

Harvard's Response to the Climate Crisis

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Executive summary

We have entered an era of climate disruption, with little time left before it spins out of control, destabilizing global human society and causing widespread violence and suffering. The world that our youngest and most vulnerable are inheriting is one of mass extinction, instability, and increasing inhospitality to human life. This inheritance is a crime against ourselves, our children, future generations, and the entire living world, a crime against nature unmatched in human history. In response, Harvard must treat the climate crisis as the world-historical catastrophe it is.

Up to now, Harvard has primarily approached the crisis from a mainstream, business-as-usual, incrementalist approach. As the wealthiest university in the world, Harvard should take a much more ambitious ethical lead. Leading in this way requires, as soon as possible, a forceful statement of a plan to *divest*. We therefore propose:

The Corporation should instruct the Harvard Management Company to withdraw from, and henceforth not pursue, investments in companies that explore for or develop further reserves of fossil fuels, or in companies that provide direct support for such exploration and development; over a reasonable period of time, extend those instructions to advisers of investment vehicles used by Harvard's endowment, including commingled funds where Harvard is not the sole investor; and ensure that any adviser who may be unwilling or unable to comply is replaced by one who is willing to carry out these instructions.

In considering reasons for divestment, we should attend to two considerations: Is some industry in which Harvard invests engaged in behavior that is ethically abhorrent, to a sufficiently high degree to warrant divestment? Is some societal change so urgently needed that divestment should be considered as a means for helping to bring it about?

With respect to the fossil fuel industry, the answer is “yes,” in both cases: First, industry leadership has knowingly engaged in a campaign of misinformation spanning the last three decades, in order to delay serious action to combat the climate crisis. That industry *continues* to invest huge sums in the exploration and development of new fossil fuel reserves, even though it is well known that the burning of less than all *known* reserves would result in planetary catastrophe. This behavior bespeaks so deep a disregard for human welfare that continued investment in this industry is ethically untenable. Second, a widespread divestment campaign would help create the conditions necessary for legislation and treaties to be enacted that would curb the destructive behavior of the fossil fuel industry. If *we* divest, and do so with a clear and forceful statement of the convictions that lead us to do so, that divestment campaign will receive a significant boost. In the face of these reasons, standard arguments against divestment are quickly revealed to be flimsy; we consider and reject several of the most common.

There are additional high-impact steps Harvard can and should take over the coming years, along four critical dimensions: **leading by example, research, teaching, and stimulating public discussion**. We offer over two dozen examples of such initiatives.

President Bacow has perceptively noted what a powerful “megaphone” Harvard possesses. We close this Paper by asking our colleagues to consider what would happen if we *use* this megaphone, coupling an announcement of a plan to divest with an ambitious set of additional initiatives. If we use our megaphone in *that* way, we could help to initiate a rapid shift in higher education globally, and thereby help to bring about the profound shifts in our cultural mores and political institutions that surviving the climate crisis will require. This is not only a task fitting of a great university; for moral, pedagogical, and intellectual reasons alike, it is a task we must embrace.

I urgently appeal ... for a new dialogue about how we are shaping the future of our planet. We need a conversation which includes everyone, since the environmental challenge we are undergoing, and its human roots, concern and affect us all. ... We require a new and universal solidarity.

– Pope Francis, encyclical “On Care for Our Common Home,” May 2015

Part of what I've experienced this year is coming to understand the power, if you will, of the megaphone that one is privileged to hold as the president of Harvard.

– Harvard President Lawrence S. Bacow, interview in *Harvard Magazine*, September-October 2019

1. Introduction

Last July, 2019, was the hottest month on record. In the past year, historic floods inundated the US Midwest, India suffered historic and nearly catastrophic droughts, Europe baked under three record heat waves, sea ice disappeared from Alaskan shores, salmon could not spawn because the water was too warm, and Greenland lost ice at an alarming, unanticipated record rate – enough in two days to cover Florida in five inches of water. Meanwhile, worldwide, 2018 saw more CO₂ emitted than in any previous year, and 2019 will almost certainly exceed those levels.

We have entered an era of climate disruption, accelerating faster than predicted even a scant few years ago; human industry and society continue to push it even faster; and there is likely little time left before it spins out of control. In addition to the climate crisis, related agriculture and biodiversity crises deepen daily and look increasingly grim on their own terms. Climate change is also harming health, with effects including – but not limited to – marked increases in heat related illnesses, respiratory diseases, insect-borne and water-borne diseases, undernutrition, and mental health conditions. These interlocking effects are beginning to destabilize global human society and cause violence and suffering. The world that our youngest and most vulnerable are inheriting is one of mass extinction, instability, and increasing inhospitality to human life. This inheritance is a crime against ourselves, our children, future generations, and the entire living world, a crime against nature unmatched in human history.

We are a group of Harvard faculty who have come together because we believe that Harvard as a community must treat the climate crisis as the world-historical catastrophe it is. This White Paper makes the case that we must move beyond piecemeal and individual action, no matter how strenuous these may have been, to enter a new, collective emergency mode. We must lead from our privileged position to help avert greater catastrophes before it is too late. We want this Paper to spur conversations within Harvard that include faculty, staff, students, administration, alumni, and fiduciaries, conversations that we hope will quickly lead to new, serious, and sustained action.

We begin by outlining the causes and nature of the climate crisis. We then argue that basic ethical standards and decency demand an emergency-level response from Harvard (as well as from society as a whole), and we consider why this response has been so difficult to motivate. We delineate various barriers to action, and end by considering Harvard's past response to the climate crisis, and what an ambitious agenda for leadership would look like. Humanity faces unprecedented challenges, and the great universities of the world can help to confront them. Harvard should – *must* – lead a global transition away from practices that continue to deepen the crisis.

2. The nature of the crisis

Three characteristics define the climate crisis as a burgeoning social and moral catastrophe larger than any in history. First, its impacts are and will be *systemic*; they undermine the interlinked physical, natural, social, and economic human systems. Second, the crisis is *accelerating*. Increasingly we see that mainstream predictions have underestimated the rate of change (Oreskes et. al. 2019). Third, the crisis is *political* – not in a narrowly partisan sense, but political as involving collective civic life and its governance at every level, as well as cultural life and its habits. Physical processes define climate and ecological breakdown, and science allows humans acting together to predict and manage these threats. But the root causes of the crisis come from malfunctioning, and historically unequal, social and political structures. These include national and global governments, corporations, and even non-profits. As these systems fall under stress, so too will our ability to respond to the crisis effectively and fairly – the poor and vulnerable will suffer more, sooner. To address the crisis adequately will require a massive act of global political cooperation. Those of us leading the charge right now must instigate a social tipping point fast enough to catch up with the many physical and ecological tipping points that we have already set off, and which themselves threaten to collapse political alliances in the near-term.

To appreciate the gravity of our collective situation, the first thing to understand is that the world's response to the crisis is disastrously inadequate. Global emissions of greenhouse gases are rising. Meanwhile, major planetary carbon sinks, such as the world's rain forests, grasslands, and oceans are being destroyed, or acidifying at an alarming pace. (The Indonesian rainforest is *already mostly gone*.) New sources of emissions, such as melting permafrost, are unpredictable and potentially enormous.

Second, existing international agreements will not prevent catastrophic climate change. Consider the Paris agreement: it mandates only voluntary and unenforceable emissions reductions for the rich countries, which in any case are not being consistently honored; it calls only for emissions *intensity* reduction targets for developing countries, which the current US federal administration is doing its best to undermine. Even if all commitments under this agreement were met, the global average surface temperature would likely increase by over 3 degrees Celsius by the end of the century. Three degrees of warming would be substantially better than the “business as usual” forecast of 4 degrees or more – but it would still leave many currently settled parts of the Earth more or less uninhabitable. Even a warming of 2 degrees above preindustrial levels is expected to generate intensified droughts and crop failures as well as loss of fisheries and arable land. As the IPCC has noted, these changes are likely to produce hundreds of millions of additional climate refugees over the course of this century. Given how poorly the European Union and the United States have responded to just a few million refugees, this is an exceptionally dangerous development.

Third, technology alone will not save us. What must happen to prevent warming of more than 1.5 degrees Celsius? First, none of the more important positive feedback mechanisms could be triggered (accelerated burning of forests, rapid melting of permafrost, accelerated warming generated by ice-free polar summers, the collapse of international negotiations due to the growing costs of adaptation, and so on). Second, hundreds of billions of tons of carbon would have to be removed from the atmosphere in the second half of this century, using a technological infrastructure that continues to be hypothetical. Finally (even with these optimistic assumptions), to have a (merely) two-thirds chance of staying within 1.5 degrees of warming, global emissions would need to fall to net zero by around 2050 – 30 years from now. Yet, even with all the will in the world, we are decades away from building commercial airliners that can run on zero-emissions fuel, and similar conclusions apply to decarbonizing many essential industrial processes. Indeed, because of the underlying technical problems and the very short time-frame, even limiting warming to 2

degrees will be an enormous civilizational challenge. Helping ourselves to the same optimistic assumptions (that there will be no catastrophic environmental or social feedbacks, and that technology will rapidly enable very large negative emissions), the world as a whole will still need to cut its current emissions by roughly fourth-fifths per capita by mid-century. It's important to understand that this leaves an extremely small remaining global carbon budget for national allocations. Even if the rest of the world were at net zero emissions by 2050, a single moderately populous country like Brazil emitting at today's US levels would be enough to blow the ceiling on 2°C of warming.

We cannot maintain business as usual, nor count on existing treaties, nor hope for easy techno-fixes. To avert catastrophic climate change, truly global participation is needed. Every country of any size has to reach net zero, and very quickly. It can't be done by a smaller coalition of the willing – should only some countries abandon fossil fuels, the price will fall for others, giving an incentive to keep using these fuels. A unified global transition requires wealthy countries to invest heavily in developing non-intermittent sources of zero-emission electricity – not to mention electrifying most heating, transport, and industrial processes – and then either subsidize or simply provide these technologies to poorer and industrializing nations. All this needs to happen in the context of increasing costs of climate change adaptation, which will make cooperation more difficult. And yet, as we will cover in Section 4, powerful and entrenched interests oppose this kind of unified global action.

When governments falter in the face of such challenges, institutions like ours must lead a response using every available tool. Anything short of this is complacency. Here at Harvard, we can no longer afford to pursue a “business as usual” policy. Eschewing complacency demands that all of *us* dramatically increase our efforts in teaching and research, but also that we couple such initiatives with a forceful statement of civic leadership, most immediately in the form of divestment.

3. The ethical case for action, and obstacles to ethical clarity

If we continue on the current path, we guarantee suffering, governmental chaos, and death on an alarming scale. The material sacrifices we will need to make to combat the crisis pale in comparison to the misery we will avert. If you see a child drowning in a pond, with no one else around to go to the rescue, you jump in; you don't hem and haw about the damage that will be done to your nice clothing. The climate crisis is much more complicated, but there is no deep puzzle about whether or why we should act. We have a duty to preserve the possibility of life – *decent* life – on Earth even at some cost to ourselves, just as we have an ethical duty to save a drowning child. We owe it to our children, and to people already suffering and dying from the effects of the crisis, to reduce the scale of the catastrophe that our past inaction has forced upon them. We also owe it to our students – and the respect our students have for this university may soon depend on their knowing that we recognize this debt.

But while the ethical case for action is clear, it's worth recognizing that the crisis has dimensions that make it hard for ordinary heuristics to steer us well. Markowitz and Sheriff (2012) provide a useful catalog of main reasons:

- The crisis resists description in terms of a simple, easy to grasp narrative.
- The principal harms it produces can, especially to people in the richest nations, seem far away in time and space. Many comparatively well-to-do people can and will insulate themselves from the most serious harms.

- There is no readily identifiable “evil villain” to pin the crisis on – i.e., no agent who has intentionally set out to ruin life for humans (and more generally).
- The crisis involves myriad sources of uncertainty, which makes it easy for us to engage in wishful thinking when contemplating its possible effects (note, in this regard, how readily the charge of “alarmism” gets levelled).
- Especially (though not solely) in the United States, the crisis has been so politicized that it is difficult to engage its ethical dimensions in a partisan-free manner.
- Our own feelings of complicity in the crisis can trigger defensive reactions that impair clear-headedly focusing on the collective actions we need to take, contributing to a general lack of understanding of, or reckoning with, the historical and systemic causes of the crisis.

Within the academy, our intellectual training cuts through much of this clouded ethical reasoning. But our tendency, as scholars, to prize personal and intellectual integrity may impede our ability to see that we can, in perfectly good conscience, use our status and cultural capital to act forcefully and *collectively*. One colleague noted in conversation that while he takes the climate crisis seriously, he worries that he doesn’t have the right to speak up publicly about it, *because* he feels that he’s not doing enough in his own personal life.

It’s very easy to feel similarly. “I fly to conferences all the time; wouldn’t it be hypocritical of me to argue for divestment?” President Faust leaned on this kind of reasoning in her 2013 public letter explaining why she and the Corporation opposed divestment, finding what she called “a troubling inconsistency in the notion that, as an investor, we should boycott a whole class of companies at the same time that, as individuals and as a community, we are extensively relying on those companies’ products and services for so much of what we do every day.”² But it cannot be a general principle that one ought not to work to rectify some wrong if one is in any way implicated, even involuntarily, in the perpetuation of that wrong. Widespread wrongs often involve entrenched institutions, from which there is no perfect or instantaneous escape; that fact cannot serve as a “shield” to protect such institutions from ethical pressure. Would we really want to condemn 19th-century abolitionists as guilty of a “troubling inconsistency” because they wore cotton? Of course not. The same goes for us: in our daily lives, we have to rely on fossil fuels in all sorts of ways. And while it is incumbent on us to reduce that reliance where we can, the systems we are implicated in, at least at the present time, limit our ability to do so. Do we really want to say that, unless we live off the grid, never drive or fly, never use anything made of plastic, eat no food grown with the use of industrial fertilizers, and on, and on, we lack standing to join in a concerted effort to rein in the combustion of fossil fuels? Surely the opposite is true: the more deeply our lives are entangled with fossil fuels, the greater our responsibility to support collective decarbonization in every way possible.

The flipside to this misguided concern about hypocrisy is the equally diversionary thought that all we need to do is amend our own personal behavior: drive and fly less, recycle more, eat vegetarian, and so on. Such choices are commendable. But it is fatally mistaken to think that we can successfully weather the crisis by taking action at this scale. Changes in individual consumer behavior alone cannot lead to swift reductions in, and ultimately outright bans on, extraction of fossil fuels; or to massive investment in renewable energy and safe nuclear power; or to governmental structures that will rein in the deadly influence that corporate interests have on the creation and enforcement of laws and regulations; or to the massive worldwide aid required to offer minimum reasonable protections to the most vulnerable. Despite what we have been

² Regrettably, self-described “global warming skeptics” have picked up on this line; see for example Saunders 2014.

habituated to think by the culture that has raised us, our identity as *citizens* matters more than our identity as *consumers*. Moreover, because the origins and drivers of the climate crisis are so entrenched and systemic, action at the institutional, social, and governmental level is essential. In short, the crisis requires of us as individuals to recognize that we are members of civil society, with a fundamental obligation to band together to confront and deal with our most serious problems.

4. Explaining the global failure to act

Political institutions at all levels have failed to address the convergent crises we have described. Here we explain that failure in order to make even clearer how urgent and enormous the need for action is. We hope that the Harvard community can use this discussion as a starting point for investigating how we can best leverage our influence.

Some of the most obvious explanations of past failures to act are systemic. Many people acting (to the best of their knowledge) ethically and sensibly worsened these global crises partly because their actions and beliefs were constrained within systems such as global and national governments, short-term economic thinking, media, peer pressure, and group behavior that are not well-structured to address climate and ecological breakdown.

The fossil fuel industry and other extractive industries are enormous and deeply entrenched in our society. Perhaps the only historical example of an industry nearly as integral to a society's functioning (while simultaneously destabilizing it) is slavery during the colonial era and into the 19th century. Colonial powers such as the British, French, Spanish, and Portuguese empires, and the United States, relied on enslaved people to reshape new world environments and to generate wealth. For the first decades of the 19th century, raw cotton picked by enslaved peoples made up more than half of total US exports, and the bodies of enslaved people themselves comprised the largest national asset (Beckert 2014, 2015). (Harvard had deep financial ties to Southern slavery.) Formally ending slavery required several centuries of constant and dangerous resistance by enslaved people, two revolutions in France, one in Haiti, and a Civil War in the US; in Britain, it required payouts (to enslavers) equivalent to about 5% of GDP (UCL Legacies of British Slave-Ownership 2019). This figure actually compares relatively closely to the estimated value of all publicly traded fossil fuel firms today, which comes to a massive 6% of global GDP. If this industry were to be nationalized and brought to a halt, it would count as the largest expropriation of private wealth in history. (The scale of this investment dwarfs the value of the companies invested in apartheid in South Africa, for example.)

Political systems are poorly designed to deal with long-term and global crises. One of the most pervasive explanations for decades of failed climate treaties invokes game theory. Climate change is a collective action problem on a global scale in which the best strategy for individual countries, absent some system of global incentives and enforcement, is to continue emitting. Decarbonization is too costly for any one country to pursue alone, because the resulting mitigation of climate change would be small and might be undermined completely as other countries correspondingly increased their emissions. Diplomats and leaders representing the best interests of their nations therefore have no reason voluntarily to mandate emission reductions. Further, elected officials cannot mitigate climate change within the timescales of election cycles; they benefit by focusing on short-term victories to show their voters. Finally, international negotiations have proven contentious, with huge disagreements about the proper rate of decarbonization and how developing countries should be compensated for missing out on decades of fossil-fueled growth.

Corporate capture prevents many governments from acting outside of narrow, market-based incremental policies aimed at economic growth. During most of the period of prolonged climate

negotiations, there was a Leviathan that could have contributed significantly to solving the Hobbesian dilemma of climate change: the United States. The US, which has long had the largest economy and military in the world by far, could have led a global green transition – and at the head of institutions like the UN, helped to enforce a widely agreed-upon set of incentives. Instead, it has generally turned its back on ambitious climate negotiations and doubled down on expanding free trade and loosening environmental regulations (The World at 1°C 2017). Corporate influence helps explain this reticence: Fossil fuel companies spend around \$100-200 million in lobbying each year (opensecrets.org 2018) and receive over \$20 billion in direct subsidies from state and federal governments (Redman 2017). As corporations expanded globally and regulations on money in politics loosened, politicians turned increasingly to corporate-funded lobbyists to write and advise on legislative and executive decisions: few understand electric and gas infrastructure better than utilities, so, the reasoning goes, why not turn to utilities’ lobbyists when assessing whether an infrastructure bill is feasible? Representatives from businesses inundate political structures. The resulting system insulates politicians and bureaucrats from calls for a green transition. It is equally easy to see how a plethora of ambitious emissions-reduction commitments by many individual companies over the years have failed to materialize or bend the global emissions curve downwards. Dynamics of competition and obligation to shareholders make it nearly impossible for corporations to halt harmful varieties of expansion (negative externalities that they are not required to pay for) on their own.

We have outlined just a few systemic barriers to action. By focusing on *systemic* causes, however, we have so far glossed over another important set of barriers.

Some associations, corporations, and politicians have knowingly accelerated the climate crisis for personal gain. The #ExxonKnew journalism campaign, led by reporters at the *LA Times* and *InsideClimateNews*, revealed that Exxon leadership knew, at least *three decades ago*, that continued oil consumption could cause irreparable harm (exxonknew.org; climateinvestigations.org). Internal company documents from that period predict global mean temperature changes almost exactly in line with current observations, and others reveal serious worries about future climate impacts. However, after considering the science, Exxon decided to expand fossil fuel extraction and production. Its executives ordered designs for ocean drilling platforms to account for predicted sea level rise, and Exxon continued to fund climate science better to understand future breakdowns. Simultaneously, it and other actors such as Charles and David Koch funded a large network of climate science denialism (Oreskes & Conway 2010). Borrowing methods and in some cases actual PR firms from the tobacco industry, these corporations methodically undermined the public image and reputation of climate science and scientists. This multi-year misinformation campaign, sometimes disguised as disinterested advertorials, may have done more to corrupt public belief and undermine the legitimacy of science than any other effort. Climate science deniers still exist and are well-funded. They continue to write op-eds for major media organizations and appear on news channels.³

As the University of Leeds’ Julia Steinberger (2019) argues, one failure of the climate science community has been to view themselves and their work apolitically. The history of #ExxonKnew demonstrates that this approach is not feasible, and probably never was. Given that the world faces a mounting ecological emergency spiralling out of control, we ask the Harvard community to consider the many systemic failures, and even acts of betrayal, we are involved in – not in a spirit of blame or guilt, but rather so that through

³ To take one example, a recent opinion piece in the *Boston Globe* called the lawsuit brought against Exxon by New York “politically motivated”. Climate politics journalist Amy Westervelt exposed the author’s organization, the Independent Women’s Law Center, as a fossil fuel front group. See Jennifer C. Bracer, “The Climate Change Shakedown,” *The Boston Globe*, October 28, 2019; and twitter.com/amywestervelt/status/1189214804239626241.

discussion we might accept these failures and use our widened understanding to undertake the most effective emergency-scale actions we can.

5. Moving forward: an ambitious leadership agenda for Harvard

Harvard has primarily approached the climate crisis from a mainstream, business-as-usual, incrementalist approach. It is time for that to change: as the wealthiest university in the world, Harvard should take a much more ambitious ethical lead. We propose bold, decisive action along five critical dimensions: **civic leadership, leading by example, research, teaching, and stimulating public discussion.**

We begin with one action – divestment – which is the single most effective example of **civic leadership** that Harvard could take. Because this topic remains controversial on our campus, we will devote extra space to its discussion, in hopes that we can lay controversy to rest.

Divestment, we believe, should ideally extend to the extraction and sale of fossil fuels, but a vital first step now is to divest from companies that explore for and develop further reserves of fossil fuels. We therefore propose:

The Corporation should instruct the Harvard Management Company to withdraw from, and henceforth not pursue, investments in companies that explore for or develop further reserves of fossil fuels, or in companies that provide direct support for such exploration and development; over a reasonable period of time, extend those instructions to advisers of investment vehicles used by Harvard's endowment, including commingled funds where Harvard is not the sole investor; and ensure that any adviser who may be unwilling or unable to comply is replaced by one who is willing to carry out these instructions.

There are additional, very important, high-impact steps Harvard can and should take, over the coming years (see below). But divestment is a step that Harvard could announce immediately (even if fully unwinding its positions in a responsible manner would take time); in doing so, Harvard would, also immediately, help significantly to shift public debate about the climate crisis and the role of the fossil fuel industry in perpetuating it, while strengthening the positions of divestment-focused efforts at our peer institutions. Accordingly, we as a community should give serious consideration to the principal arguments for and against divestment. In our view, the former vastly outweigh the latter. Here we provide a brief summary.

The central argument against divestment asserts that Harvard's endowment must not be used as a mechanism for enacting social change. This principle is on its face ambiguous. It can be understood in an uncompromising form: Harvard's endowment must not be used as a mechanism for enacting social change, under *any* circumstances. So stated, the principle is pristine, but has been abrogated in the past on four occasions (quite correctly). Much more plausible is a qualified form: Harvard's endowment must not be used as a mechanism for enacting social change, *barring exceptional circumstances*. But if that bar was met in the past – as it *was* – then it is certainly met in the present case.

In considering positive reasons for divestment, we should attend to two considerations, both salient during the South African divestment debates:

- **Ethically abhorrent behavior:** Is some industry in which Harvard invests engaged in behavior that is ethically abhorrent, to a sufficiently high degree to warrant divestment?
- **Urgent need for change:** Is some societal change so urgently needed that divestment should be considered as a means for helping to bring it about?

We think the answer is “yes,” in both cases.

First, the fossil fuel industry leadership has knowingly engaged in a campaign of misinformation spanning the last three decades, in order to delay serious action to combat the climate crisis. That industry *continues* to

invest huge sums in the exploration and development of new fossil fuel reserves, even though it is well known that the burning of less than all *known* reserves would result in planetary catastrophe. This behavior bespeaks so deep a disregard for human welfare that continued investment in this industry is ethically untenable. Call this the *ethical* argument.

Second, divestment highlights the urgency of action to avoid or at least mitigate climate disruption, and helps create the public consensus necessary for legislation and treaties that would curb the destructive behavior of the fossil fuel industry. Our divestment will provide a significant boost to a campaign which already involves more than 1,000 institutions and more than 11 trillion dollars, especially if we do so with a clear and forceful statement of the ethical convictions that lead us to do so.⁴ Call this the *social* argument.

Note that the social argument directly aligns with the fiduciary responsibility of the Corporation to the future of Harvard and to those who work and learn here. For the climate crisis threatens that future. Even on grounds of narrow self-interest, then, we have cause to divest.

A third, *prudential*, argument deserves mention, if only to calm fears that divestment represents a severe financial hit. Not only are such fears overblown in the short term, but in the long term – which, remember, is the term that the managers of our funds should be focused on – one of two things will happen: either fossil fuels will prove to be a poor investment, because serious steps will have been taken to curb their extraction and sale (a judgment already made by the fiduciaries of the University of California system); or no such steps will be taken, in which case it won't, alas, matter how good an investment fossil fuels have been.

We close by stating and refuting seven objections.

- The objection from engagement: Divestment will prevent Harvard from engaging with the target industries in ways that might be more effective at bringing about the desired changes.

Response: This objection *might* have force if it were remotely credible that “engagement” would lead the fossil fuel industry to change their business models in any significant way. This is not credible.

The objection deserves a more extended response – though only because, at the November 2019 FAS meeting, a document was distributed from the Harvard Management Company titled “Sustainable Investment Update November 2019”; the suggestion, apparently, was that it contained ample evidence of HMC’s successful efforts at engaging with the fossil fuel industry. The document is worth reading closely.⁵ We will here report our own reactions to it.

One cannot easily imagine that the steps that HMC outlines in this paper will lead to timely reductions of GHG emissions necessary to meet the Paris Accord – *even if all investors followed these steps*. Moreover, no such claim is made. Experience with ESG, PRI, and Climate Action 100+ is that the impact of these screens and their reporting is slow, often based on voluntary participation, produces data that can have large margins of error (upwards of 30%), provides little enforcement mechanism, and readily allows continued investment in fossil fuel companies that explore for and develop new reserves, or in companies that provide direct support for such exploration and development. Reducing GHG emissions of major companies, even *if* achieved under

⁴ We recognize that divesting from publicly traded stocks does not (and is not intended to) exert immediate financial pressure on fossil fuel companies. Shares of ExxonMobil put on the market will be bought by someone else, and will not reduce the capital available for expansion of fossil-fuel production, refining, or distribution. Nor will the ExxonMobils of the world suddenly sit up and say, “Gosh, maybe we should change our business model now.” But only 25 percent of the Harvard endowment is held in shares of publicly traded companies, while more than 50 percent is held in hedge funds and private equity. Divestment may indeed prevent Harvard money from flowing through these entities to fund the expansion of the fossil-fuel industry.

⁵ It can be found here: <http://www.hmc.harvard.edu/content/uploads/2019/11/Sustainable-Investing-Update-2019.pdf>.

this investment policy, will have negligible effect on overall emissions until we stop investing in the establishment and development of yet more fossil fuel reserves. Where phrases such as “a safe climate” appear in this document, they seem virtually meaningless.

Overall, “engagement” will, at best, take *much* more time to show any real results. We do not have much more time. The PRI collaboration on methane emissions involves two companies only, addresses a small issue in the overall problem (akin to fireproofing some wallpaper while the house is burning down), and seems aimed at, in effect, reinstating federally mandated methane reductions that were reversed by the current Administration. Aside from “Company A” and “Company B,” HMC’s document gives no indication that engagement has produced tangible, measurable, verifiable reductions in GHG emissions by specific companies. It is not even clear that Company A and Company B have actually reduced their emissions despite “years” of engagement. Remarkably, HMC nowhere states that it has decided not to invest in *any* particular company because of that company’s behavior, practices, and governance concerning climate issues. The result, on balance, are decidedly discouraging, and offer no reason to expect engagement to bring about changes to our energy practices at anything like the scale needed to meet even the Paris Accord. This should come as no surprise: the monies at stake are much too great for major fossil fuel companies to be at all likely significantly to change their practices merely as a result of shareholder pressure.

The remaining six objections can be dealt with more quickly.

- The objection from inefficacy: Divestment will not in fact bring about the desired changes.
Response: This objection is irrelevant to the ethical and prudential arguments. Next, recall that the changes in question are changes to the public conversation surrounding the fossil fuel industry and ways it should be reined in. Divestment from companies doing business in South Africa effected such changes (Gethard 2019). There is no good reason to think that the present case will be any different.
- The slippery slope objection: Divesting from fossil fuels will open the door to a host of other divestment-focused efforts.
Response: The climate crisis is in a class of its own; there is no reason to fear a slippery slope. Some members of our community might indeed feel that there are other industries from which Harvard should divest, but here we recognize the need for the Corporation to balance various objectives. Our claim is not that the Corporation should not be in the business of balancing these objectives; it is rather that the Corporation has struck the wrong balance when it comes to fossil fuels.
- The objection from distraction: Divestment will distract attention from other, potentially valuable efforts at bringing about the desired changes that Harvard can pursue.
Response: We all have a role to play and can bring different strengths and skills to addressing the crisis. Working on one aspect does not preclude the University from working, in parallel, on other aspects.
- The objection from hypocrisy: Divestment would involve a “troubling inconsistency” on our part, given that we would continue to use fossil fuels for some time.
Response: See above. There is no inconsistency. On the contrary, our continued use of fossil fuels, even as we learn to restrict and eventually eliminate such use, only increases our responsibility in this area.
- The objection from virtue-signaling: Faculty and students pushing for divestment just want someone else (the Corporation) to take steps to combat climate change *for* them, and are unwilling to undertake serious steps themselves.

Response: See below for a long list of steps, many of which would fall on each of us to help carry out.

- The objection from timidity: By pushing for divestment, we will anger those members of the electorate who already view Harvard as a bastion of coastal, liberal elites.

Response: If the *only* serious step Harvard were to take was to divest, then this objection *might* have force. But – leaving aside the obvious point that portions of the US electorate will hold us in suspicion and contempt whatever we do – it will be clear by this point that it is no part of our proposal that Harvard should so limit itself.

Divestment is where we should begin. *But we must not end there.* In fact, Harvard’s statement of its intention to divest will be all the more powerful if presented as one essential part of a comprehensive, ambitious leadership agenda. Here we begin the conversation about what such an agenda should contain, by listing a variety of actions Harvard could take, across four more key domains. And we preface this list by emphasizing a crucial first step, a plan for which could be announced in very short order:

Harvard should, as soon as possible, undertake a high-profile fundraising campaign, designed to raise substantial capital for a range of climate-focused efforts at the university, spanning teaching, research, and public outreach.

While not all the actions we are about to list will require resources generated by such an effort, many of them will. And this effort will signal to our alumni network and to the world at large a firm commitment to placing the climate crisis at center stage within our university.

Leading by example:

- **Drastically reduce air travel** across the university, enabling this shift by designing and implementing effective, reliable, and easy to use methods for remote conferencing.
- **Make vegetarian meals the default choice** in dining halls, the Faculty Club, and Crimson Catering: instead of having a limited selection of “vegetarian options,” for instance, there should be a limited selection of “meat options.”
- **Source locally-grown foods** in our dining halls and for other catering, to the extent possible.
- Move towards more **ecologically sound groundskeeping** and the elimination of all internal combustion engines.
- **Phase out single-use plastics** on campus; **convert to all compostable** and provide compost bins.
- Use our leverage with state and local governments to get funding for **improved public transportation**, which would benefit the Harvard community (Harvard is one of the largest employers in the Boston area); in the meantime, increase the subsidy for MBTA passes.
- Publicize a clear, realistic plan for becoming **fossil-fuel-free by 2035**, including a blueprint for other institutions to follow.
- Establish a **Harvard standard for carbon accounting**, designed to become a sector leader, that takes into account not only the Harvard physical plant but faculty, staff, and alumni travel, as well as Harvard’s effects on the local community.
- Ensure Harvard’s climate-focused **efforts and initiatives are highlighted in all major promotional material**, especially material sent to prospective students and their families.
- Building on President Faust’s Green Harvard initiative, immediately **establish a Task Force**, including representatives from our several communities, on and off campus – staff, student, alumni, faculty, and administration, both from FAS and from the professional schools – charged with adding to these recommendations, overseeing their implementation, and reporting back to the entire community as to our collective progress.

Research:

- **Target fundraising** to fund 25 - 30 tenured or tenure-track faculty lines, all focused on climate-related research (across all three divisions and SEAS).
- **Free energy and environment scholarship from corporate influence** by rejecting donations from the fossil fuel industry (which currently dominates funding to various energy research groups at the Kennedy School, for instance; see Franta 2015, Franta & Supran 2017). Make public all previous and current funding for climate and energy research, and ensure 100% transparency for all external funding except towards general University support.
- Work with Harvard graduate/professional schools and other research universities/institutes to form **consortia for the coordination of research**, and identify key topics/questions that cutting-edge research ought to address.
- **Create a tenure process more accommodating of solutions-based interdisciplinary research**, so that junior faculty can be freer to work on problems of immediate relevance.

Teaching:

- **Build up curriculum on the climate crisis**, with the goal that there will be enough courses for every undergrad to be able to take *at least* one.
- Raise funds to make it possible for faculty to construct **ambitious, cross-disciplinary Gen Ed courses** on climate crisis.
- Use Harvard's efforts to achieve **carbon neutrality as an educational opportunity**, for students, alumni, and the wider community.
- Make **basic on-line training in the climate crisis** mandatory for all students and staff (the way training in Title IX issues is now); perhaps design this through HarvardX.
- Within humanities: **Build a Hum 10-style course on humanity and the environment**. (Year-long; target size of 120; sections of 15 each led by a faculty member who is a co-teacher for the course.)
- Fund and facilitate the development of climate-focused **curricula in the graduate and professional schools**.
- Develop well-curated materials for **teaching about the climate crisis in K-12 education**.

Guiding public discussion:

- **Provide support for scientists fighting disinformation in the public sphere**, because there are few easily accessible well-funded sources of basic climate science that refute all the skeptical arguments (except underfunded, crowdsourced sites such as skepticalscience.com) – despite a long-standing and well-funded science-denial countermovement.
- Work with Harvard graduate/professional schools and other research universities/institutes to form **consortia for the regular dissemination of “climate crisis updates.”**
- Set up **media-outreach positions** specifically focused on developing media contacts (print, online, TV), and curating for and disseminating timely information to those contacts.
- **Work with peer institutions to develop a “Knowledge Action Network”** along the lines of the initiative being pursued by the University of California and Cal State systems.⁶
- **Organize regular, carbon-neutral, highly publicized conferences** focused on defining bold but achievable steps that can be taken at the political level.

⁶ See: <http://climatechampions.ucop.edu/uc-csu-knowledge-action-network-for-transformative-climate-and-sustainability-education-and-action/>; also see: <https://dev-nxtterra-ucop-edu-v01.pantheonsite.io/>.

- **Provide funds and staff for faculty engaging in advocacy** on climate change in Massachusetts and at the national/international level.
- **Integrate climate policy into the Nonpartisan Program for Newly Elected Members of Congress.**⁷

6. Conclusion

It goes without saying that the measures outlined above will require different mechanisms for development and implementation. Divestment requires a decision from the Corporation; a high-profile push to raise funds for new research positions should be led at the presidential level; enhancements to the curriculum should be driven by the faculty in a bottom-up fashion; changes to our dining practices may best be led by students. And it also goes without saying that we are open to discussion about most of these proposals, drawing on the perspectives of all members of the Harvard community – including students, alumni, and staff.

What should *not* be open to discussion is the pressing need for Harvard to take *prompt, substantive* action, action which must include divestment as well as reinvestment in clean energy. We know the temptation some of our colleagues feel for what they perceive as a safer “stay in our lane” approach: “Let’s just keep teaching our students about climate change and its dangers and use Harvard’s financial resources, however acquired, to carry this out.” Yet this approach is fallacious. In a situation of such urgency, the university’s primary mission, as a center of teaching and research, must take into consideration every aspect of its functions as an institution.

And our students know this. Our students are not passive consumers of instruction, eager to learn from our wisdom as teachers without asking awkward questions, but citizens actively aware of the economic, political, and cultural forces that sustain and shape the institution in which they live and learn. According to the “stay in our lane” model, it’s not just that faculty and other university employees should submit to a voluntary quietism when it comes to the endowment, a matter too high for our gaze. The model asks us to impose this self-limitation of perspective on our students. This is a betrayal of the idea of a university; it’s strikingly complacent about the moral authority that faculty can expect to exercise as teachers; it’s condescending to the engaged, self-aware, voting citizens who are our students; and to the extent that it inculcates values at all, it inculcates the wrong values, merely helping to produce the next generation of apologists for the status quo.

Consider, by contrast, what would happen if we simultaneously announce that we are significantly speeding up our timetable for becoming carbon-neutral and then carbon-free; that we have a plan to couple these efforts with other high-profile initiatives in teaching, research, and the dissemination of critical knowledge that other institutions could easily adapt; and that – in recognition of the extraordinary danger that the unfettered activities of the fossil fuel industry continue to pose for the future of humanity – we are going to *divest*, and *reinvest*, as some of our peer institutions are already doing, in those renewable energy industries whose success is critical for the survival of the planet. And remember, here, President Bacow’s perceptive comment about the “megaphone” that Harvard possesses. If we use our megaphone in *that* way, we could help to initiate a rapid shift in higher education globally, and thereby help to bring about the profound shifts in our cultural mores and political institutions that surviving the climate crisis will require. This is not only a task fitting of a great university; for moral, pedagogical, and intellectual reasons alike, it is a task we must embrace.

⁷ <https://iop.harvard.edu/get-inspired/bipartisan-program-newly-elected-members-congress>

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