.

The claim that sustainability is impossible until justice is achieved must be categorically rejected. This is false given the youth-military strategy, and the approach is far too slow to prevent catastrophic collapse.

9. A key reason for strategic confusion among the environmentally concerned is that social justice and sustainability have been theoretically and organizationally merged. (As just noted, this process was greatly facilitated by Klein's book.) The differences are clear: social justice is about the structure and behavior of society, whereas sustainability is about the limits of nature. Social justice, if one's ambitions are restricted to capitalist relations, can be achieved while the current system still reigns. Sustainability, whatever one's ambitions, cannot. I therefore suggest that youth leaders quickly return to the pre-Klein situation, where environmental and social justice movements at times cooperated, but remained analytically, strategically, and organizationally distinct.
10. Your leadership will be strengthened if you have a firm grasp of the main historical events that led to today's disaster. The basic sequence is this: **over-expansion** → **overshoot** → **BAU decision** → **crisis** → **no revolution** → **collapse**. First, capitalism's economic over-expansion caused ecological overshoot. Second, the capitalist ruling class decided to continue with business as usual, thereby triggering the ecological crisis. Third, the populace and military failed to mount a revolutionary response, thereby allowing the crisis to escalate into the current collapse. This tragic chain of events makes it clear that, if humankind and nature are to survive, the populace and military must quickly overcome their political passivity.

11. I define "emergency SRM" as SRM that is initiated as soon as physically possible, with or without international governance, to address the dire threat of runaway global warming. If a non-state group were to undertake this action, the political results could be electrifying. Thus, if it appears that PONRs will precede military intervention, you should consider creating or instigating such an event.

F. KEY POINTS

- The core strategic question is how the capitalist ruling class can be quickly replaced with a sustainable ruling group that will immediately implement the rational crisis response.
- The negative factors for revolutionary change are the biological side of human nature, the power and control of the capitalist class, and the military's continued support for this class.
- The positive factors are the ecological side of human nature, our non-material motivations, and the military's professional responsibilities.
- Three conclusions follow: the negative factors currently overwhelm the positive factors, the decisive social force is the military, and the young are the logical instigators of military intervention.
- The resulting revolutionary strategy is this: ethical members of older generations will support the young in instigating the military, and the military will then replace the capitalist ruling class with a sustainable ruling group and the capitalist state with a sustainable state.
- Although academics and other thinkers are tightly constrained by capitalist social control, they can provide valuable assistance to the young by undertaking specific intellectual tasks. Among these are the formulation of a sustainable legal infrastructure and the development of a post-capitalist economic theory.

G. FURTHER READING

EXTERNAL BOOKS

[*Ten Days that Shook the World*](#) - John Reed (1920)

Youth leaders should learn as much as possible from working-class revolutions. Reed's book is an excellent first-hand account of the 1917 Russian Revolution and thus a useful source for this guidance. Among the lessons: unreservedly represent the populace, use simple and pithy slogans ("Peace! Bread! Land!"), and initially expect vicious resistance from intellectuals, journalists, and senior members of the capitalist state.

[*How Nonviolence Protects the State*](#) - Peter Gelderloos (2007)

In this brief but insightful book Gelderloos tackles a key topic: the irrationality and immorality

of *nonviolence* when fundamental social change is required. The author notes that arguments for nonviolence are often based on "falsified histories of struggle" (p. 2), and that nonviolent movements frequently benefit from the threats of violence by related movements. My stance on the issue is this: youth actions must be nonviolent or violent as required for their ecological survival; if violence is used, it must be strategically justified and as humane as the survival objective permits.

WEBSITE POSTS

[Book review: *Anthropocene or Capitalocene?*](#) - Criticism of a group of Marxian academics who acknowledge the role of capitalism in the ecological crisis, but who avoid the revolutionary implications due to their employment by a capitalist institution. Also suggests the positive roles academics can play in preparing humankind for the transition to a post-capitalist society.

[Extinction Rebellion: Courageous Activism, Flawed Strategy](#) - A critique of XR's rejection of SRM, written shortly after the group's formation in 2018. Since that time the group has moved even further away from environmental rationality by accepting the ecocidal guidance of a conservative scientific "support" group called [XR Scientists](#).

Chapter 7

From capitalism to a sustainable economy

A. FACILITATING THE TRANSITION

In the youth-military strategy ([chapter six](#)) the new ruling group quickly initiates the transition from capitalism to a sustainable economy. But even under ideal political conditions - the group's firm grasp on power and the state's full cooperation - this shift will be extremely difficult to achieve. Capitalism responds to our material interests and is deeply entrenched in our minds and societies. This implies that, for the transition to succeed, it must be aggressively facilitated. I propose two principles to serve this purpose:

1. ***Minimum effective change.*** This retains as much of capitalism as is consistent with sustainable well-being. As explained further below, a distinction must be made between capitalism's dangerous economic *logic* and its *institutions*: the markets, corporations, legal infrastructure, etc. that help implement this logic. To the extent that the latter are useful in a sustainable economy, they should be retained. The resulting familiarity will psychologically ease the transition.
2. ***Social neutrality.*** For the global economic transition to succeed, many conservative countries, groups, and individuals must participate. The conservative view of society, which values individual freedom over social solidarity, must therefore be respected. The principle of *social neutrality* is the commitment, particularly in a sustainable economic theory, to remain impartial in this regard.

Briefly stated, social resistance to the post-capitalist transition can be significantly reduced by restricting economic changes to the minimum required for sustainable well-being, and by adopting the principle of social neutrality to maximize conservative participation.

B. CAPITALISM AND ITS ECONOMIC LOGIC

To successfully implement the above two principles and shift to a sustainable economy we must understand capitalism's underlying nature. This will help answer a critical question: *which features of the system are compatible with a sustainable economy and should thus be retained in suitable forms, and which are ecocidal and must therefore be discarded?*

Note first that capitalism is not defined by the private ownership of the means of production. During the 20th century this criterion served to distinguish the system from state-oriented socialism, but a distinction is not a definition. As well, private economic ownership was far more common during the preceding feudal period. Capitalism's historical appearance was marked by the widespread dispossession of independent farmers and artisans, resulting in the concentration of economic ownership in a few capitalist hands. For much of the populace the system was therefore the death knell of private ownership.

What then is capitalism? Like any economic system, it is defined by its *economic logic*. This refers to the economy's goal, its core assumptions about humankind and nature, and the resulting forces that drive its activities. Capitalism's economic logic is depicted in figure 7-1.



Figure 7-1. Capitalism's economic logic

As shown at center, the system's goal is maximum profits, which is facilitated by maximum economic growth. To permit rapid expansion, capitalism treats both natural sources (timber, oil, fish, etc.) and natural sinks (safe waste absorption capacity) as unlimited. As well, it treats workers not as human beings who provide labor, but as labor inputs only. Similarly, it treats the populace not as human beings who consume, but as output consumers only.

In brief, capitalism's economic logic uses narrow conceptions of humankind and nature to achieve the system's goal of maximum profits and growth. This logic is faithfully reflected in the assumptions and concepts of standard economics.

Capitalist logic is not necessarily irrational. If natural sources are abundant, natural sinks are largely intact, and people are suffering in poverty, it is probably the most effective way to quickly improve their lives. The problem is not capitalist logic per se, but rather its continued application when these conditions no longer apply. This is unquestionably the situation today.

Let me now return to the key question above: in the transition to a sustainable economy, which capitalist features should be retained and which should be discarded? I have already stated that its institutions should be selectively retained, but what happens to its economic logic?

Three aspects of capitalism's economic logic relate directly to the environment: the goal and the two assumptions about nature. The goal is clearly ecocidal because infinite growth on a finite planet is physically impossible. The assumption that natural sinks are unlimited is also

fatal. The obvious example is the GHG crisis, which existentially threatens the young because Earth systems cannot safely absorb capitalism's massive emissions. The assumption of unlimited natural sources is also disastrous because it drives capitalists to destroy ecosystems through their extraction of increasingly scarce resources and their substitutes.

The verdict on the environmental aspects of capitalism's economic logic is thus clear: under current environmental conditions all three are perilous for the young and the natural world, and must therefore be firmly rejected.

The logic's assumptions about workers and consumers are less clear-cut. Given the principle of social neutrality, there is no basis for dictating how these groups should be treated. However, reduced consumption in a sustainable society means that a minimum level of equity is required for social stability. Unless workers and consumers are treated fairly, this stability will be severely threatened. It is thus likely that, whatever a society's political posture, capitalism's narrow assumptions about workers and consumers will have to be substantially modified.

To summarize my conclusions about capitalism's economic logic and the transition:

1. The institutions used to implement its logic should be selectively retained and modified as required. New institutions will be necessary to implement a sustainable economic logic.
2. The three environmental aspects of capitalist logic must be rejected. These are the goal of maximum profits and growth, and the assumptions of unlimited natural sources and sinks.
3. The logic's assumptions about workers and consumers must be rejected insofar as they result in social instability. Beyond this, the economy's treatment of these groups is socially determined.

C. THE ECONOMICS OF NEEDS AND LIMITS (ENL)

ENL is my conceptual framework for economic analysis. It is intended as a starting point for the development of a robust economic theory to rationally guide a sustainable economy. I will briefly describe two major components to show how the framework's logic differs from that of capitalism. For a more extensive overview, see [this introduction](#), which includes links to a Kindle book on ENL as well as a free PDF.

An important clarification is that ENL is a *guiding* framework only. That is, it permits analysts to establish rational economic objectives to direct the economy, but it does not address an economy's detailed operations. A second theory, which I call a *functional framework*, is required for this purpose.

Instead of maximum profits and growth, the goal of ENL logic is *sustainable well-being*. "Sustainable" is the standard term, indicating that environmental limits are not violated. "Well-being", however, has a specific meaning within ENL. This is based on the important distinction between *needs* and *wants*. See figure 7-2.

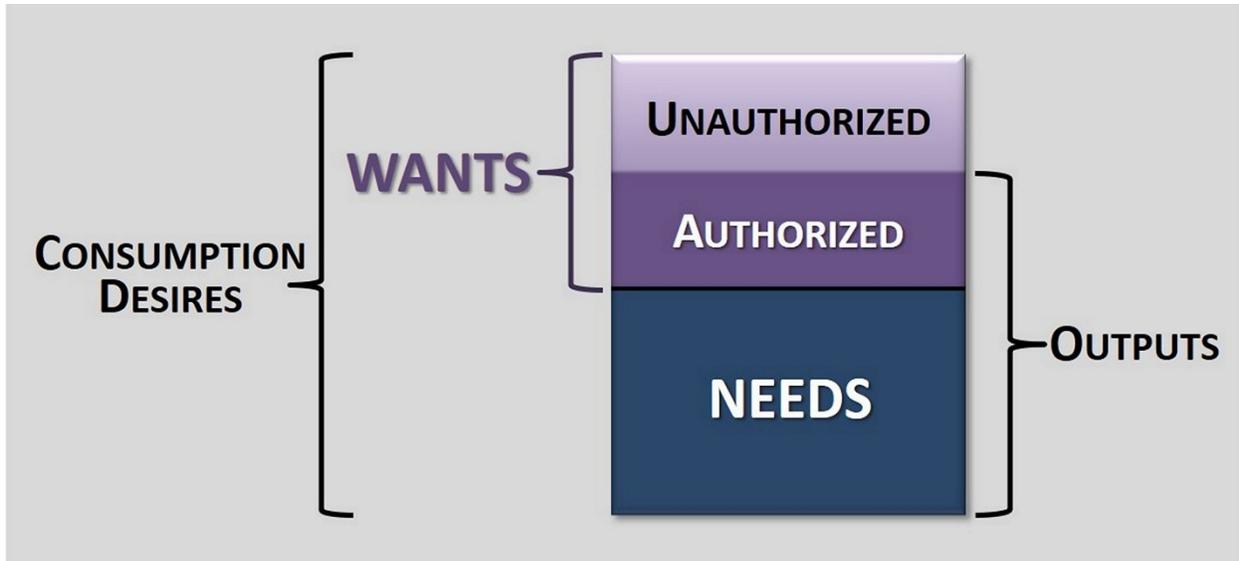


Figure 7-2. Needs and wants

Needs and wants are both consumption desires. The difference, by definition, is that satisfying a need maintains or increases physical health, but satisfying a want does not. Typical needs are for food, shelter, and clothing. Typical wants are for travel, wine, and entertainment.

A second difference is that need satisfaction is limited by the maximization of physical health, whereas want satisfaction is limited only by appetites and imagination. Because unconstrained consumption is environmentally dangerous, ENL divides wants into the socially authorized and unauthorized. This distinction is based on two factors: *ecological space* (the possibility of increased production without violating environmental limits) and the strength of society's consumption desires for such outputs.

Applying the above concepts, *well-being* in ENL refers to the combination of need satisfaction and authorized want satisfaction (net of human costs incurred). This combination, which is depicted at right in figure 7-2, establishes the set of outputs that an ENL-based economy strives to produce.

Because physical health is the core factor in human survival and life enjoyment, ENL uses health as its standard of value and cost. "Value" in economics refers to what is desirable in outputs, and "cost" to the sacrifices required to obtain them. These concepts are used to determine which outputs should be produced, at which quantities, to sustainably maximize a society's aggregate health.

ENL uses graphs such as the one below to make these determinations. Although the details must be skipped, a brief description will give the reader some insight into the framework's analytical approach. See figure 7-3.

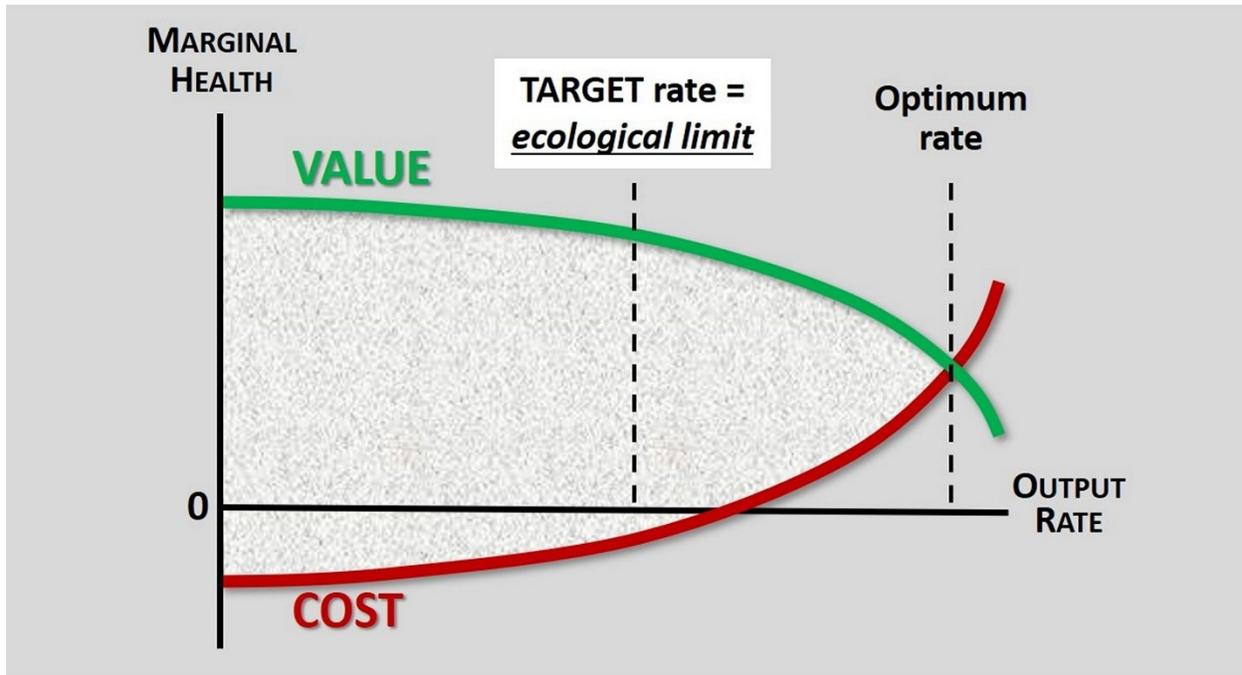


Figure 7-3. The target output rate

This graph depicts a declining value curve and a rising cost curve as the output rate increases. The area between the two curves represents aggregate social health, which is maximized at the optimum output rate. In the absence of environmental limits this is also the target rate, or rational aim. In the presence of such limits, as here, the most restrictive environmental limit establishes the target rate instead.

The important point is this: *if all outputs are produced at their target rates, society will squeeze as much health as possible from its economic production without violating any natural limits.* The above graph is therefore a key analytical tool in the quest for sustainable well-being.

The following is a summary of ENL's economic logic:

1. The economy's goal is sustainable well-being;
2. Natural sources and sinks are limited and must be rationally allocated;
3. Workers are treated as both labor inputs and human beings who desire well-being;
4. The populace is treated as both consumers and human beings who desire well-being.

D. CURRENT APPROACHES

- **Standard economics:** Also known as neoclassical economics, this mainstream theory formally expresses capitalism's economic logic and is taught at universities around the world. Consistent with the goal of maximum profits and growth, it is based on a subjective standard for value and cost. This reflects the fact that capitalist economies

produce outputs based on *affordable desire*: consumption desires backed by the capacity to pay. The theory does not distinguish between needs and wants.

A deeply hidden aspect of the standard discipline is that it combines the guiding and functional roles. It is overtly a functional framework, with sophisticated tools to analyze the operations of a capitalist economy. However, it tacitly embraces capitalism's logic, thereby smuggling the system's ecocidal assumptions into its analytical concepts and methods.

- **Ecological economics:** This heterodox field appeared in the late 1980s as a response to the environmental ignorance of standard economics. Regrettably it made two major concessions to gain academic acceptance: it embraced expansionary capitalism despite its professed goal of optimal scale, and it adopted the subjective standard of value and cost despite a warning by co-founder Herman Daly that this is environmentally dangerous. The field is thus intellectually compromised and unable to guide the economic transition.

Ecological economics is strongly associated with the Degrowth movement, and the two play a similar role in social control. Degrowth attracts thinkers who support economic contraction and then diverts them to futile projects, and ecological economics attracts those who support a sustainable economy and then diverts them to a futile theory. Their shared control task is to neutralize potentially dangerous social thinkers.

- **"Doughnut economics":** Despite the name, this is not an economics - that is, a formal economic theory. As described in [Kate Raworth's book](#), it is instead a historical overview of economic thought and a set of guidelines - change the goal, design to distribute, etc. - to allow the reader to "think like a 21st century economist". Raworth avoids any discussion of capitalism, economic logic, value and cost, etc. She has numerous suggestions for economic change, but fails to acknowledge that revolutionary change will be required to implement them.
- **Local economics:** This is a catch-all term for the various attempts to transcend capitalist logic at the community level. Relevant organizations include the [New Economy Coalition](#) (NEC), the [New Economics Foundation](#) (NEF), the [Schumacher Center for a New Economics](#), and [Pathways to a People's Economy](#). Although such projects cannot be fully implemented while capitalism still reigns, they are significant because they allow people to experiment with post-capitalist economic arrangements and modes of economic thought. As with the knowledge and insights of indigenous people, the results of these experiments will likely be useful in the transition to a sustainable world.

E. LEADERSHIP CONSIDERATIONS

- Economics is a specialized topic that you may want to avoid given your other responsibilities. You might therefore choose to assign people with an economics education to deal with these issues. If so, ensure that they are open to an unbiased reassessment of economic thought. Be aware that, to earn an economics degree, the student must deeply internalize capitalism's economic logic. Escaping from this

indoctrination will be impossible for many. It may therefore be better to choose strong analysts who lack such education and can approach the topic with fresh eyes.

- If you have a progressive background you may find it difficult to accept the idea of social neutrality, which makes progressive values optional. If so, remember that your primary responsibility is youth ecological survival. To achieve this, cooperation and even formal alliances with conservative groups and individuals will likely be necessary. You must accept the fact that politics makes strange bedfellows, and that some aspects of social justice must be deferred until youth survival has been assured.
- Don't become ensnared by the seductive idea that "economic democracy" - the populace's control of the economy - is sufficient for sustainability. Very little in human nature, or in the populace as shaped by capitalism, is a reliable source of economic rationality under today's ecologically constrained conditions. Without an explicit set of well-founded principles, an economy steered by popular will could destroy the biosphere almost as quickly as one steered by capitalist logic.
- The transition from feudalism to capitalism was a gradual process that took several centuries to complete. Standard economics was developed to theoretically support and socially justify this process. Given today's ecological time constraints, the shift from capitalism to a sustainable economy must be completed within years or possibly a few decades. This will entail an extremely rapid and theory-driven process. A framework such as ENL will therefore be a critical requirement, and you should insist on its rapid development by social thinkers.

F. KEY POINTS

- The difficult transition from capitalism to a sustainable economy can be facilitated by applying two principles: *minimum effective change* and *social neutrality*.
- Capitalism's economic logic is environmentally destructive and must be replaced by a sustainable logic. Its narrow assumptions about workers and consumers must be substantially modified to maintain social stability under contractionary conditions.
- Capitalism's institutions, which implement the system's logic, should be selectively retained and modified as required. New institutions will also be necessary.
- My proposed starting point for a sustainable economic theory is the Economics of Needs and Limits (ENL). This guiding framework is based on an objective theory of value and cost, distinguishes between needs and wants, and offers analytical tools for achieving sustainable well-being.
- The two main current theories are standard and ecological economics. Both are based on a subjective theory of value and cost, and both accept expansionary capitalism despite the escalating ecological crisis.

Chapter 8

The post-capitalist world

Assume that the youth ecological revolution has been fully successful. That is, a sustainable ruling group holds political power, the transformed state is aggressively implementing the rational crisis response, and the transition from capitalism to a sustainable economy is substantially complete. Given the human and social realities discussed in previous chapters, what will likely be the broad characteristics of this post-capitalist world?

A. HUMAN NATURE

As explained in [chapter four](#), humankind is both a biological and an ecological species. As a biological species we have innate material interests. As an ecological species we have a highly intelligent brain. Under capitalism both sides of this nature have been severely distorted. Our material interests have been inflamed by the system's expansionary logic, and our minds have been shaped by its mode of social control. Human nature in the post-capitalist world can thus be characterized, at least in part, by the changes in these two areas.

In a sustainable society, capitalism's intensification of our material interests will cease. Some people will still be more acquisitive than others, but the economy's logic will no longer inflame our inherent tendencies. However, because capitalism has long been globally dominant, we cannot know where our inborn tendencies leave off and the system's inflammations begin. It is also difficult to estimate how long it will take for people to adjust to the new economic conditions. Thus, beyond the eventual moderation of our material interests, I find it impossible to specify how they will evolve.

Regarding our minds, in the post-capitalist world these will no longer be in the service of heedless economic expansion. Although social control will still shape our thinking, its aim will be sustainable well-being. One consequence will be a major shift in the boundary between permissible and impermissible thought. Recall from [chapter five](#) that thought is permissible when it has ruling-class approval and can thus be expressed without censure in social and intellectual circles. It is otherwise impermissible, and harshly punished through social rejection and professional marginalization. As society is transformed, this thought landscape will be dramatically transformed as well.

Two interesting speculations about human nature in a sustainable society can be found in Ernest Callenbach's perceptive novel, *Ecotopia* ([section G](#)):

- After the ecologically-driven secession of Northern California, Oregon, and Washington from the U.S., an American visitor found the residents of the resulting Ecotopia to be strongly emotional. They are sentimental about nature and native people, quarrel acrimoniously in public, and openly express their sexuality.
- An important feature of Callenbach's society is ritual warfare, where groups of young people battle each other with spears, and serious injuries are sometimes incurred. The author explains that, "... it was essential to develop some kind of open civic expression

for the physical competitiveness that seemed to be inherent in man's biological programming - and [that] otherwise came out in perverse forms, like war." (p. 80)

B. POLITICS

In [chapter five](#) I said that the threat to the young is not the structure of political power, but rather the domination of this structure by the capitalist class. This is why the youth-military strategy leaves the structure intact, but replaces this class and its state with their sustainable counterparts. The result is shown in figure 8-1.

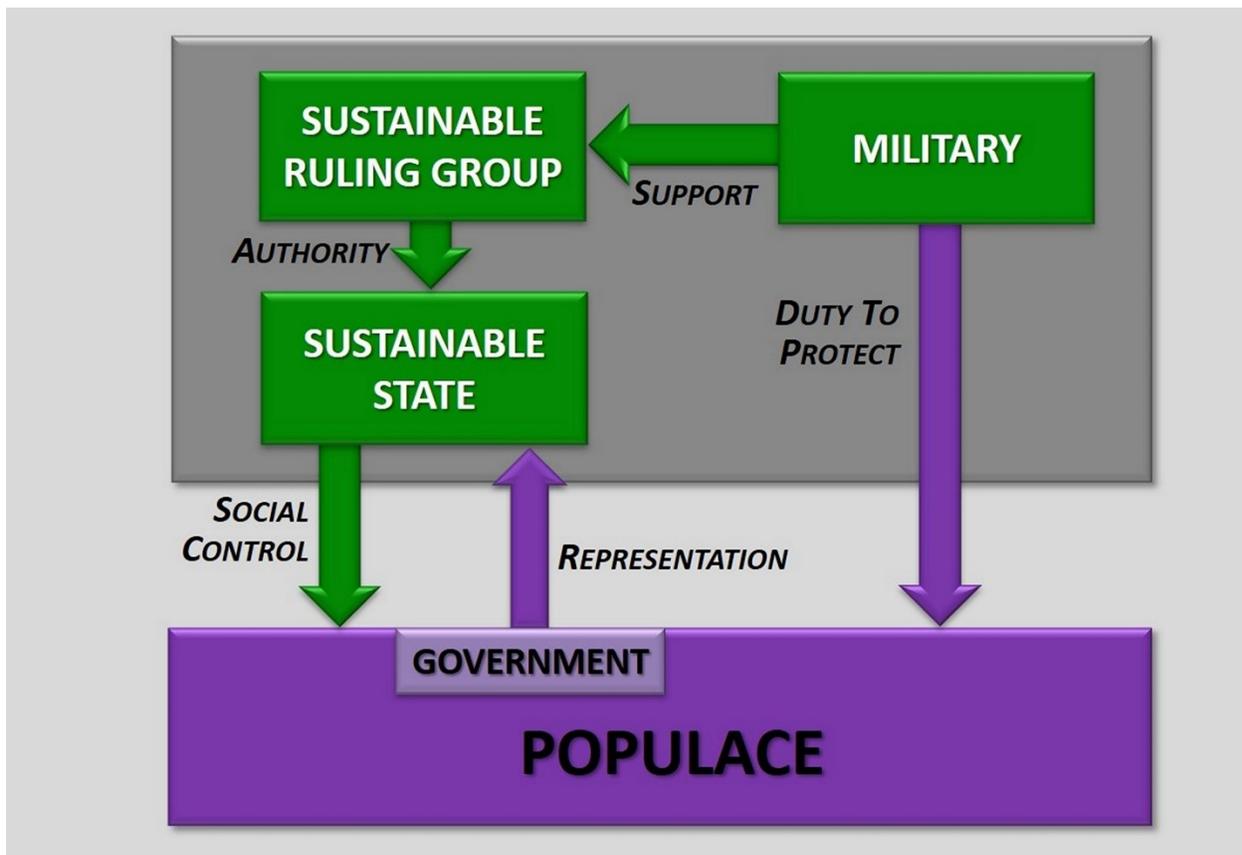


Figure 8-1. Political power in a sustainable society

The following are some key points:

- The military now supports the sustainable ruling group and thus ensures its hold on power. If the new rulers at some point betray the populace, environmentally or otherwise, the military will again be duty-bound to intervene. As under capitalism, the military safeguards the populace from existential threats such as foreign invasions and the results of environmental disasters.
- The sustainable ruling group does not represent a specific social stratum such as capitalists, but rather the goal of sustainable well-being and its associated economic

logic. The group's core responsibility is to construct and maintain a sustainable society by ensuring that the appropriate economic principles are faithfully implemented.

- The new ruling group has authorized its state to exercise social control as required to maintain and regulate a sustainable society. The state thus enforces the constitution, laws, policies, regulations, etc. that have been formulated for this purpose. It also seeks to shift the populace to a sustainable mode of life through its propaganda. The state therefore uses education, public information campaigns, and mass events to instill post-capitalist perspectives and behaviors.
- Government still represents the populace's interests by pressuring the state. Electoral politics looks much like it did under capitalism, but there are two important differences. First, structures that were established to blunt the popular will, such as the UK's House of Lords and the Electoral College in the U.S., have been dissolved. Second, members of the ruling group and their representatives are constitutionally forbidden from participating in or influencing government in any way.

C. ECONOMY

Based on the approach outlined in [chapter seven](#), the state has adopted a sustainable economic theory for guiding decisions about outputs, natural sources and sinks, trade relations, the population level, etc. Capitalist institutions that promoted economic expansion have been eliminated. To support the new economic logic, capitalism's useful institutions have been adopted in modified form, and novel institutions have been introduced. The state regulates the economy for sustainability, social stability, and well-being.

These are some other attributes of a post-capitalist economy:

- It is mixed - that is, a combination of private and state ownership. This division is non-ideological in that the only criterion is sustainable well-being. Because well-being is a socially neutral concept, the private/state choice is socially specific.
- To the extent that capitalists retain their economic assets, they have become *proprietors*: business owners as before, but under a sustainable logic that is enforced by a sustainable state. Workers have either remained workers and are thus employees of these proprietors, or have become proprietors themselves.
- Because of the proprietor-worker division, a class structure still exists, but in a highly attenuated form. The relative social status of workers has risen while that of former capitalists has declined.
- The work week has been sharply reduced, likely to 20 hours or less, as an adjustment to reduced production and consumption. Based on this factor and the treatment of workers as human beings, the labor market has been extensively modified. The following comment by Callenbach on Ecotopia's 20-hour work week reveals the likely results:

"... the profoundest implications of the decreased work week were philosophical and ecological: mankind, the Ecotopians assumed, was not meant for production, as the 19th and early 20th centuries had believed. Instead, humans were meant to take their

modest place in seamless, steady-state web of living organisms, disturbing that web as little as possible. This meant sacrifice of present consumption, but it would ensure future survival - which became almost a religious objective, perhaps akin to earlier doctrines of 'salvation'." (p. 47)

D. SOCIETY

These will likely be the most prominent aspects of a post-capitalist society:

- Because economic activities have been curtailed, the work-week shortened, and the division between workers and business owners weakened, society is less stratified, pressured, and competitive than under capitalism. Workers have more time and energy to explore their interests and possibly become proprietors.
- Given the inherent differences among individuals and the remaining distinction between workers and proprietors, some level of economic inequality remains. This is however limited by the need to maintain social stability under reduced consumption. The degree of social justice beyond this depends on a society's political perspective and the pressures exerted by progressive forces.
- Communities and neighborhoods have returned. Capitalism deliberately tore people away from these social bonds to isolate and disorient them, thereby facilitating their manipulation for profits and growth. Post-capitalist society has reversed this trend and strongly encourages community solidarity and neighborhood activities. The *family fetish*, which was heavily promoted by capitalist culture to compensate for the social losses, has largely lapsed. Family remains a core feature of human life, but strong consideration is also given to neighborhood, community, region, society, species, and biosphere.
- To humanely reduce population, social experiments have begun on increasing the ratio of parents to children. China attempted to control its population by reducing the ratio of children to parents (the one-child policy), but this was strongly resisted by the populace. Legally permitting families to take forms such as five adults and two children, or eight adults and three children, could satisfy the human drive to procreate and nurture, allow for siblings, broaden the range of adult influences, and reduce financial pressures on individual parents.

E. SCIENCE

Capitalist science is *pragmatic*: it explains the world to permit the profitable implementation of the system's economic logic, but it looks no further. Its ruling dictum is thus the one that blights today's quantum mechanics: "Shut up and calculate!" In the 20th century this shallow approach was systematized through the lavish financial assistance of the Rockefeller Foundation and other wealthy funders. See [appendix E](#) for a discussion of this important topic.

This conceptually skewed treatment of science has been decisively repudiated, resulting in the following theoretical shifts:

- The physical sciences have been re-conceptualized based on the rejection of capitalism's reductionist worldview. Most significantly, life is no longer seen as a set of molecular processes, but as the awareness that arises from them. The notion that "information" underpins life, which was a last-ditch effort to salvage the capitalist perspective, has been dropped. A living organism is now defined as the combination of a unique awareness and its physical infrastructure, thereby transforming biology.
- To incorporate awareness into its worldview, post-capitalist science has worked with the revived field of philosophy to develop an ontology that recognizes the full scope of existence. As one important consequence, the subjectivity that inexplicably pops up in capitalist science (the "observer" in quantum mechanics, the "theory of mind" in biology, aware plants, etc.) now has a firm intellectual foundation.
- The social disciplines, which served capitalism in numerous ways, have also been drastically modified. This is obviously the case for economics, which is now based on a sustainable rather than an expansionary logic. It is also true for "political science", which now addresses both electoral politics (government representation) and deep politics (power and social control).
- The *capitalist disease model* has been abandoned. This ascribed disease causes to individuals while largely ignoring the societies and environments in which they live. A key tactic was to treat susceptibility as cause: people get sick not because their water is tainted, but because they're more vulnerable to tainted water than others.

F. KEY POINTS

- The core aspects of human nature are still expressed in a sustainable society, but their selective intensification through capitalism's economic logic has ceased.
- Although social control continues to shape human thought, its purpose now is sustainable well-being rather than profits and growth.
- The structure of political power is largely unchanged, but the capitalist ruling class and state have been replaced by their sustainable counterparts.
- The economy is guided by a sustainable economic theory such as ENL. Its ownership is mixed, most capitalists have become proprietors, the work-week has been sharply reduced, and the labor market has been radically restructured.
- Because society is more equitable and less pressured, workers have more time and energy for personal development and life enjoyment. Many may therefore choose to become proprietors instead.
- Various personal and collective activities have been introduced to compensate for reduced consumption.
- Social experiments are being conducted to restructure the family for lower population levels and other benefits.

- Science has moved beyond its pragmatic restrictions and now seeks, in concert with philosophy, to deeply understand the world rather than just controlling it for capitalist ends.

G. FURTHER READING

EXTERNAL BOOKS AND DOCUMENTS

[*The Right to be Lazy*](#) - Paul Lafargue (1883)

This brief essay ridicules the capitalist notion of a "work ethic", which reconciles the worker to degrading labor under alienated conditions. Lafargue's main message is that, "[The working class] must return to its natural instincts, it must proclaim the Right of Laziness, a thousand times more noble and more sacred than the anemic Rights of Man ... It must accustom itself to working but three hours a day, reserving the rest of the day and night for leisure and feasting." (p. 34) Lafargue blames both capitalists and the workers themselves: "... the working class, with its simple good faith, *has allowed itself to be thus indoctrinated ...*" (p. 38, emphasis added)

[*Ecotopia*](#) - Ernest Callenbach (1974)

Callenbach envisions a sustainable and humane society after its political secession from the United States for ecological reasons. The book provides numerous sparkling insights about a post-capitalist world. One frequently overlooked aspect of the Ecotopian secession is that it required the threat of massive violence: the secessionists were said to have mined the harbors of major eastern U.S. cities with nuclear weapons to prevent a military reaction by Washington.

[*The Reenchantment of the World*](#) - Morris Berman (1981)

Berman's topic is the capitalist worldview, which holds that the universe is exclusively matter and motion, thereby eliminating mind and consciousness. Although the author mystifies capitalism, he is correct on this important point: "... the forces that triumphed in the second half of the seventeenth century were those of bourgeois ideology and laissez-faire capitalism. Not only was the idea of living matter heresy to such groups, it was also economically inconvenient. ... if nature is dead, there are no restraints on exploiting it for profit." (p. 117)

WEBSITE DOCUMENT

[*Life, Biology, and Capitalism*](#) (2016) - Here I offer my views on the essence of life, propose a shift from today's mechanistic biology to "vital biology", and discuss capitalism's role in the field's intellectual corruption.

Conclusion: Power or Perish!

The world's young people have been ecologically betrayed, and those who betrayed them continue to hold political power. Therefore, to have any chance of survival, the young must instigate revolutionary change. In this book I have provided theoretical guidance to the militant youth leaders who will hopefully arise to meet this existential challenge.

My core advice to them is this: ***by default reject everything the older tell you about the crisis and its solutions.*** Our behavior to date leaves no doubt that, as a group, we care little about your future. We have selfishly pursued our material interests and slavishly complied with capitalist social control. We have told you grotesque lies to diminish and distort the crisis, and we continue to pretend that governments have the power to solve it. Instead of implementing the rational response we have offered you false assurances, futile conferences, and meaningless agreements. *We have abandoned you.*

The young must instigate the military, and the military must decisively intervene. At this late date no other strategy can work. No-one else will do the instigation, and no other social force can rapidly sweep away an ecocidal system and ruling class. The prospect of revolutionary change is profoundly disturbing, but civilizational collapse will be terrifying beyond all imagination.

Young people, grasp the reins of history now! Exert your will. Be defiant, courageous, and resolute. ***With political power you may survive; without it you will suffer and die.***

This book's final words must be directed at my age cohort - the older. First, we must humbly confess that we have failed to meet our most basic responsibility: to preserve the global environment for the civilized survival of the young and future humankind. Second, we can to some degree redeem ourselves by supporting the young with our indispensable assets: knowledge, experience, influence, authority, and military force. The past is tragic, but gone; our ethical moment of truth is now.

APPENDIX A

Youth Ecological Manifesto

NOTE: A manifesto is a public declaration of a group's values, principles, analysis, and objectives. This document is intended as a starting point for the manifestos that youth leaders may soon wish to produce. It is written from the youth perspective and assumes that the young have become fully aware of their existential predicament.

PREAMBLE

We, the young, have been ecologically betrayed. Older generations have a clear ethical responsibility to protect the environment for our present and future well-being, but the natural world is now being ruthlessly destroyed. The international community vowed decades ago to maintain greenhouse gas concentrations at safe levels, but their rapid increases now pose an existential threat.

We know that, as a result of this betrayal, we will suffer intensely and in many cases perish well before our time. We are also convinced that, under current political conditions, nothing of any significance will be done before the crisis spins out of human control. In brief, we understand that we have been abandoned to a grim ecological fate.

Based on this understanding, we have lost faith in the capitalist class and its allies as our social leaders. Although they have long known about the unfolding catastrophe, they have continued with business as usual to protect their power and privileges. ***We therefore demand that they be replaced by leaders who will rationally tackle the crisis we face. To give us a chance at ecological survival, we demand revolutionary change.***

WE REFUSE TO BE PASSIVELY SLAUGHTERED. We refuse to follow our morally corrupt leaders and their compliant supporters down the path of ecological destruction. We will fight to the last breath for our future, humankind's future, and the future of life on Earth.

We plead with all people of good conscience to stand with us in this life-and-death struggle.

THEIR LIES AND OUR TRUTHS

Today's monstrous inaction on the ecological crisis is possible only because the capitalist class and its allies have spun a web of lies to disorient and misdirect the environmentally concerned. The door to rational action will remain closed until these falsehoods have been exposed and refuted. We therefore begin by replacing their most damaging lies with our respective truths.

LIE #1:

The ecological crisis is climate change, which was caused by greenhouse gas (GHG) emissions.

TRUTH #1:

The crisis is *ecological overshoot*, which was caused by the over-expansion of the global capitalist economy. This resulted in the violation of multiple environmental limits starting around 1950. Climate change, properly defined, is just one aspect of this much broader and deeper environmental disaster.

LIE #2:

"Global warming" and "climate change" are synonymous, hence interchangeable.

TRUTH #2:

These terms denote causally related but distinct phenomena. "Global warming" refers to the rising temperature of the Earth's surface as a result of increased GHG concentrations. "Climate change" refers to alterations in the world's climates as a result of this warming. Global warming is thus the cause, and climate change is its effect. This also means that the common practice of using "climate change" to refer to the full range of harmful GHG effects is incorrect. We therefore use "GHG crisis" for this purpose.

As young people who are desperately trying to escape the calamity we face, we are appalled that these and other terms have been compromised. We are reminded of George Orwell's *Newspeak*, which shaped and simplified the language so as to make non-compliant thought impossible. The modified strategy here is to muddle the core vocabulary in order to prevent rational discourse, thereby averting fundamental change.

LIE #3:

The rational aim for the GHG crisis is net-zero emissions.

TRUTH #3:

The rational aim is safe concentrations, as stipulated in the [UNFCCC agreement](#) - an international treaty that was ratified by 197 countries in 1994. Given today's catastrophic land, ocean, and climate degradation, these levels must drastically decline. However, the goal of net-zero emissions doesn't achieve this - instead it stabilizes concentrations at even higher future levels. *This seminal agreement has therefore been effectively repudiated, and the protection we thought it provided has been torn to shreds.*

LIE #4:

Solar radiation management (SRM) is an irrational techno-fix.

TRUTH #4:

Implemented with due caution, SRM is a rational techno-shield. Because there is insufficient time to reduce GHG concentrations to safe levels before points of no return are reached, SRM is required to temporarily reduce solar radiation. It is therefore a stopgap measure to buy humankind the time it needs to implement GGR (below), aggressively reduce emissions, and

transform our economies. *We interpret the dismissal of this critical measure as a genocidal assault on our generation.*

LIE #5:

GHG removal (GGR) can be postponed until emissions reductions prove to be inadequate to meet temperature goals.

TRUTH #5:

GGR must be implemented immediately, and at massive scales. This is the only way to achieve the necessary reductions in GHG concentrations. In its [1.5°C report](#) the IPCC said that GGR will be needed if emissions go beyond a cumulative limit or if the 1.5°C target is exceeded. In both cases its implementation is postponed, which is disastrous for our generation. *Delaying this critical measure by imposing various conditions is yet another evasion of rational action and thus another attack on our fragile prospects.*

LIE #6:

Reductions in consumption and population can be ignored in the reduction of environmental impacts.

TRUTH #6:

These measures must be implemented quickly and equitably. Any environmental impact, including GHG emissions, is driven by three factors: consumption, population, and efficiencies. To significantly reduce these impacts, efficiencies must rise as rapidly as is technically feasible, and in the rich world both consumption and population levels must decline as rapidly as is socially feasible.

LIE #7:

The IPCC is a scientific organization.

TRUTH #7:

The IPCC is a political organization with a scientific facade. No scientific organization would [shift its attention](#) from the problem of unsafe GHG concentrations to its emissions increments. No such organization would change its solution target from well-defined concentration levels to wildly uncertain temperature limits. (The word “uncertain” and its variants appear **334 times** in its 1.5°C report.) And no such organization would downplay or suppress four of the five possible measures for tackling the GHG crisis: SRM, GGR, and reductions in consumption and population.

If the IPCC were a scientific organization it would propose emergency measures for the Arctic meltdown rather than [ignoring such measures altogether](#) - as it did in its fifth Assessment Report (2014). Most importantly, as a scientific body it would urgently reassess its strategic approach if its results were unsatisfactory. The IPCC's results have in fact been abysmal: over its 33-year tenure the atmosphere's CO2 level has risen by 65 ppm, at an accelerating pace. Despite this, the organization has never questioned its energy and efficiency fixations.

Based on this illogical and dishonest behavior we have concluded that, although we respect the research of its associated scientists, the IPCC itself is a political body. Its designated roles are to attract the environmentally concerned by acknowledging the GHG crisis and opposing denialism, and then to divert them from any solutions that might threaten capitalism or growth.

LIE #8:

The ecological crisis can be resolved through government policies and political will.

TRUTH #8:

The hardest lesson we have learned is that social leadership is exercised not by the people or their governments, but by those who control the economy: the capitalist ruling class and its state. These forces cannot be voted out of office, and they impose strict limits on government action. Having overcome the deceptive propaganda we have absorbed all our lives, we now understand that the people are not sovereign, and that any workable strategy must explicitly recognize this fact.

Our overall conclusion is this: ***The fundamental requirement for our ecological survival is not political will within the prevailing social order, but the political power to create a new and sustainable social order.***

OUR DEMANDS

Based on the above truths, we make the following demands. We will militantly assert these until they are adequately met.

DEMAND #1: Replace the capitalist class as social leaders

The capitalist class must be replaced by a group that is fully committed to a sustainable world. After examining the political structure of capitalist societies we have determined that the military is the only force that can achieve this end in the time available. We are dismayed that military intervention is necessary, but there is no feasible alternative at this late stage.

Military intervention could be either indirect or direct. Indirect intervention would apply if a mature civilian group is available. In that case the military could support this group while keeping itself on the sidelines. If such a group has not appeared, the military would have to assume political power itself. It should then relinquish power as soon as a qualified civilian group is prepared to assume control.

We fully understand that military intervention and revolutionary change will cause profound social disruption. However, the betrayal and inaction of recent decades have convinced us that this is our only road to survival.

DEMAND #2: Implement solar radiation management (SRM)

The first responsibility of the new social leadership will be to implement SRM. This should be done on a multilateral basis if possible, but unilateral action may well be necessary.

Although the environmental risks associated with SRM are real and serious, they must be assessed in the context of our threatened future. Conventional discussions typically ignore this threat and thus falsify the assessment. To clarify this, consider an analogy. If a bus is headed towards a cliff and the driver is unconscious, the rational approach for an intervening passenger would be to quickly grab the wheel and then steer away from danger. In doing so the risk to bus occupants should be minimized - it would be better to steer into a field than a concrete wall. This is the template for an emergency response: do what is necessary, as rapidly as possible, at minimum risk.

Applying this template to the GHG crisis, *SRM must be implemented as quickly as is technically feasible while minimizing the potential damage to humankind and nature.*

One of the main reasons being cited for avoiding SRM is the lack of international governance. This is transparently a pretext for inaction because governance is irrelevant in an existential emergency. In the bus metaphor it would be absurd to seek passenger agreement about the best solution before grabbing the wheel. For a planet careening towards ecological disaster the absurdity is infinitely greater.

DEMAND #3: Transform ecocidal economies

Once new social leaders are in place and SRM has been initiated, work must immediately begin on the transition from capitalism and other expansionary systems to sustainable economies.

The main conceptual requirement for this transition is a new economic theory. Standard economics reflects capitalism's ecocidal logic and is thereby disqualified. An environmentally aware alternative, ecological economics, has made its peace with capitalism and has a disastrous conceptual foundation, so it must be rejected as well. We therefore propose an independent framework, the [Economics of Needs and Limits](#), as a starting point for the new theory's development.

The exact nature of a sustainable economy cannot be foreseen. Because overshoot is unprecedented, humankind is facing a sharp historical discontinuity. This means that our species cannot move towards a predefined system such as socialism. Instead we must move away from capitalism under the guidance of sustainable economic principles. A post-capitalist economy will therefore be the unknowable outcome of a rapid, organic, and theory-driven process.

DEMAND #4: Restore environmental health

Our fourth demand is to return the Earth's environment to a healthy state insofar as this is feasible. This will entail three broad initiatives: restoring the Earth's energy balance, rationalizing the use of resources, and rehabilitating damaged ecosystems. This demand is last

because these projects are incompatible with capitalist logic. It is therefore necessary to begin the economic transition and to supersede this logic before they can be seriously undertaken.

Restoring the energy balance will involve the aggressive implementation of GGR through existing removal technologies and methods, plus the well-funded development of new technologies and methods. It will also require emissions reductions that greatly exceed today's restricted efforts. These will entail efficiency improvements that are unconstrained by the profit motive as well as sharp decreases in rich-world consumption.

Rationalizing resource use means abandoning industrial agriculture, forestry, fishing, and livestock production, and tightly restricting mining activities. Humankind must shift to far less destructive scales and modes of resource use to reverse today's massive destruction. We are particularly horrified by the [steep decline in insect populations](#). This development, which is due largely to industrial agriculture, is an unmistakable sign of a broad and perhaps global ecological collapse.

Rehabilitating damaged ecosystems refers to the clean-up of pollutants and other wastes. This includes the removal of plastics from the ocean, poisons from lakes and rivers, and industrial chemicals from landfills and dumps.

As a general statement, *our species must quickly establish its optimum level of planetary impact*. Some impact is necessary for our survival and life enjoyment, but too much is ecologically fatal. Humankind has overshoot the Earth's natural limits and must now locate the delicate balance between the sufficient and the sustainable.

POSTSCRIPT

The ecological crisis is ultimately an ethical issue. This assertion goes well beyond the standard recognition that the global rich are its primary cause and the global poor its primary victims.

Past revolutions have succeeded when material interests were effectively aligned with revolutionary ends. For the ecological crisis, in the rich world, this visceral motivation is largely absent: material interests lead us away from rather than towards ecological salvation. The main impetus to fundamental change must therefore lie in the ethical realm. A critical mass of people, in positions of sufficient power, authority, and influence, must override their personal comforts for the sake of the young, the poor, and life on Earth. Can they rise to this challenge?

For the capitalist class and its supporters this question has already been answered. Not only have they failed to respond rationally to ecological overshoot, they have cynically blocked effective action. Whatever their individual merits, they are an amoral group.

For the compliant supporters of this class and its ecocidal economy, the answer will soon be evident. To date they have slavishly disseminated the lies and refused to develop the intellectual infrastructure for a sustainable society. But some pangs of conscience are perhaps being felt, and an ethical reassessment may be under way. If so, they should understand that time is short and the crisis won't wait.

For the military the question has yet to be posed. Its professional responsibility is to safeguard the people from existential threats, but it mistakenly believes that this can be achieved

under capitalist leadership. We must therefore awaken this critical force to today's environmental and political realities. The military must then decide if will honor its core commitments, or if its loyalties will remain with the destructive masters it presently serves.

Our generation faces immense challenges as well. In the rich world we have a strong material interest in capitalist affluence and thus the expansionary status quo. This must be courageously overcome. Related to this is the siren call of progressivism, a movement with humane values that restricts itself to system reforms when system replacement is clearly required. We must either revolutionize this movement or abandon it. We must also learn to distinguish between friend and foe among our elders. Many are complicit in the cataclysm we face, but others are eager to help us influence the military and to share their knowledge and experience as we seek a sustainable world.

Our final challenge, should it come, will be the most daunting. If the military fails to respond constructively in a timeframe that is consistent with our ecological survival, we will seek political power ourselves. Facing a terrifying future and left with no other choice, we will shift from persuasion and agitation to outright insurrection.

We will not be passively slaughtered!

APPENDIX A - Youth Ecological Manifesto

APPENDIX B

Public statement by the U.S. military

NOTE: This is my proposal for a public statement by the United States military shortly after its political intervention to replace the country's ruling class. The U.S. military was chosen because it is globally significant, and because its leaders have occasionally expressed enlightened views about the GHG crisis. The following are some examples from [Department of Defense \(DoD\) documents](#) (8MB PDF):

- "Climate change is real, serious, and inescapable, and its looming effects ... may prove to be destabilizing on a massive scale." (p. 407)
- GHG tipping points have, "... a real potential to wipe out a majority of the population and species on the planet." (p. 165)
- "The life-sustaining capacity of our planet may be in jeopardy." (p. 408)

Citizens of the United States:

Over the past twenty-four hours your military has seized control of the country's key centers of communication, transportation, commerce, and government. This intervention was necessary to take emergency action on the environment and to initiate the economic and political restructuring required to prevent ecological collapse. Military control will be relinquished as soon as a qualified civilian group can assume responsibility for these essential tasks. The political leaders of other countries have been informed of our actions and the reasons for taking them.

We recognize that, even as a temporary measure, military intervention is a drastic step that runs counter to America's values and traditions. A fuller explanation is therefore in order.

The military's main purpose is to protect our nation - that is, to safeguard the collective interests of the American people. We have historically assumed that the country's leaders served these interests as well. However, the severe environmental degradation of recent decades and the absence of any effective response have made it clear that this assumption no longer holds. There is a growing divergence between the interests of the people and the actions of their leaders. *The military has therefore been forced to choose, and it has chosen the people.*

Our first step will be solar radiation management (SRM) to prevent massive releases of greenhouse gases from the rapidly melting Arctic. This is necessary to prevent runaway global warming, which would devastate the biosphere and doom the homeland. SRM now has the same existential urgency as repelling a foreign invader from America's shores.

Once SRM has been initiated, the military will begin to transform our economy so that it is fully sustainable. This will entail a rapid shift from economic expansion to contraction as well as efficiency improvements that are unconstrained by the profit motive. Large-scale efforts to

restore the environment to a viable condition, including the extraction of unsafe greenhouse gases, will commence as soon as possible.

America's foreign policy will be modified to encourage other countries to move in these directions. Military expenditures for the defense of our nation will not be compromised as a result of these changes.

Business leaders are strongly encouraged to embrace the economic transformation and to play a constructive role in the new economy. Your knowledge and experience are valued, and will be appropriately rewarded so long as your businesses fully comply with environmental and social regulations.

Citizens must understand that the production of non-essential outputs will decline. Goods and services that provide little objective benefit or that cause excessive environmental damage will be curtailed or eliminated. Workers who are displaced by these adjustments will be financially supported until they are re-employed in a transformed labor market.

The above changes are far-reaching and will require extensive intellectual support. This includes the development of a new economic theory, new economic institutions, and the legal infrastructure to manage a sustainable economy. Funding for social research will be distributed accordingly.

Americans should note that, although they are free to discuss these initiatives, public opposition and active resistance will not be tolerated. Martial law, which is now in effect, will be strictly enforced to punish any offenders.

More information on these fundamental changes, and what they imply for government, business, and citizens, will be distributed shortly.

We are confident that the American people will understand that the military is acting on their behalf, and that these exceptional measures are unavoidable at this late hour.

APPENDIX C

Public statement by young climate scientists

NOTE: This is my proposal for a public statement by young climate scientists (those under about 40 years old) regarding the distortions and deceptions of their mainstream colleagues.

The undersigned are young climate scientists who reject the falsehoods being disseminated by mainstream climate science. We fully agree with the mainstream regarding the reality and gravity of the crisis currently called "climate change", and we respect its research. However, we strongly condemn its apparent capitulation to non-scientific interests and the resulting corruption of its thought and message. Aside from confusing the public and discrediting our field, this corruption threatens our prospects as young people, the future of humankind, and the integrity of nature.

At the heart of the mainstream falsehoods is the redirection of public attention from safe greenhouse gas (GHG) concentrations to reduced emissions. The [UNFCCC agreement](#), which was ratified by 197 countries in 1994, vowed to maintain concentrations at safe levels "for the benefit of present and future generations of humankind." Tragically, the Intergovernmental Panel on Climate Change (IPCC) [effectively reversed](#) this commitment a year later. Since that time the mainstream has fixated on emissions reductions, even though emissions are the *increments* to the concentrations problem rather than the problem itself. The inevitable result has been the skyrocketing GHG levels that now imperil our world.

Besides rejecting safe concentrations, mainstream climate science propagates several grave distortions. Because of their devastating impact on the public mind and the actions of social leaders, we identify the most significant of these below.

1. **Misleading terminology.** "Climate change" is narrowly defined in the IPCC glossary as a prolonged change in the mean and variability of key climate components. Despite this, the term is commonly used in reference to the full range of harmful GHG effects, including ocean acidification. In our view a far more accurate choice is "GHG crisis".
2. **SRM as an isolated measure.** SRM is an essential stopgap measure, but it must be part of a coherent solutions set (see below). The mainstream instead treats it as an isolated measure in order to either delay it indefinitely or to dismiss it as an irrational techno-fix.
3. **Net-zero emissions as the goal.** Emissions are concentration additions. Reaching net-zero emissions thus means that concentrations have peaked, and that the critical task of reducing them to safe levels can begin. Whatever date is set for its achievement, net-zero emissions is a milestone, not a goal.
4. **A temperature anomaly as the goal.** Ecological damage from global warming is a function of the rate, magnitude, *and duration* of unsafe temperatures. Mainstream climate science suppresses the duration factor, allowing it to claim that stabilizing the warming at

1.5°C or 2°C is a rational goal. This claim is profoundly misleading: ecological damage, which is the key factor, will continue for as long as unsafe temperatures persist.

5. **Decarbonization as the main solution.** Clean energy and other carbon efficiencies are one element of one part of the proposed solutions set. Decarbonization is essential, but it is not the main solution.
6. **Ignoring tipping points and points of no return.** Mainstream climate science admits that climate "surprises" may occur, but virtually ignores these non-linear events when addressing solutions. This is most egregiously expressed in its rejection of SRM, which would provide our generation with at least some protection against tipping points and points of no return in the perilous years to come.
7. **Positive carbon budgets.** Because the 1.5°C and 2°C temperature limits have not yet been reached, the mainstream claims that more GHGs can be safely emitted. This ignores both the invalidity of temperature targets and the glaring fact that a planetary emergency already exists.

Besides being inaccurate and misleading, the above distortions violate the field's own codes of ethics. For example, the American Geophysical Union (AGU) [states](#) (400KB PDF) that, "Members have an ethical obligation to responsibly, accurately, and clearly inform the public about ... geoscience phenomena of importance to the well-being of Earth and society." (p. 5) The mainstream's falsehoods by contrast entail massive irresponsibility, inaccuracy, and lack of clarity. In fact, based on the AGU's definition, they constitute [scientific misconduct](#).

This is our proposed solutions set for the GHG crisis:

1. **Prudent SRM as a stopgap measure** to hopefully give humankind the time it needs to safely complete the steps below.
2. **Aggressive emissions reductions** to minimize further environmental damage. These will entail sharply lower rich-world consumption as well as decarbonization of the global economy.
3. **Large-scale removal of GHGs** from the atmosphere to reach safe concentrations. In other words: [climate restoration](#).
4. **Prudent pollution control.** Atmospheric pollution contains aerosols, which have a cooling effect. Reducing this pollution is beneficial to human health, but it could dangerously increase global warming.

We plead with mainstream climate scientists to honor their professional commitments by publicly repudiating the above falsehoods and supporting the proposed solutions. As young scientists we understand the institutional risks and personal sacrifices these acts will likely entail. We can only ask that you place our future, the future of humankind, and the fate of the biosphere above such considerations.

(Signatories)

APPENDIX D

Michael Mann's *The New Climate War*

NOTE: Mann is a central climate figure, and [his new book](#) is highly relevant to the ecological plight of the young. This appendix therefore summarizes the book's thesis, suggests reasons for its appearance at this stage, and notes its significance for youth leaders.

A. MANN AND HIS BOOK

[Michael Mann](#) is Distinguished Professor of Atmospheric Science at Penn State, a major research university in Pennsylvania, U.S. He has won numerous professional awards and in 2020 was elected to the National Academy of Sciences. In a previous book, [The Hockey Stick and the Climate Wars](#) (2013), he described the brutal attacks by industry-funded deniers that he and other climate scientists had endured. Because he is battle-scarred and prestigious, Mann is highly credible while being deeply committed to the capitalist status quo.

The thesis of his book is that the old war against "hard denial", which rejects the scientific evidence about the GHG crisis, has been largely replaced by the new war against "soft denial", which accepts the evidence but then goes astray in various ways. The soft deniers include those who exaggerate the crisis ("doomers"), blame individuals instead of corporations ("deflectors"), and use age, gender, ethnicity, and other "pre-existing fault lines" to splinter the climate movement ("dividers"). Mann calls all these people "inactivists" who, wittingly or unwittingly, do the bidding of fossil-fuel interests and thus prevent effective action.

B. GOOD COP/BAD COP

The New Climate War puts a novel spin on an old social-control tactic: [good cop/bad cop](#). This has long been a [favorite of the IPCC](#), and Mann uses it to beat down anyone who might undercut the mainstream's disastrous strategy: government policies to reduce emissions in order to "avoid the worst consequences".

Let me clarify Mann's tactical twist and then offer some possible explanations for his book's publication at this juncture. See figure D-1.

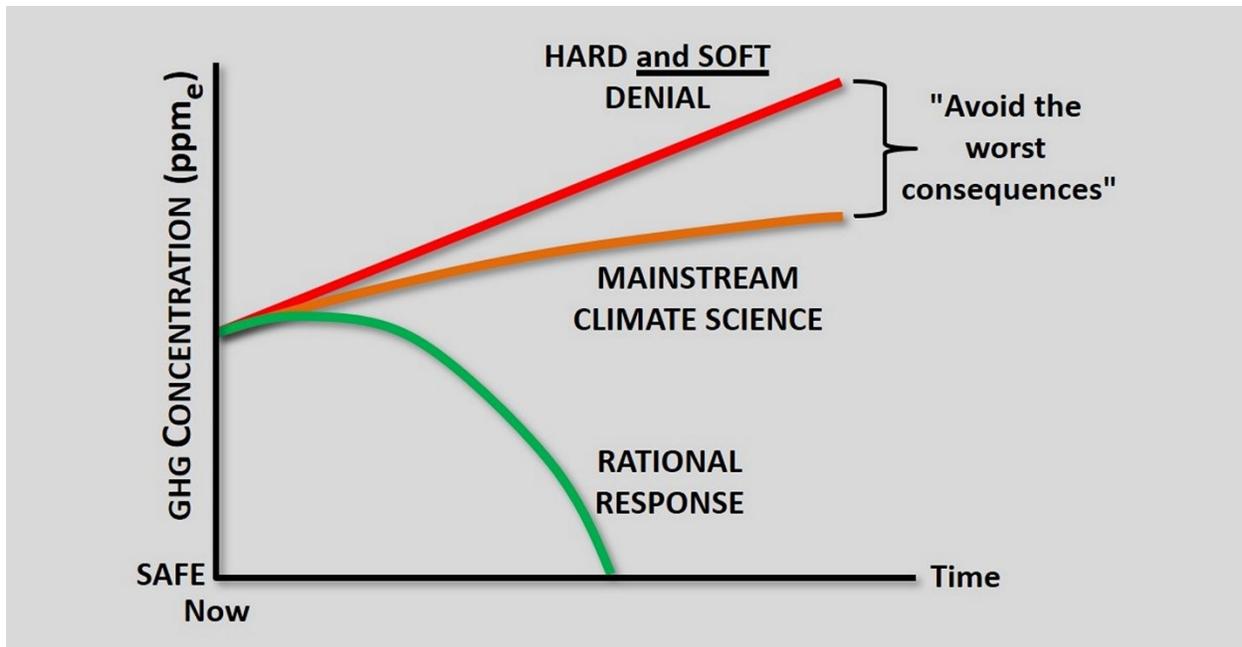


Figure D-1. The concentration trajectories behind Mann's good cop/bad cop

The above graph tracks GHG concentrations, hence global temperatures, over time. The red line at top depicts the rapid rise in concentrations from business as usual, which in the old war was blamed primarily on the hard deniers. The brown curve in the middle reflects the emissions reductions achieved through the mainstream strategy. The green curve at bottom represents the rational response outlined in [chapter three](#) and [appendix C](#).

The older tactic pitted the hard deniers (bad cop) against mainstream climate science (good cop). This worked because the good-cop strategy "avoids the worst consequences" and is thus *relatively* better. With massive help from the capitalist media, this was sold as the solution. However, as explained in [chapter two](#), ecological damage is represented by the areas under the above curves, so both approaches are *absolutely* ecocidal. This is why the two "cops" must be ignored and a "lawyer" called to demand the rational response.

As shown at the top of the figure, Mann's tactical update is to lump the soft deniers in with the hard deniers and classify them all as bad cops. For example, he claims that "doomers" like [Jem Bendell](#) and [David Wallace-Wells](#) are just as harmful to the climate cause as the hard deniers of the past. With the soft and hard deniers placed in the same category, the trick works as before: public attention is sharply focused on the battle between the purportedly good and bad guys, and the safe-concentrations alternative to both is removed from view.

The book is thus a deep deception to ensure that the mainstream approach is not undermined by an objective "lawyer" and the rational approach: rapidly reduce GHG concentrations to safe levels.

C. WHY NOW?

Why would Mann's book have appeared in early 2021? The following strike me as the most plausible reasons:

- Responding rationally to the GHG crisis has revolutionary implications, so the ruling class must maintain tight control over the GHG message. In 1988 it seized control of this message from independent scientists by [establishing the IPCC](#). In 2018 it countered the fading credibility of the 2°C story with the IPCC's [1.5°C report](#). I therefore surmise that, in 2021, the ruling class sought to prevent radical statements about the escalating catastrophe by bolstering the capitalism-friendly message of mainstream climate science.
- Under capitalist rule the GHG crisis will rapidly escalate, and Mann's book prepares us to accept this dark future. He repeatedly states that *the best we can do is reduce emissions to constrain how much worse things will eventually get*. Thus, although he excoriates the "doomers" who explicitly state that it's too late to avert disaster, he preaches this implicit version of doom himself.
- The peasants, AKA the young, are getting restless and must be prevented from grabbing pitchforks and attacking their ethically challenged elders. The book thus praises the immature, reformist youth movements typified by Greta Thunberg in an attempt to stop the young from becoming a more mature and militant threat.
- Some liberal climate scientists, including Kevin Anderson, the authors of the "[Hothouse Earth](#)" paper (800KB PDF), and those associated with [Scientists Warning](#) and the [Alliance of World Scientists](#), have made modestly provocative statements that clash with the conservative wing of mainstream climate science. This threatens a disruptive split within the good-cop camp. Mann's book thus disciplines these apostates: comply with the conservative stance or face increasing pressures in your professional lives.

D. LEADERSHIP CONSIDERATIONS

1. Reviews of Mann's new book (examples [here](#) and [here](#)) have been effusive and uncritical. This reflects the current social-control situation: Mann as the designated big dog to direct the GHG discussion into capitalism-friendly channels, and a mass of compliant followers to help him spread the ecocidal message. Don't waste your time and energy engaging with these people. Forsake them, build a militant movement, and instigate revolutionary change.
2. A striking feature of Mann's book is its intolerance: the author contemptuously dismisses anything that falls even slightly outside the conservative mainstream approach. His first few pages are replete with references to "the enemy". Although Mann parades as a liberal Democrat, he could well be laying the groundwork for a fascistic future within both his discipline and society as a whole.
3. Another striking feature is the book's lack of concern about the young. Consider that, under Mann's approach, they will move from an already perilous present into a truly gut-wrenching future while being denied SRM protection. This underscores one of my main

points: your generation has been ecologically abandoned and must take full responsibility for its ecological survival. This burden falls heavily on your shoulders as a youth leader.

4. Mann appears to have erred by implicitly confirming that duration is a major factor in the ecological damage from unsafe temperatures. On p. 213 he quotes ally Richard Betts, who correctly states that a single year at 2°C would not be catastrophic, but several decades at this temperature very likely would be. In other words: *duration matters - a lot*. However, this greatly weakens the mainstream claim that stabilizing the globe at an elevated temperature is a rational objective. As a youth leader you should jump on such missteps for polemical and recruitment purposes.
5. You must clearly recognize that the young are threatened by mainstream climate science as a whole - that is, both the liberal wing of Will Steffen, Johan Rockström, etc. and the conservative wing of Mann, Katharine Hayhoe, etc. The liberals appear more enlightened because they acknowledge the gravity of tipping points and the need for fundamental social change. However, neither wing admits that GHG concentrations must quickly decline to safe levels, and that revolutionary change is required to achieve this. Both are thus equally genocidal for the global young.

APPENDIX E

The Rockefeller Foundation

The intellectual corruption of climate science, as described in this book, is devastating for humankind and nature. However, it is just one aspect of a far broader and more sinister development. This is the 20th-century transformation of science as a whole from a moderately objective mode of inquiry into a dedicated instrument for maximizing capitalist profits and growth. The young, and especially their leaders, must understand this extraordinary shift and its impact on environmentalism in recent decades.

Intellectual corruption under capitalism is nothing new. In the 19th century, after the capitalist classes in England and France had consolidated their power, they quickly threw objective economic theory out the window. Karl Marx commented that, "It was thenceforth no longer a question [of] whether this theorem or that was true, but whether it was useful to capital or harmful, expedient or inexpedient, politically dangerous or not. In place of disinterested inquirers, there were the hired prizefighters; in place of genuine scientific research, the bad conscience and evil intent of apologetic."

Marx wrote this in 1867. Fifty years later capitalism had matured sufficiently to extend its intellectual corruption to the physical sciences. A major force in this process was [The Rockefeller Foundation](#). Fortunately a perceptive historian of science, Lily E. Kay, has written a detailed book about the Foundation's role: [The Molecular Vision of Life](#) (1996). I will first summarize Kay's book, then cite a recent book about trusting today's science, and finally discuss an investigative article that examines the Foundation's connection to today's environmentalism.

A. KEY POINTS: *The Molecular Vision of Life*

- The aim of the Rockefeller Foundation was to "endow scientists with unprecedented power over life" with the intention of, "... **restructuring human relations [for] industrial capitalism**". (pp. 3 and 8, emphasis added) Central to this aim was the reduction of biological life to the physical processes of chemistry and physics. A highly influential source for this perspective was Jacques Loeb's essay, [The Mechanistic Conception of Life](#) (1912).
- This recasting of life and human relations was a vast undertaking that was beyond the capacity of the capitalist state. The latter is not structured for such transformations and is to some degree bound by democratic norms. The ruling class therefore financed and coordinated the shift through the private Rockefeller Foundation and other plutocrat funders (Carnegie, Ford, etc.). The corruption of science was thus completely anti-democratic: the unilateral imposition of capitalist will to serve capitalist ends.
- The Foundation's project was strongly influenced by [eugenics](#). This refers to the intentional manipulation of hereditary characteristics to "improve" the species - that is, to mold the populace for its assigned economic roles. The term and its explicit aim lost favor during World War II because of the Nazi death camps, but the ruling-class quest

for biological human "improvement" continued in forms that were more socially acceptable.

- Kay summarizes her findings as follows: "Through education, public opinion, stimulation of a specific research agenda, and the promotion of selective categories of knowledge and research, the Foundation played a key role in the creation of a ... consensus [on social control] between social and political elites on one hand, and academic interests on the other." (p. 28, minor edit for clarity)
- In her conclusion Kay emphasizes that the molecular vision of life was not the logical result of objective research, but rather the intended outcome of a well-defined capitalist agenda. This echoes the [Walsh Commission](#), which in 1912 investigated industrial relations in the U.S. and characterized the Foundation's work as, "a thinly disguised capitalistic manipulation of the social order." (p. 28)

Briefly stated, the capitalist class in the early 20th century decided to shape people, society, and science based on its worldview and economic logic. It did so by circumventing the state and instead using private funders like the Rockefeller Foundation. As a result, today's scientific thought is pragmatic, mechanistic, and reductionist - hence destructive of people, community, and nature.

B. RECENT BOOK: Why Trust Science?

The book mentioned above is [Why Trust Science?](#) by [Naomi Oreskes](#). Her main claim is that, "... the basis for our trust is not in scientists - as wise or upright individuals - but in science as a social process that rigorously vets claims." (p. 141) With respect to empirical research, this is reasonably accurate: such science is collaborative and generally self-correcting.

The problem arises with the intellectual framework in which the research is conducted and conclusions are drawn. As Oreskes says, "Scientific facts are claims about which scientists have come to agreement." (p. 127) But this agreement is rooted in the prevailing scientific worldview, which has been implanted as described above. For example, climate scientists agree that emissions must decline, so this is a scientific "fact". They don't agree that concentrations must return to safe levels, so this is not. Clearly, the criterion being applied here is not environmental integrity, but rather compliance with the Rockefeller-imposed version of reality.

Oreskes either ignores or is oblivious to this deep history. In either case her book is grossly mistitled - especially for the threatened young. For them the question is not, "Why trust *science*?", but rather, "Why trust *capitalist science*?"

C. THE CAPITALIST CORRUPTION OF ENVIRONMENTALISM

Let me now turn to the investigative article. This will be an eye-opener for many and should be carefully read - here I provide only a glimpse. It was written by Max Blumenthal and is titled, "['Green' billionaires behind professional activist network that led suppression of 'Planet of the Humans' documentary](#)". The writer does an excellent job of refuting the arguments made by the

film's suppressors, but my focus is on their connection to the [Rockefeller Brothers Fund](#), which the Rockefeller Foundation calls "our sister organization".

Blumenthal notes that the environmental group 350.org was deeply implicated in this suppression, and that the Rockefeller Brothers Fund provided the group's initial financing and guided its agenda. Two leading figures in 350.org are Bill McKibben and Naomi Klein. The writer comments that, "In 2011, when Klein was appointed to 350.org's board of directors, she joined forces with an environmental organization incubated by the Rockefeller Brothers Fund and supported by the Ford Foundation." Blumenthal identifies many other groups and individuals who in some way serve billionaire interests. His message is clear: *capitalist influences permeate today's environmental movements*.

What can be expected from such influences? That is, what would be the likely impacts on environmental thought and action if environmentalists are backed by plutocrat capitalists? In my view the most significant of these would be:

- Categorical rejection of militant movements and revolutionary change;
- Minimal constraints on profits and economic growth;
- Strict enforcement of capitalism's worldview and economic logic;
- Support for activists, NGOs, scientists, etc. to the extent that they comply with the above.

As we survey today's environmental scene, this is exactly what we find. All initiatives revolve around government policies and dismiss the replacement of an ecocidal ruling class. The core initiative, emissions reductions, poses little threat to capitalism's profitable expansion. Michael Mann's recent book ([appendix D](#)) and the blatant censorship of [Planet of the Humans](#) are zealous enforcements of the capitalist perspective. Finally, the people and organizations identified in Blumenthal's article are supported in various ways - funding, access to publishers, friendly media treatment, etc. - because they slavishly comply with capitalist demands.

For youth leaders the conclusions are inescapable: reject today's deeply compromised environmental movements, independently rethink the crisis and its solutions, carefully reconsider political power and the role of government, and quickly organize militant movements to spur revolutionary change.