Ethical Maxims for a Marginally Inhabitable Planet

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Ethical Maxims for a
Marginally Inhabitable Planet
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ABSTRACT Bioethics has largely neglected the Anthropocene and its ethical challenges. This essay asks which ethical norms will serve us well in the face of the coming climate catastrophe. It sketches the climate changes likely for the year 2031 and offers six adaptive maxims, drawn from bioethics work in ICUs and hospices, to guide us through the devastation and transition following environmental and social collapse. These six maxims are: work hard to grasp the immensity of the change; cultivate radical hope; have a line in the sand; appreciate the astonishing opportunity of life at this time; train your body and mind; and act for the future generations of all species. Because we are already in an environmental collapse and the beginnings of social collapse, these maxims are relevant today as well as for the future.
The new solidarity of fate is as yet nowhere matched by the solidarity of our feelings, let alone our actions.
—Z. Bauman (2009)
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very person living on the planet now, and all who will be born, will be impacted by the climate emergency of the Anthropocene. In this essay we challenge bioethicists specifically to think about what resources our field may have to offer for addressing the moral crisis this development represents, as well
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as the new moral challenges and dilemmas it will generate. In particular, we address this essay and its thought experiments to our junior colleagues and former

students, who will be the ones among us who will confront the moral, social, and environmental crises most directly.

We are both now in our 70s. Like almost all working in bioethics, we have been asleep at the wheel for more than three decades. None of us has paid nearly enough attention to the fact that bioethics ought primarily to be framed as ethics for the bios, not merely for biomedicine. Van Rensselaer Potter's Bioethics: Bridge to the Future (1971), deserved far greater attention than it received. And there have been others seeking to awaken us. In 1999, in his book The Great Work: Our Way into the Future, the geologian Thomas Berry argued for a larger scope for medicine, and concomitantly, for bioethics:

The profession of medicine must now consider its role, not only within the context of human society, but in the context of the Earth process. A healing of the Earth is a prerequisite for the healing of the human. Adjustment of the human to the conditions and restraints of the natural world constitutes the primary medical prescription for human well-being. The medical profession needs to establish a way of sustaining the species as well as the individual if the human is to be viable as a species within the community of species. (69)

But these voices went almost completely unheeded. With a few exceptions scattered over the last 15 years (Brody 2009; Johnson 2016; Lee 2017; Moreno 2005; Pierce and Jameton 2004; Richie 2019), the field has remained steadfastly focused on biomedicine and its issues. But now the larger viewpoint—what Berry (1999) called "macrophase ethics"—is being forced upon us. The role of tipping points and cascade effects is now much clearer and more terrifying. The higher quality of data has shown how much faster things are moving than was previously thought, and the new amounts of historical data have shown us how quickly change can happen. On top of that, better modeling shows us more clearly just how impossible things will get on an Earth at an increase of 3° Celsius (C)—or even 2 or 2.5.

A Barely Conceivable Challenge

The specific aim of this essay is to explore what ethical maxims might guide us in the year 2031. Our assumption is that the current devastating trajectory for global warming will continue, or deviate only slightly. We wish we could be more optimistic, but there is little reason to think that technological remedies of sufficient scale are achievable any time soon, or that needed lifestyle adjustments in energy consumption are feasible—especially for American culture. Hence, a 2.5° C rise in global temperature over preindustrial levels is a strong possibility, possibly as early as 2041. If this is the case, humanity will be facing social, finan-

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cial, and political collapse on a global scale. There will be death and suffering from immediate climate events of unprecedented magnitude, such as frequent and severe storms, flooding, heat waves, and fires, resulting in famine, food and water shortages, pandemics, wars large and small, and economic and social insecurities on a level only the poorest of nations have ever experienced. We can always hope for less devastation, but typical American optimism at this juncture bespeaks either ignorance or denial. Had we responded 30 years ago, when the science was already clear enough to motivate different policies, we might hope for more, but now, in 2021, the task is increasingly difficult, and the timeframe for adjustment is radically shortened. Given these assumptions, it becomes important to ask what kind of ethics—what kind of moral guidance for living in this severely depleted environment—will be needed. The challenge of getting our bodies as well as our minds around the hyper-complex phenomenon of the Anthropocene is staggering enough. But when combined with the projected ethical challenges and existential agonies these environmental transformations will entail, the prospect becomes almost unthinkable. Yet we must face these issues, for the alternative is moral nihilism.

It is important to grasp that our situation constitutes a singularity. There is no previous extinction event in recorded history to reflect on and learn from. As Mark Lynas (2020) has observed, one would have to "wind the geological clock back about 3 million years, to an epic called the Pliocene, to encounter a world where global temperatures averaged 2–3 degrees higher than at the start of the 20th century." We do have five other mass extinction events to bring to our consideration of this sixth mass extinction event, and we also have the extinction of other species who reached an evolutionary dead end, all of which we could use to model the possible eventual end of Homo sapiens. But just as knowing that other people have died is not the same as realizing that we ourselves will die, so too knowing that other species go extinct is not the same as fully grasping the possibility of the extinction of our own species. And, of course, making the leap from our own personal death—hard as that may be to grasp—to the possible end of human life itself will hardly be easy. Human extinction is not currently on the horizon, but as the planet becomes less and less hospitable to other species, we can no longer assume that it will always be hospitable to us. How to cancel the assumption that human life will go on indefinitely after our individual death? To even pose this possibility is to generate, for most of us, a degree of anxiety and distress that makes it difficult even to continue the inquiry.

But that precisely is the point; that precisely is why it is important to push on.

And what we suggest is that we would be well served to look in new directions for resources. So far, we have relied on scientists and investigative journalists to keep us informed and to rally us to action. But their work has induced a curious, counter-intuitive phenomenon: the domestication of horror. Scientists study and measure; journalists interpret and report. The better job scientists and journalists
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do in analyzing and explaining things, the more they tame the horror of what is coming. Furthermore, they teach us to approach the Anthropocene as observers, but this is problematic: no one will be an observer at an increase of 3° C.
We must move from a cognitive, observer understanding of our situation to a felt embodiment of our predicament, from intellectual knowledge to bodily acknowledgment. Resources for reflection may possibly be found in practical disciplines developed for dealing with human extremes, such as refugee communities, famines, and end-of-life scenarios. Resources may also be found in communities that have faced immense suffering: indigenous peoples, survivors of concentration camps and solitary confinement, and oppressed or enslaved communities of color. We are recommending, in short, that we consult people who have dealt with situations where one set of hopes, and all fantastical thinking, have to be abandoned, and new radical hope has to be found. Our own contribution to this discussion will draw on our decades of experience in clinical bioethics consultation, which has focused on care and decision making in catastrophic, life-threatening, and end-of-life situations.
We make no claim to finality or completeness for the ethical maxims we will highlight below. Our intention is to contribute to the nascent conceptualization and discussion of the barely conceivable and yet largely undiscussed catastrophe of global warming. We encourage other bioethicists, as well as those with experience with endangered communities, to join this discussion. All of us as human beings are finally being forced to confront this climate emergency: it is not off in the future. The recent Australian and European flooding is climate flooding, just as the California fires of 2020 and 2021 are climate fires. Confronting our predicament means facing head-on the oft-avoided and grim fact that our children and grandchildren, and their descendants on down the line, will be dealing with the ramifications of the Anthropocene for decades and centuries to come.
The World in 2031
So what will the world be like in 2031? Start here: we are carbonizing the atmosphere at an alarming rate. Half of the total carbon pollution on Earth has

been emitted in the last 30 years, notably after there was scientific consensus that greenhouse gases (GHGs)—carbon dioxide, methane, and nitrous oxide—are a grave threat. Temperature accelerations are causing polar ice to melt, permafrost regions to shrink, and oceans to warm and rise. Hurricanes and other severe weather events are increasing in number and severity. Houston has had a so-called “once every 500-year storm” in each of the past three years. The fires in California and Oregon are unprecedented and promise to worsen in frequency and devastation. Meanwhile, tropical rain forests in places like Brazil, which store and thus help control carbon emissions, are being systematically cleared for farming and ranching. Changing consumption habits have also fueled the rise of autumn 2021 • volume 64, number 4 497

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GHGs. The increase in meat eating in developing countries like China is a notable example. It is estimated that the GHGs emitted from all livestock globally accounts for 14.5 % of all GHGs (FAO 2020).
What will be the effects of global warming? The Paris Agreement of 2015, signed by 196 nations, is an aspiration to keep global warming to below 1.5° C above preindustrial levels. We are currently at 1.1, and a rise to 2.3° is already locked into the atmosphere from the carbon we have emitted in the past 30 years, even if we went to zero emissions today. Just how soon we will reach the 2.3° level is uncertain, but every day of continued emissions brings it sooner. If we link temperature change to sea level rise, 1.5° C in global warming translates into a rise of 1–2.5 feet. If this goal is not met, a 2° C rise in temperatures means a sea level rise of 3–6 feet, affecting everyone on the globe. Perhaps most notably, the number of climate refugees from flooding, fires, and drought would enlarge, to as many as 245 million people. If global warming reaches 3.5–4° C over preindustrial levels, sea level rise will be 22–25 feet, with devastation of almost unimaginable magnitude (Maslin 2014; Wallace-Wells 2019). Massive deaths, especially among the world’s poorest populations, will occur as a result of uninhabitable land, food and water shortages, and the subsequent breakdown of economies and national governments. To use potable water as just one index, currently a quarter of Earth’s population is water stressed. This means that 1.95 billion people currently struggle to meet their daily needs for clean water. By 2030, the increased salination of irrigated farmland, the evaporation caused by increased heat, and frequent flooding of coastal areas will mean that an additional billion people will be without a safe source of drinkable water (Maslin 2014).
Another index is infectious diseases. Vector organisms, such as mosquitoes, are

sensitive to changes like water-surface temperature, humidity, moisture, and deforestation. Climate warming would affect both the scope, intensity, and seasonality of infectious diseases such as malaria and cholera. In general, global warming will mean a substantial increase in transmission of disease worldwide (Maslin 2014). This is to say nothing of health events such as heat emergencies, mental health disorders, and broader health problems caused by declining food supply, food safety, and its consequences (Jameton 2016).

How fast will all this happen? If a business-as-usual pattern prevails and warning signs are ignored, a 2.5–3° C rise could occur as early as the early 2030s, 3–4° by mid-century, and a 5–6° rise by 2100 (Lynas 2020). Much depends on which scientific modeling of climate change turns out to be the correct one. For example, it is still unknown whether temperature will rise at a predictably steady pace with the rise of GHGs, or whether there is a tipping point, caused by a complex of feedback loops, beyond which devastating changes cascade and accelerate (Bendell 2020). What we know about past climate changes is that they appear to have been abrupt, and climate models for these sudden changes are hard to simulate. Nonlinear, cascading changes in the severity of global warming

and its accompanying catastrophes is a high probability. Much depends as well on how quickly the world can move to green technologies like solar and wind power, electric cars, and built structures with zero GHG emissions (Miller 2020). Yet scaling up technologies such as these usually requires decades. And even if massive technological changes in how energy is produced all work perfectly, all over the globe, they will be insufficient if the cultural patterns of consumptive capitalism, economies based on growth, and habits of increasing—rather than curtailing—energy use persist.

Mitigation and Adaptation, Collapse and Transition

Mitigation and adaptation represent two prominent ways to talk about surviving global warming. Mitigation means lessening the degrading effects of the Anthropocene, usually through technological ingenuity. Adaptation means accommodating to a new human experience through moral, social, economic, and political adjustments. These are not, of course, mutually exclusive, since any mitigating strategies will also involve adaptations, and successful adaptations both require some degree of mitigation and may also uncover novels strategies for lessening the rate of environmental degradation.

There are numerous reports of the promise of mitigating geotechnologies for

carbon capture, such as vacuuming carbon dioxide out of the air and sending it into space or turning it into rock, reforestation, shooting particles into space to block sunlight, and quick conversions to solar and wind energy to replace coal and other fossil fuels (Kolbert 2021). Yet a true turnaround of our carbon-based economy will not come easily or quickly. Even in the US and Europe, where global warming is perhaps most widely understood, the political obstacles are daunting. The fossil fuel industry has hidden its own decades-long research showing the degrading effects for the Earth resulting from rapacious coal, gas, and oil production. Their legislative lobbies are well entrenched and powerful, and these companies—much like the tobacco companies in the mid-20th century—have shown clearly that they are willing to tolerate a great deal of human suffering in order to pursue profits. In addition, it is highly unlikely that the growing carbon footprints of China, India, and other rising industrial giants will be sufficiently curtailed. Reliance on mitigation through technological innovation looks more like fantasy and folly than prudence. While we believe that an all-out effort to engineer and adopt cleaner technologies should be mounted, counting on these as the solution grossly underestimates the magnitude of the task and amount of social and political change required. Thus, we are focused in this essay on moral and social adaptation.

If, as is likely, mitigation is too late, or if it fails completely, adaptation will be the task. And thinking seriously about adaptation means thinking about collapse—for some forms of collapse seem inevitable and part of what adaptation

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will have to take into account. “Collapsology” is a nascent field (Servigne and Stevens 2020), and thinking in this way is not a matter of counseling people to give up. It is suggesting the cultural equivalent of “advance directives.” If you find yourself in a spot where mitigation has failed, and adaptation is what must be done, what will you be focused on? Will it be anger, regret, competition, survival? Or will it be living what life is available with as much quality as possible? We think it likely that by 2031 mitigation will be seen to have largely failed, and that adaptation to social and environmental collapse will be the task that is left. We assume that this means major portions of the planet will be facing the kinds of major transitions that people face in hospitals, ICUs, and hospices every day.

It is impossible to know with any certainty how severe the environmental and social collapse will be—in most places, it will probably not be as bad as the total

lawlessness of “Mad Max” scenarios. Yet radical shifts will be required everywhere to manage a future more altered in living conditions and expectations that anything in human memory.

The second pairing, collapse and transition, is needed because both environmental and social “collapse” have to be part of any realistic assessment. And while neither kind of collapse is likely to be total, we must talk also of “transition.” If a total collapse (of either kind) occurs, it is more likely to come from engineering misadventures in the efforts at mitigation, not from global warming per se. (Shooting particles into space to block the sun’s rays seems a likely candidate for this kind of blundering hubris.) Good adaptation methods figure heavily into whatever transition may be possible, making for a softer landing and shorter horror, with more resources surviving to power recovery on other side. But to be clear, some environmental and social collapse seems unavoidable, meaning suffering and death on a scale no one alive has ever seen. Hence, a caveat: the use of these pairs of stark terms—mitigation and adaptation, collapse and transition—when used as a shorthand, as we are now doing, can become an intellectualized, distancing force shielding us from the horrid realities under discussion. We must move with care so as not to leave the distress behind, stewing in our bodies and psyches, while we talk abstractions. Any hope of mitigation or adaptation, or transiting out of social collapse, will require all the cognitive and emotional resources we have—minds and bodies all working with knowledge and in acknowledgment, and in concert.

Six Ethical Maxims for a Time of Collapse

Unlike principles, which are guides for how to think, pointing out moral values which could guide our cognitive processes, maxims are short guides for how to act, and they suggest practices to which we should become habituated. They often take the form of wisdom sayings and draw less from modern philosophy than

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from ancient philosophy and wisdom literature. Maxims are less how to analyze and choose and more how to be. They constitute ideas that must be practiced to be fully understood. In this way they resemble more the moral virtues than principled decision guides so familiar to bioethicists.

When describing the need for striking and memorable maxims, Pierre Hadot (1995) puts it this way:

when the time comes, they can help us accept such [catastrophic] events, which are, after all, part of the course of nature; we will thus have these maxims and

sentences “at hand.” What we need are persuasive formulae . . . which we can repeat to ourselves in difficult circumstances, so as to check movements of fear, anger, or sadness. The exercise of meditation [on maxims] is an attempt to control inner discourse, in an effort to render it coherent.

Thus, in the sense we employ here, maxims are slogans, mnemonic reminders, and ultimately spiritual exercises. In a crisis, shorthand reminders of core values work better than principles that require reflective interpretation and application. In addition, the basic principles we now use most often in bioethics were crafted for an age of relative abundance, stability, and progress. Meditating on maxims ahead of time helps to shapes a more realistic view of the world and habituates us, so that when the time comes, we are more likely to behave in a way ethically appropriate to the reality before us. In short, maxims can be especially useful in times of moral crisis and major cultural change. They help establish conditions that will preserve moral creativity and resourcefulness. They can be essential moral components for surviving the inevitable transitions before us.

Maxims present means of living one’s life in a coherent and honorable way in the midst of great trouble. This is in significant part why we are proposing maxims, and not principles or theories. An autonomy-driven ethic, pictured as enacted by rational, independent agents—whether deontological or utilitarian—fits all too well with the neoliberal world order, under which regime the Anthropocene has accelerated. Both the dominance of the hyper-individualistic autonomy ethic characteristic of neoliberalism and the attendant ubiquity of the utilitarian calculus—and indeed the neoliberal order itself—are inconceivable without the abundance, even superfluity, sponsored by fossil fuels. We thus endorse the critique of principlism and utilitarianism found in the ethics of care. But we are here looking deeper—we are looking for how the very idea of ethical behavior can survive in extreme conditions. Because we know that often it does not.

And this is where maxims and bioethics comes together. The maxims have ancient origins. Variants of them have been followed when dealing with human catastrophes in the past, mostly in periods in which there was far less optimism, reliance on rational analysis, or faith in technical ingenuity. But, equally as decisive, we have seen these maxims at work in hospitals and hospices. Much of what we know about them has been learned from patients and families while doing

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ethics consultation or working in ICUs and hospices. And while it is true that collapse will involve a collection of large-scale events, all impacts will be individ-

ual and personal as well. What we have observed in the field confirms, we would argue, teachings of the world's wisdom traditions that have stood the test of times of scarcity and hardship, of social disruption, of natural catastrophe.

To be clear, we are not arguing that these maxims are the total ethics needed for the Anthropocene. To begin with, the complicity of our ethical traditions in creating the Anthropocene must be acknowledged, and this ought to prompt a revolution in approach to the foundations of bioethics. Perhaps an ethics of care should come to the fore, and an ethic of biophilia, as expounded by Eric Fromm (1973) and especially by Edward O. Wilson (1984)—developed in Bioethics: A Path Forward (forthcoming) by Nancy King, Gail Henderson, and Larry Churchill—should be carefully examined for its value as a foundational norm. And then there will be the many specific activities aimed at mitigation of the ongoing crisis that will certainly be needed. What we offer here is but a bare beginning. Our intention is to provoke discussion and to provide a fruitful place for that discussion to begin.

For each of the six maxims that follow we provide:

• Maxim: a formulation cast as an injunction, as is common in wisdom traditions;

• Basis: vignettes and examples from ethics consultation and bioethics that illustrate or clarify the injunctions, and texts from the 20th and 21st centuries that have been helpful to us in our reflections on the Anthropocene;

• Extrapolation: suggestions of how the maxim and basis will be useful in a time of climate emergency.

Maxim 1: Work Hard to Grasp the Immensity.

Realize how fiendishly difficult it is to grasp the scope of climate devastation oneself. Realize how hard it is for others. Effective strategy, as well as compassion, require carefully assessing the capacity of one's listeners. In keeping with this, these maxims suggest a progression. One step at a time. Begin small. Asking people to go beyond their capacity can be cruel and is generally counterproductive.

Basis. As every clinical ethics consultant knows, it is always difficult to accept bad news that has a finality to it, like a terminal or crippling diagnosis. But some things are even more difficult than that. Some turns of events demand a change in one's whole view of the world. We are thinking here in particular of cases in neonatal units where young, often first-time parents face their newly born children who have startlingly awful diagnoses and conditions. One of the very worst we have ever worked with is a severe case of Osteogenesis imperfecta, a condition

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where the bones in the newborn's body break incredibly easily. Bone formation is flawed. There is essentially no reliable skeleton, and nurses changing diapers know they are breaking bones every time they move the child. This is not only a tragedy; it is something that goes beyond the bounds of the conceivable for many young parents. The world simply cannot be the kind of place where this can happen. And yet it is. And so the parents must reconstitute their world simply to be able to acknowledge what is in front of them.

Likewise, working with end-of-life scenarios, ethicists become acquainted with all manner of premature and tragic deaths. We can all think of cases of this kind that stretched our moral sensibilities: the young mother dying of undetectable cancer, leaving three kids behind; the star athlete dying of heat stroke through the neglect of his coaches; the healthy middle-aged man born with a Berry aneurysm that suddenly ruptures and kills him. Senseless events. How can the world be like this?

But to move beyond them, as we know from working with patients and families, it is essential to grasp just exactly what has happened. We also know that when that is done, new possibilities can be found on the other side of what looked like the endgame.

Extrapolation. The very possibility of environmental and subsequent social collapse is similarly inconceivable for most of us. How can humans have had this much impact on the natural order itself? Can we possibly unknowingly have perpetrated the extinction of thousands upon thousands of other species, and untold suffering of our own species?

The tragedies of bioethics work can give us insight into the moral nihilism senseless suffering can open onto. By moral nihilism we mean not only that past norms seem to lose their validity, but that 'right and wrong' as ways of interpreting our world are no longer anchored anywhere. And yet this sense of moral vacuity can in turn help us appreciate how difficult it is to face the Anthropocene directly. Moments of moral paralysis seem, in fact, to be a common experience for those coming to grips with the climate emergency and all that it implies. A dose of moral nihilism may actually be essential for getting to the end of ordinary hope and allowing us to come truly into radical hope—to tap the resources that lie on the other side of ordinary hope, optimism, and reasonableness.

Maxim 2: Cultivate Radical Hope.

The kind of hope that reappears after optimism has died is hope that can be relied on. It is generally a hope that doesn't talk about or think of itself as hope. This means realizing the dangers of optimistic hope, of fantasyland and magical

thinking. First, we must own our grief and anger. Second comes the realization that blaming ourselves and others doesn't help. Only when one reaches a certain level of despair can new resources of hope emerge, in oneself and in the new world in which one finds oneself. What is called for is a faith in a possible future, autumn 2021 • volume 64, number 4 503

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however improbable, embedded in action totally oriented to the situation (Lear 2006).
Basis. All of us who have worked in ICUs and with palliative care and hospice teams have watched patients and families adjust to what had seemed a hopeless situation. We recall one formerly homeless patient saying to us, "Well, Doc, if it weren't for AIDS, I'd be dead"—meaning that in coming to terms with AIDS, he had gotten himself off the street and had broken his addictions. We are also familiar with studies showing that survival rates for certain kinds of cancers are better for patients in hospice than out. By accepting a terminal diagnosis and re-defining what counts as healing, an unexpected path for extended life opens up. Confirming this, the bioethicist Judith Andre (2015) talks about "open hope"; Joanna Macy speaks of "active hope" (Macy and Johnstone 2012); and Gabriel Marcel (1978) speaks of the hope that can arise when "hope-for" is released. Likewise, Albert Camus's 1947 novel The Plague and his 1946 essay Neither Victim nor Executioners are essential resources.
Extrapolation. How will you behave when there is no ordinary hope? What are the kinds of things you will always want to do—the way you want always to be, whether there is hope or not? For example, consider the central virtues of the hope that emerges beyond optimism: being kind, not abandoning people, behaving with integrity. The key is knowing that there is almost always room for something positive to be done. There are always openings, always gaps in the gloom.
Practice for how you will behave when there is no more left to do—that is, when no telos-action or results-oriented action of any kind is possible.
Maxim 3: Have a Line in the Sand.
Know that there are some things you will not do, some modes of living you will not embrace. Know that there are lives worse than death. Be prepared to die.
Basis. This maxim is the core insight behind the practice of formulating advance directives. At what point is it time to stop? We are thinking of hospice patients who asked that their tube feedings be stopped, and the candidate for a brain surgery to de-bulk a benign tumor who declined the procedure, because life in the hospital and rehab was simply unpalatable to him. (Interestingly enough, he

lived far longer than his projected life expectancy had he had the surgery.)
For those of us in health care, there are the sobering lessons from the horrific situation that developed at Memorial Hospital in New Orleans after Hurricane Katrina, as recounted in Sheri Fink's outstanding book, Five Days at Memorial: Life and Death in a Storm-Ravaged Hospital (2013). As floodwaters rose in the days after the storm, the hospital lost power when the grid failed, and then lost backup power when their generators were swamped. With no power, the ventilators and other life-supporting machines stopped working. There were no functioning monitors. Without air conditioning, temperatures in the sealed units rose rapidly. As the days went by, shortages of food and medicine developed. Gunfire was

heard in the streets; police withdrew from the area because of the danger. Under these conditions, impossible triage decisions were made, and finally, over a dozen critically ill patients were injected with lethal doses of morphine and sedatives.
Extrapolation. Post-Katrina New Orleans presents us with the kinds of scenarios that can be expected to be a regular occurrence as natural and social collapse unfold. Useful reflections on how to behave in such extreme situations come from the concentration camp writings of Victor Frankl and Etty Hillesum. There is also the example of Ludwig Wittgenstein, who urged his student Drury, who was preparing to go into combat in World War II, to decide ahead of time not to engage in hand-to-hand combat, but to be willing to be killed instead (Monk 1990).
Know what you will do, and what you will not. Max Weber formulated it this way in his classic lecture "Politics as a Vocation" (1919):
it is immensely moving when a mature man—no matter whether old or young in years—is aware of a responsibility for the consequences of his conduct and really feels such responsibility with heart and soul. He then acts by following an ethic of responsibility and somewhere he reaches the point where he says: "Here I stand; I can do no other." That is something genuinely human and moving. And every one of us who is not spiritually dead must realize the possibility of finding himself at some time in that position.
Considering the likely realities of collapse and transition, it seems probable that many people will find themselves facing these kinds of decisions, and something like an internal, ethical "advance directive" could prove beneficial. This is why, for example, emergency responders run through practice scenarios. The body and the imagination need to be encouraged to engage directly that which lies

outside the normal. True, drawing lines in sands that are constantly shifting in a tricky business. One must be prepared, as well, to pivot and go in unexpected directions. But these pivots are more likely to be done well if one has prepared by imagining the worst and drawing practice lines in the sand.

Maxim 4: Appreciate the Astonishing and Unique Opportunity.

Appreciate the opportunity you have to accompany humanity in this extraordinary transition and to be present to the earth and the biosphere at this time. Appreciate how amazing our bodies are, as a perceiving sensorium, as movement and in activity, sponsoring emotion and thought. Be amazed at the interconnectedness of things and their astonishing complexity. Think small, alongside thinking very big.

Basis. One of the privileges of doing ethics consultation and research in clinical bioethics is the opportunity to meet remarkable people who handle their physical challenges with courage and grace. All of us who have done this work can think

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of examples. We cite here one from our book What Patients Teach (2013). The patient has abdominal cancer and is in the last weeks of her life:

There is no blessing like friends. I've had friends who came out of the woodwork, friends I hadn't seen in a long time or who I only saw infrequently. I have been treated so lovingly; it's just been overwhelming to me. I'm so very grateful that I had this year to spend this time with these people. It's interesting. The two friends who have helped me the most have both said to me that they consider it a privilege to be able to do this. Which goes to show that many times the people in your life are willing to do more to help you out than one might have guessed. (109)

There are also well-known accounts of illness that confirm the blessings that can come in extremity if one is prepared to receive them. At the end of his account of his long dying of AIDS, Harold Brodkey (1996) says: "Peace? There was never any in the world. But in the pliable water, under the sky, unmoored, I am traveling now and hearing myself laugh, at first with nerves and then with genuine amazement. It is all around me" (177). And Arthur Frank (2002) summarizes his reflections on his own illnesses, and illness in general, this way: "The ultimate value of illness is that it teaches us the value of being alive; this is why the ill are not just charity cases, but a presence to be valued . . . . Illness restores the sense of proportion that is lost when we take life for granted" (120). Cultivating gratitude: What could be more important? This is the message—from our patients, from the

dying, from our great teachers.

Extrapolation. Our patients, and many people who have faced ethical extremity, teach the importance of the "little things." We are thinking of Masha Gessen's interview with the former Gulag prisoner talking about his old camp:

You should see it [Site Perm-36] in the summer. Some evenings there—the light is special, and the air—sometimes you'd be going behind the outhouse, because inside it was rather unpleasant and inconvenient and you avoided it if you could, so there you'd be, taking a piss behind the outhouse, and the air was like you could touch it, and the smell of those linden trees, and the sound of the birds singing. (Gessen and Friedman 2018)

This marvelous passage brings to mind the woman we interviewed years ago who had lost fingers in a textile mill, but whose main memory of work, the memory she stressed in her account, was of how beautiful the afternoon sunlight was as it shone on and through the running threads in the very spinning looms that had claimed her fingers.

Learn then to appreciate how amazing nature is, even in (or especially) the face of loss and change. Think of the amazing greens one finds when walking in landscapes after intense wildfire, or of the astonishing color photographs of Rich-

ard Mosse capturing the (admittedly unearthly) beauty of the devastation of the Amazon (Maher 2021). Joanna Macy's teaching work is especially helpful in its insistence on the blessing of our being alive during this amazing time: appreciate that there is anything at all, and that we have witnessed it (Macy and Johnstone 2012).

Maxim 5: Train Your Body and Your Mind.

Learn breathing exercises. Develop the physiological capacity to deal with despair. Despair isn't just psychological, it's physiological.

Learn skills for getting beyond ego—not just the cognitive limits of ego, which many are at least familiar with pondering, but the emotional and physiological limits of ego.

Basis. Those of us who have worked with colleagues in health care on issues related to moral distress and burnout are familiar with the power of bodily practices to mitigate and eventually assimilate trauma of all kinds. Included in such practices would be mindfulness, yoga, cognitive-behavioral therapy, trauma release exercises, and wellness programs (nutrition, exercise, sleep patterns).

A useful advanced skill is the capacity to shift timeframes. In imagination,

go out to geological, evolutionary, planetary, cosmic scales to get a different view of the Anthropocene. Consider, for instance, that the merger/“collision” of the Milky Way and Andromeda galaxies, which will take place over a period of 5 billion years, has already begun. Next, practice returning to the timescale of the human life cycle. From there, descend into an examination of the moment-by-moment construction of experience. At that level, as well as at the level of the galaxies, the Anthropocene, which looms so large for us, is invisible. Finally, come back once more to the human cycles of days, weeks, years, generations. If one doesn’t return to the human cycles, one becomes a monster. But staying always here in the human ego timeframe, one will likely die of grief or rage (both of which have their own specific fast and slow tracks).

Extrapolation. As we have seen with the COVID-19 pandemic, in time of severe social stress, moral distress and burnout can spread quite widely. They impact not just health-care workers and emergency responders, but also food workers, teachers, and mass transit personnel. Physical, psychological, and spiritual trauma are likely to become widespread as the climate collapses. Training body and mind to cope will be essential to survival and to whatever sort of human flourishing is possible on a vastly depleted planet.

Maxim 6: Act for the Future Generations of All Species.

Speak for those without voice: the poor, the future generations, other species. Speak for the forests, the seas, the mountains.

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Act, personally and politically, to limit the damage being done to the biosphere. Every 0.5° C increase avoided is a major victory and achievement.

Basis. For the bioethicist, the COVID-19 pandemic has been a clinic in the interconnectedness of ethical problems, as well as the intertwining of the fates of nations and species. Think here of the interconnections between and among fresh meat markets in China, violated natural habitats, global trade patterns, and their economics; the disparities in health care and vulnerability among nations, and among populations within nations; the multiple failures of the health-care system in protecting its workers and its patients; the catastrophic failures of political leadership and the undermining of confidence in science and medicine. And then boil all this down to triage policies, and staffing decisions, and the allocation of PPE. All connected, all one giant web.

Extrapolation. It is essential to find creative ways to cultivate an in-depth, emotional as well as intellectual understanding of interconnection, so that when we

act for a species or a group, we are acting for everything in the global web. We are all in this together, all tied together, all forming a multiplex unity. Acting with a sense of solidarity, involving mutuality and reciprocity, the development and maintenance of trust, is essential for decent survival. This understanding is the only intelligent basis for strategy and research. This insight is the foundation for the basic compassion involved in the stress on equity, distributive justice, and the acknowledgment of the gross unfairness of the basic fact that those who have contributed the least to the carbon catastrophe will bear the brunt of the chain of disasters it is initiating.

The Process Has Begun

What in many ways is hardest to realize—yet must be realized—is that the collapse is already here. The following is a list of symptoms of systems already badly out of kilter: the COVID-19 pandemic; the recent Houston storms; the wildfires in California and Australia; and the grid collapses in Texas and California. It is clearly too late to avoid the climate crisis or mitigate it in any definitive way. Adaptation and collapse have begun, albeit in slow motion.

Unfortunately, the numbing has begun as well. We are already far too tolerant of massive amounts of suffering. We are currently moving toward 600,000 COVID-19 deaths in the US. This is more deaths than in all our 20th- and 21st-century wars combined. There have been over 3 million deaths worldwide, and yet life moves along in a quasi-normal state for most of us.

Alongside this process, the temptations and provocations to ruthlessness, competition, and violence will be constant. But our greatest moral threat will likely remain the creeping normalization of catastrophe.

Which brings us back to the fundamental questions addressed by the maxims: what kind of person will you be, and what will you teach and model for your colleagues, your students, your families?

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We ourselves find this list of maxims daunting. But this is how maxims work. Maxims have to do with how we do everything we do—a tone and style of living—as well as with the implementation of certain practices. Maxims are, in significant part, about keeping morality itself alive in a catastrophe. They demand of us that which we have difficulty demanding from ourselves. This is why we put forward for discussion this list of six maxims: precisely because they are so difficult, but also—in our view—so necessary.

References

Andre, J. 2015. Worldly Virtue: Moral Ideals and Contemporary Life. Lanham, MD: Lexington Books.
Bauman, Z. 2009. Does Ethics Have a Chance in a World of Consumers? Cambridge: Harvard University Press.
Bendell, J. 2020. “Deep Adaptation: A Map for Navigating Climate Tragedy.” IFLAS Occas Pap 2: 1–35.
Berry, T. 1999. The Great Work: Our Way into the Future. New York: Bell Tower.
Brodkey, H. 1996. This Wild Darkness: The Story of My Death. New York: Holt.
Brody, H. 2009. The Future of Bioethics. New York: Oxford University Press.
Camus, A. 1946. Neither Victims nor Executioners: An Ethic Superior to Murder. Eugene, OR: Wipf and Stock, 1986.
Camus, A. 1947. The Plague. Trans. S. Gilbert. New York: Random House, 1991.
Churchill, L., J. Fanning, and D. Schenck. 2013. What Patients Teach: The Everyday Ethics of Healthcare. New York: Oxford University Press.
Fink, S. 2013. Five Days at Memorial: Life and Death in a Storm-Ravaged Hospital. New York: Crown.
Food and Agriculture Organization (FAO) of the United Nations. 2020. “Key Facts and Findings.” http://www.fao.org/news/story/en/item/197623/icode/.
Frank, A. 2002. At the Will of the Body: Reflections on Illness. Boston: Houghton Mifflin.
Fromm, E. 1973. The Anatomy of Human Destructiveness. New York: Holt, Rinehart and Winston.
Gessen, M., and M. Friedman. 2018. Never Remember: Searching for Stalin’s Gulags in Putin’s Russia. New York: Columbia Global Reports.
Hadot, P. 1995. Philosophy as a Way of Life: Spiritual Exercises from Socrates to Foucault, ed. A. Davidson, trans M. Chase. Oxford: Blackwell.
Jameton, A. 2016. “Time Frames for Saving the Planet.” Ethics Policy Environ 19 (2): 136–40.
Johnson, J. 2016. “Bioethics as a Way of Life: The Radical Bioethos of Van Rensselaer Potter.” Lit Med 34 (1): 7–24.
Kolbert, E. 2021. Under a White Sky: The Nature of the Future. New York: Penguin Random House.
Lear, J. 2006. Radical Hope: Ethics in the Face of Cultural Devastation. Cambridge: Harvard University Press.
Lee, L. 2017. “‘A Bridge Back to the Future’: Public Health, Bioethics and Environmental Ethics.” Am J Bioethics 17 (9): 5–12.

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Lynas, M. 2020. Our Final Warning: Six Degrees of Climate Emergency. London: Fourth Estate.
Macy, J., and C. Johnstone. 2012. Active Hope: How to Face the Mess We're in Without Going Crazy. Novato, CA: New World Library.
Maher, D. M. 2021. "'They Are Living Maps': How Richard Mosse Captured Environmental Damage in the Amazon." Guardian, April 6. https://www.theguardian.com/artanddesign/2021/apr/06/richard-mosse-irish-photographer-amazon-environmental-damage.
Marcel, G. 1978. Homo Viator: Introduction to a Metaphysic of Hope. Trans E. Craufurd. Gloucester, MA: Peter Smith.
Maslin, M. 2014. Climate Change: A Very Short Introduction. 3rd ed. Oxford: Oxford University Press.
Miller, D. 2020. Solved: How the World's Great Cities are Fixing the Climate Crisis. Toronto: University of Toronto Press.
Monk, R. 1990. Ludwig Wittgenstein: The Duty of Genius. New York: Penguin.
Moreno, J. 2005. "In the Wake of Katrina: Has Bioethics Failed?" Am J Bioethics 5 (5): 18–19.
Pierce, J., and A. Jameton. 2004. The Ethics of Environmentally Responsible Health Care. New York: Oxford University Press.
Potter, V. 1971. Bioethics: Bridge to the Future. Englewood Cliffs: Prentice Hall.
Richie, C. 2019. Principles of Green Bioethics: Sustainability in Health Care. East Lansing: Michigan State University Press.
Servigne, P., and R. Stevens. 2020. How Everything Can Collapse. Trans. A. Brown. Medford, MA: Polity Press.
Wallace-Wells, D. 2019. The Uninhabitable Earth: Life After Warming. New York: Tim Duggan.
Weber, M. 1919. "Politics as a Vocation." In From Max Weber: Essays in Sociology, ed. H. Gerth and C. Mills, 77–128. New York: Oxford University Press, 1946.
Wilson, E. 1984. Biophilia. Cambridge: Harvard University Press.

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