



## Arthur M. Diamond, Jr., *Openness to Creative Destruction Sustaining Innovative Dynamism*. Oxford: Oxford UP, 2019

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### 1 Introduction

As of 1:30 pm on April 5, 2021, COVID-19 has claimed 2,856,237 lives worldwide. According to the John Hopkins University Corona Virus Resource Center, there are currently 131, 548, 086 global confirmed cases. The world economy has been deeply affected by the pandemic. Economists report that the total cost of the pandemic in the trillions. COVID-19 vaccines represent a major win in the fight against the virus that has caused much widespread misery. The Pfizer-BioNTech coronavirus vaccine is 90 percent effective in protecting against COVID-19. It would not have been possible without the tireless effort of Professor Katalin Karikó, a scientific innovator fitting the mold of dynamic inventor Arthur Diamond presents in his book, *Openness to Creative Destruction Sustaining Innovative Dynamism*. Not only did Professor Karikó persist in her beliefs in the therapeutic potential of synthetic messenger RNA over the course of four decades, but she did so despite the criticisms of other scientists and despite lack of financial backing for large parts of her career. Professor Karikó is a good example of the unconventional picture that Diamond paints of entrepreneurs in a specific version of market capitalism he terms, innovative dynamism. Specifically, she is an example of someone who does not hold prevailing academic theories in too high a regard and instead privileges her tacit knowledge (knowledge gained from years of working with mRNA in the lab) to persist believing in the potential of a therapy that now could quite literally save the world. Most surprisingly, she, like most of the entrepreneurs surveyed in the book, seem not primarily motivated by profit, though the money their projects eventually attract is integral to disseminating their creative ideas to the masses.

Are the many examples offered by Diamond that are similar to Professor Karikó's story evidence against the long-standing suspicion that there is something morally damning in the self-interested motivations of innovative entrepreneurship? Is it the case that others would have inevitably pursued the cure that Karikó pursued,

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regardless of economic system? In light of COVID-19 and other high-pressure situations, ought we to care how we constrain the innovators who develop solutions? Diamond's case for the economic system, innovative dynamism, seeks to answer these and other important questions concerning our political and cultural treatment of innovators and entrepreneurs. This review critically assesses his efforts. I make my case by first reviewing the major argumentative structure of the book, then I summarize and evaluate the three major themes Diamond presents in the book: (1) what is innovative dynamism and who are its competitors, (2) what are the major benefits of innovative dynamism, (3) who is the innovative entrepreneur and how do we support him or her?

## 2 A System Without Tradeoffs?

*Openness to Creative Destruction* works to correct and deepen the analysis of creative destruction offered by Joseph Schumpeter's economic classic, *Capitalism Socialism and Democracy* (1950). Innovative dynamism is a label for an economic system characterized by robust economic freedom for inventors and entrepreneurs to succeed and fail and that often flourishes in cultures that regard innovation and entrepreneurship with respect rather than disdain. One could read Diamond's book as supporting two conclusions, one decidedly forceful and the other less controversial. The first argument might be summarized in the following form:

(1a) If we correctly identify what innovative dynamism is, then we recognize it is a system without trade-offs experienced by other systems and with clear benefits for most, especially the poor and vulnerable, and we ought to prefer it over other economic systems as a result.

(2a) Innovative dynamism is a system wherein both consumers and workers benefit, where prices are low and goods are better, and it encourages moral behavior widely considered to be beneficial for society, including (but not limited to) environmental consideration and our ability to adjust to global warming, more humane treatment of animals, and cheaper, higher quality health-care.

(3a) Therefore, innovative dynamism is a system without trade-offs experienced by other systems and with clear benefits for most, especially the poor and vulnerable, and we ought to prefer it over other economic systems as a result.

The second argument may be summarized using similar form:

(1b) If the bad outcomes of innovative dynamism have been grossly overestimated and the good outcomes are apt to be ignored, then we ought to consider the good outcomes when deciding on policy.

(2b) The bad outcomes of innovative dynamism have been grossly over-estimated, and the good outcomes are apt to be ignored.

(3b) Therefore, we ought to consider the good outcomes when deciding on policy.

I take it that 1b, “If the bad outcomes of innovative dynamism have been grossly overestimated and the good outcomes are apt to be ignored, then we ought to consider the good outcomes when deciding on policy”, is simple common sense, and carries with it some clear justification. Namely, when considering between policies that promote or constrain innovative dynamism, we ought to consider the benefits of innovative dynamism, even if we choose to constrain it. The rest of the relevant premises (1a), (2a), and (2b) are justified by Diamond throughout the course of the book. This review will argue both that Diamond provides good evidence to support the weaker conclusion through 2b (“The bad outcomes of innovative dynamism have been grossly over-estimated, and the good outcomes are apt to be ignored”) but also that support is given for the more aggressive 1a and 2a. If I have any criticisms of the book, it is that the comparative case is not harsh enough in the direction of alternative economic systems for their failures to promote meaningful work, useful new goods, and provide what the poor and vulnerable most need.

### **3 Innovative Dynamism vs. Stagnation and Decline: A True Dilemma**

Diamond points out early on in the introduction that “When Schumpeter wrote of capitalism he meant ‘entrepreneurial capitalism,’ but unfortunately today ‘capitalism’ is an ambiguous term used to label three or four very different economic systems” (p. xvi). A major obstacle to any who hope to present fair comparative analyses between economic systems is the false notion that what is present in the United States currently represents entrepreneurial capitalism. Policy concerns that address issues like labor shortages, good qualities, or wage stagnation, for example, might then be tempted to conclude that something is wrong with entrepreneurial capitalism insofar as these issues are seen within the United States. This common mistake is contradicted by the immense amount of government infrastructure existing in the United States. For example, it is misleading to call the system of private, employer-based insurance, public, government-funded insurance (i.e., Medicare, Medicaid, and the Veterans Association), and private direct-to-consumer healthcare an example of capitalistic medicine, since so much of the industry is directed not only by supply and demand, but also according to immense regulatory frameworks guiding insurance companies, reimbursement rates for Medicare and Medicaid, Veterans rates, and much more.

Diamond solves the confusion over which capitalism we evaluate by focusing on areas of history and segments of the market that are most free from regulatory oversight and more clearly examples of entrepreneurial capitalism. In Chapter 1: “An Economy of Innovative Dynamism” he focuses on examples like the garment industry in the late 1800’s New York city, where lack of regulatory pressure made it easy for immigrants to start businesses and the culture was tolerant of new ideas and innovation. Indeed, in listing the major ingredients for a flourishing, innovative dynamism economy, Diamond focuses more on the culture surrounding innovators and entrepreneurs and less on the regulatory environment. In an argumentative strategy used throughout the entire book, Diamond produces countless, real historical examples to explain what he means. In summary, the examples in Chapter One

speak to the common person's curiosity in successful entrepreneurial cultures, their expectation that things could be better if processes were improved, and their drive to develop new things. Successful entrepreneurial cultures are not characterized by singular cultural interest in profit, but rather a spirit of equal opportunity, understood by the people as the equal opportunity to succeed or fail in one's ventures, regardless of elite status or not.

### 3.1 It Matters What We Do to the Inventors

Innovative dynamism runs on the belief of common persons that innovation is not inevitable. If innovation was inevitable, there would be little reason for struggling peasants to spend their scant free time tinkering with their tools to improve them. Innovative dynamism takes seriously the fact that without new products and new process innovations, the result is stagnation and decline. Either a culture respects and embraces innovation or it is "closed to innovative dynamism and bind[s] entrepreneurs" (p. 3). The examples offered by Diamond indicate that systems which do the latter not only stagnate but decline because "the actions of inventors and entrepreneurs' matter, and the institutions and policies that allow them to act matter to" (p. 4). In other words, it is not inevitable that inventions that increase utility will arise, especially if we constrain the ability of entrepreneurs to fund, work on, and test their inventions. Diamond gives historical examples to show that when even deeply needed inventions are presented in cultures and regulatory environments not open to innovation, the potential these inventions bring for widespread increase to quality of life goes unrealized.

Further, constraints on the actions of entrepreneurs and inventors' matter because they are scarce. Successful innovations are not only risky new ideas, but they are also "designed and constructed to succeed in the market" (p. 5). If an invention is too expensive for the average customer to run or too complicated a design to reproduce easily, then it is not likely a wide swath of people will be able to enjoy it. Additionally, "the greatest breakthrough inventions and innovations are those that go against the dominant theories and opinions" (p. 5). It is rare to find those persons or collaborative teams with both the tacit knowledge and the courage to persist in developing innovations that breakthrough what the majority think.

The institutions, policies, and cultures that promote rather than hinder the actions of these valuable, scarce inventors and entrepreneurs are explored in Chapters 9 and 12. In Chapter 9, "Innovation Bond or Unbound by Culture and Institutions", Diamond explores recent research that suggests the kinds of cultures and governmental forms that best support innovation. These are (1) cultures that have a high regard for trust and respect (pp. 127-131), (2) cultures that tolerate change and diversity of thought (pp. 129-131), (3) rigorous protections for property rights (pp. 132-134), (4) predictable application of the rule of law (132-134), (5) efficient bureaucracies that governments open to innovation long-term (pp. 134-135), and (6) cities or infrastructure (i.e., the internet) that support cooperation and exchange between persons outside of biological family structures (pp. 133-134). Chapter 12 adds a bolder item to the list: innovative dynamism systems are characterized by firms that exist for

shorter periods than longer. He cites evidence of a correlation between the percentage of firms in business for sixteen or more years and a decline in the birth of new startups.

Chapter 12 explores the immense cost to consumers and to entrepreneurs of burdensome regulation on startups, rules of which are sometimes so silly it is hard to believe they exist. Diamond cites one example that made me laugh out loud while reading: “One of the FAA’s more noteworthy regulations was that each drone flown in the United States was required to carry an onboard manual. Drone entrepreneur Paul A. White asked the obvious question: I mean, who is supposed to read it?”

In one of the most important arguments in the book, Diamond counters the “precautionary principle”, the political justification given for burdensome regulation. The “precautionary principle” “prohibits any actions that might cause harm’ and places the burden of proof on those who take actions that might cause harm” (p. 169). He gives two arguments in support of the conclusion that we ought not to rely on the precautionary principle when choosing policy options. Diamond argues that if we agree that certain inventions are good, then we ought to agree that regulation like the “precautionary principle” that would have prohibited these inventions would have been bad policy. He bets that we do agree that airplanes, air conditioning, antibiotics, cars, chlorination of the water supply, vaccination, open-heart surgery, radio, refrigeration, the smallpox vaccine, X-rays, trains, blood transfusions, the Green Revolution, and pasteurization were good inventions (see p. 168). So, he concludes that we ought also to agree that regulation that would have prohibited these inventions would have been bad policy. It would be hard rationally to argue that these inventions are not good ones. If we consider the immense pain and suffering experienced by those who do not enjoy life with antibiotics or clean water, the prohibition of such inventions based on fears that they *might* be harmful seems grossly imprudent, especially when we consider the harm posed by the problems such solutions attempt to solve, like untreatable syphilis or cholera caused by contaminated water. Furthermore, Diamond argues that the idea that regulators choose either between the precautionary principle or massive vulnerability for harm is a false dilemma. It is not the case that lack of regulation of new goods imposes massive vulnerability for harm because in the absence of imposed regulation from government there exists organic regulation, including “the discipline of the marketplace, which occurs when firms that harm their customers lose those customers and lose other potential customers through ‘word of mouth’” (p. 169), private evaluations of product safety (the existence of which precedes product federal safety regulation in the United States), and when customers sue for damages in the law torn process (p. 170). We are not left defenseless without government regulation of safety, as there are immense incentives for companies not to harm their customers and effective avenues by which harmed parties can receive compensation. Additionally, it is important to realize that government regulations often offer scant effective avenues for harmed consumers and that the regulation imposed often makes the problem worse (see, e.g., the chart on p. 171). In summary, in characterizing the economic system of innovative dynamism as free of much regulatory burden, Diamond is not endorsing arguing that there is a trade-off to made between innovation and vulnerability to harm. There is no tradeoff. Under innovative dynamism, consumers both enjoy protections against

harm and the increased well-being from good inventions and steady entrepreneurial progress.

### 3.2 A Word on Progress and Decline

Innovative dynamism is characterized by a progressive cultural and economic march towards greater material wealth, which in turn enables the ability of more people to contribute new ideas and solutions to problems. Progress is an oft touted word in political, cultural, and moral commentary, but it is often not clear where the progress starts from and where we are supposed to be progressing towards. In Chapter 3, Diamond clearly describes the progress he sees in the historical data, including the starting place and the end place. We started in destitute poverty and we end in a cultural and economic position that ensures the next generation is able to improve and increase quality of life. For most of our time here, humans have been stagnated in violent, disease-ridden, vulnerable, and dirty destitution (pp. 37-43). Borrowing an analogy from economist Diedre McCloskey, recent, dramatic improvements in quality of life can be represented by the image of a hockey stick. As Diamond argues, “All experts agree that *Homo sapiens* have been around for at least 40,000 years... If the whole length of the hockey stick is 40, 000 years, then the horizontal handle roughly represents the first 39, 750 years, and the upward blade roughly represents the most recent 250 years” (p. 37). Though small innovative leaps were developed and remembered between roughly 1000 to 1820, the material wealth of most humans remained for the majority of history, stagnant and impoverished. It is only in the last 250 or so years that we have seen the improbable, exponential leaps in wealth enjoyed by so many people.

This magnificent fact goes often ignored in philosophy and in political science. Often, critics of innovative dynamism will complain about the inequality inherent to market capitalism. The complaint is hard to understand in the context of the hockey stick analysis. In comparison to the equal outcomes in the 39, 750 years of human destitution, the inequality experienced in the last 250 years in capitalist countries seems a small price to pay, especially considering the immense gains in quality of life experienced by the poorest in these economies. Furthermore, given the immense inequality between the material wellbeing of peasants and their political masters (kings, chiefs, emperors, and the like) experienced by peasants for all of history, the expectation for any human economic system to bring about equal outcomes is puzzling.

Further, this chapter does a good job of explaining what is at stake when we debate over policy that hinders entrepreneurship and innovation, the causes for increasing material well-being. Societies who choose stationary states rather than dynamic innovative ones pay the price in quality of life of ordinary people because they do not have the “incentives, institutions, and ready entrepreneurs to be able to make innovative changes” (p. 47). As Diamond argues:

A society seeking the stationary state would end up neither cozy nor stationary. The actual choice is between progress in the presence of innovative dynamism versus regress in the absence of innovative dynamism. In

the its waning decades the Soviet Union was regressing, not maintaining a cozy stationary state (p. 47).

Another stark example is Venezuela. In 2016, The Fraser Institute reported that Venezuela had the highest level of economic freedom in South America in 1970. In 2019, however, it ranked first by far on the “most Miserable Countries in the World” index for its severe inflation and unemployment. Government decisions preceding and throughout the Chavez era were hostile to economic freedom and thus restricted the ability of business and innovation to occur in the region. The point is that the destitution that characterizes the majority of human experience can be experienced again if governments and cultures cease to support the efforts of innovators and entrepreneurs to improve life through solutions for ordinary people.

One point Diamond could have pressed harder is the rippling effect that cultural and political disrespect for entrepreneurship and innovation has on an economy. Stagnating economies not only suffer from cultural and academic backwardness that disrespects entrepreneurial activity and innovative solutions, but they also tend to put policies in place that drain wealth, which, by means of impoverishment, can stifle innovation by lessening the ability of persons to work on anything but surviving. Here, Venezuela is again an apt example, since its economy so quickly descended into chaos after stagnation and since the regimes in power during the time of decline are so famously hostile to economic freedom and business. For example, Venezuelan scientists are fleeing the country since the struggle to defend and feed themselves it impossible to do any scientific work. After they move, it is not guaranteed that they will find work as scientists. The immense loss both to Venezuela and to the global academic community of scientific innovators might be better felt if we consider our luck that Dr. Karikó, the scientist who worked to develop mRNA therapies in the current COVID-19 vaccines, was not born in or working in Venezuela when she developed her lifesaving research.

The picture Diamond weaves of innovative dynamism is of an economic system that exists in a culture tolerating diverse thinking and solution finding. The institutions and policies in which the system operates are free of burdensome regulation. It is a political system not ideologically oriented against innovation, but one that embraces it as a great good. It is an economic system that flourishes under a rule of law, that punishes theft, and promotes private property (including intellectual property) through high quality patents and predictable governance (see pp. 133-134).

## 4 The Benefits

There are good reasons to think that fears concerning innovative dynamism are overblown, especially if we consider some of Diamond’s responses to oft cited worries about lack of competition, labor shortages, and declines in moral progress.

## 4.1 Competition and Fears About Big “Anything”

An important point Diamond makes in defending the system of innovative dynamism is to show that innovative dynamism is not subject to large, longstanding, monolithic monopolies. Put simply, the history just does not support the widespread fear that under innovative dynamism monopolies will upset competition such that other firms will be unable to compete. While it is true that monopolies exist for short periods of time, in places where regulatory environments did not protect these monopolies from competition or bar the entrepreneur from testing and collaborating with others to produce a competing product, the monopolies soon faced devastating competitive ventures. Take, for example the list Diamond quotes from Harvard business historian Thomas McCraw: “Digital Equipment, Pan American Airways, Pullman, Douglas Aircraft, and the Pennsylvania Railroad, firms he described as ‘once as strong as dinosaurs but now just as extinct’” (p. 8).

## 4.2 Labor and Technology

As Diamond readily acknowledges, “the most common worry about innovative dynamism is that the job market will not be redundant, or, even worse, will be very far from redundant” (p. 79). He responds to three criticisms of creative destruction in turn: (1) innovation destroys more jobs than it creates, (2) technology especially destroys more jobs than they create, and (3) that innovations cause lengthy economic crises which destroy many jobs” (pp. 79-80). Against the first worry, Diamond offers empirical research showing that it is the case that long-term innovation creates more jobs than it destroys. Indeed, the empirical knowledge is so well-known in the field of labor economics that Diamond voices the following relatable puzzle: “Since labor economists now know well that more jobs are usually created than destroyed, it is a puzzle that many non-economists believe or fear the opposite” (p. 81). Further, he offers strong arguments from authority to sooth fears that AI or other technology will crowd us out for jobs in the future (see pp. 81-82). Generally, doom and gloom theories about the harm of technology like robots is little more than speculation and we ought to avoid burdensome regulation to mitigate against an ill-founded need for precautions. Finally, and perhaps most relevant for an audience who experienced the 2008 recession, “innovative dynamism need not cause economic crisis” (p. 171). Specifically, the root causes of crises and weak job markets almost always turn out to be ill-thought out, but perhaps well-intentioned, federal regulations (pp. 171-172). Diamond reports that there is good research showing that regulations usually did not solve the problems they were designed to fix and often came with immense costs due to unintended consequences. Take for example, Diamond’s review of the FDA. The FDA is structured according to the “precautionary principle”. You are more likely to get fired if you approve a drug that eventually does harm than if it eventually does good. The incentives help to explain why “many more patients die because of the FDA delaying good drugs than are saved by the FDA banning bad drugs” (p. 177). Further, in limiting the freedom of the patient to choose to experiment upon



themselves or not, the FDA is “gratuitously cruel where a patient has a terminal disease for which there is no approved cure” (p. 177). The burdens of regulation imposed by the FDA in the name of safety are not only more stringent and cumbersome than in other countries (see p. 178), but they are also not necessarily reliable authorities on what is and is not safe. For example, Diamond includes an example of when the FDA and the American Cancer Society endorsed (as safe) sunscreens that contained a form of vitamin A known to be associated with increased risk of skin cancer” (p. 172).

Not only is the labor market enhanced under a system of innovative dynamism, but the quality of the labor improves as well: “Innovative dynamism has a long history of creating new jobs that are better jobs, and also of nudging old jobs higher toward the challenging, meaningful peak of the hierarchy of needs” (p. 92). Against popular views like Alasdair Macintyre’s or Patrick Deneen’s that claim that workers are exploited and that lack of meaningful craft is a major moral flaw in entrepreneurial capitalism, Diamond presents compelling data strongly suggesting that it is just not true that meaningful work is not created by innovation. Consider that jobs requiring strong emotional intelligence like nursing, law, education, and recreation work all increased between 1992-2002 significantly (+512,000 percent nursing jobs gained, +28 percent nursing jobs lost) whereas jobs requiring manual dexterity like tool makers or typesetters decreased (-34,000 percent typesetters jobs gained, -62 percent typesetter jobs lost) (96). Even in areas traditionally considered to be difficult, like farming, innovation has replaced drudgery with mental satisfaction: “Many farmers today have drones for monitoring crops, computers for calculating yields, air-conditioned tractors for comfortable plowing, the Internet for information and entertainment” (p. 97). In both providing accessible conveniences to make hard work easier and in creating jobs that stimulate people through reason, emotions, or creativity, innovative dynamism does more than provide jobs. Diamond offers convincing evidence that it provides a redundant labor market that we should all want.

### 4.3 Morality, Equality, Culture, Environment

Finally, Diamond’s most creative analysis comes in response to the suspicion that entrepreneurial cultures are greedy and morally bankrupt. On the contrary, Diamond argues that under innovative dynamism, we have comfortable enough lives to make it easier for us to improve, rather than corrupt our souls and that we are able to dedicate ourselves to solving social with the time we save with cheap, readily accessible improvements for everyday life like washing machines and computers. Cultures that embrace innovative dynamism are furthermore tolerant and fair. They are tolerant insofar as they have to be in order to respect the work of inventors and entrepreneurs, who operate on creativity and often go against accepted academic or cultural norms. They are fair because

generally, what people earn in such a system has some observable relationship to what they have done. A case can be made that inventors and entrepreneurs who work hard, take risks, and create something new that other value, earn their rewards (p. 109).

In addition to cultural moral improvement, there are specific areas of moral improvement that are meant to have a wide appeal. So, despite a pluralistic moral landscape, for example, one ought to prefer an economic system under which health-care, disaster relief, and giving are more effective. For sake of time, I focus on disaster relief. Diamond argues that innovative dynamism enables common people to be able to respond better to the disasters that befall them, especially in the crucial and often lethal period before first responders are able to mobilize and help. He writes,

when the victims of disaster are more resilient, nimble, and resourceful, they are more likely to survive...our best strategy to survive and prosper in the face of natural disasters and other crises is not to bury our heads in a system of rules and stagnation, but to enable and encourage everyone to develop the nimble resilience and resourcefulness of the innovative entrepreneur” (p. 111).

Having just recently been subject to a giant, disaster storm in Texas, I have to say that Diamond’s analysis maps onto my own experience. For example, many of my neighbors lost power and water for days on end. Those who had access to more resources, like cars and smart phones, were able quickly to find hotels in small towns around Dallas and get to heat, food, and water quickly, like my neighbor. Others, like myself, were able to find shelter with relatives who had retained power. I found myself staring outside at the unlikely amount of snow in Dallas and marveling at how lucky we were to live in a place where a high-school theology teacher was able to afford a home big enough to house three families needing shelter.

## 5 Who is the Innovative Entrepreneur?

Inventers and entrepreneurs who develop globally important innovations that provide such benefits like better healthcare and sanitation are rare. They are rare both because what they do is risky and it is difficult to create marketable products, services, and processes that are both new and easily accessible. Chapter 2: The Innovative Entrepreneur offers important insight on why deeply useful innovations are usually pushed through by decidedly rare individuals. First, they are not necessarily motivated by profit. By surveying a host of successful entrepreneurs, Diamond concludes that “successful entrepreneurs reveal a variety of motives: to make a lot of money for its own sake, to win a competition, to prove oneself to others, to consume conspicuously, to get a project done” (p. 19). However, given less than ideal cultural, political, and institutional entrepreneurial conditions, the entrepreneur that is more likely to persist in the face of obstacles is the project entrepreneur (the entrepreneur motivated to get the job done). Given the rarity of people with the creativity and risk tolerance to produce marketable, breakthrough innovations, it matters how we choose to constrain or allow their activity, especially in the early stages of their inventions. Furthermore, as mentioned in the opening paragraph on Dr. Karikó, many successful inventors do not put much stock in academic theories that say what they are doing is ill-advised or impossible, rather they often have tacit knowledge from working and tinkering with their invention to know and trust that their hunch will work. As Diamond puts it: “They (formally) know less of what is false, and they

(informally) know more of what is true. They know less of what is false because they are either ignorant of, or willing to ignore, the currently dominant theories. They know more of what is true by having more informal knowledge (whether local, tacit, or inchoate)” (p. 155). This important finding by Diamond, supported by many examples (see, e.g., pp. 17-35), deserves to be underlined.

In my own field, one is severely punished for deviation from popular political and theoretical frameworks. For example, not only are Christian philosophers in bioethics, for example, often openly discriminated against in the field, but they have a very difficult time finding work wherein they might practice their trade honestly, without compromising on their ideas, theoretical convictions, and research interests. The temptation is always present to do what is easier, and gain the professional commendation and article acceptances by writing on the fashionable subject of the day, using the language and conclusions known to be the majority view. This is because, in part, it is hard for people who have spent the better part of 10 years training not to spend their lives doing what they were trained to do. The point is, it is incredibly rare in the academic world I know to find those with the courage to deviate from the incredible homogeneity of the academy, for reasons that I deeply understand. Namely, most want to make good on the sacrifices of graduate school and feed their family on their educational investments. I am persuaded by Diamond’s widespread examples that the same is true for the majority of people. People do not like “rocking the boat”. Entrepreneurs and inventors do. They are willing to risk it all in pursuit of a project they think has incredible potential. The risks they take ought not to be brushed off as risks that would inevitably be born by someone (the assumption being that the inventions they chase will somehow inevitably be brought to market). No, there are real costs there, costs which many in the audience might consider to be analogous to the difficulty of defending controversial ideas in the academy.

## 6 Conclusion

In summary, Diamond certainly presents strong justificatory reasons to think that (2b) the bad outcomes of innovative dynamism have been grossly over-estimated, and the good outcomes are apt to be ignored. In particular, Diamond gives ample time to explaining many of the major worries associated with innovative dynamism. We find moral benefits like greater tolerance and readiness to face natural disasters to be creative additions to other examples, like cheaper goods, a more redundant job market, more meaningful jobs, less burdensome regulations, and fairer competition. I also think there is a case to be made for the stronger reading of Diamond’s book, one supporting the conclusion that (3a) “innovative dynamism is a system without trade-offs experienced by other systems and with clear benefits for most, especially the poor and vulnerable and we ought to prefer it over other economic systems as a result”. My major criticism of the book as a whole is that the failings of other systems are not made explicit. One has to dig for them in the examples and comparisons in each chapter, but they are there. For example, Diamond clearly shows why more regulatory institutional structures that burden the activity of innovative dynamism trade creative solutions and fast development, for adherence to precautionary

principles, which do not always avoid harm and often lead to corruption. Diamond also makes a good case for preferring innovative dynamism over other cultural settings hostile to business in his discussion of the hockey stick analysis.

I would much rather live under innovative dynamism than live in cultures and under institutions set on decline and destitution insofar as in the former I am far, far more likely to be able to access basic medication, clean water, and safety than in the later. Finally, and on a relevant note, the tradeoff of new goods vs. precautionary or ideological opposition to potential harms is not one I am willing to make if it bars me from the likelihood of enjoying the benefits of research like Dr. Karikó's. I am not willing to trade a chance at a COVID-19 vaccine for the risk aversion. The cost is too high.

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