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### The Trouble with Doomsday

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In January 2017, the *Bulletin of the Atomic Scientists* moved its iconic "Doomsday Clock" from three to two-and-a-half minutes to midnight. Among the reasons mentioned were the international community's failure "to come effectively to grips with humanity's most pressing existential threats, nuclear weapons and climate change." It also specifically mentioned the rise of nationalist movements and President Trump's strident rhetoric on nuclear issues. "Wise public officials should act immediately", the *Bulletin's* statement said, "guiding humanity away from the brink. If they do not, wise citizens must step forward and lead the way." <sup>1</sup>

The Doomsday Clock is undoubtedly a classic. In the words of one cynical commentator, it ranks on a par with *Time Magazine's* Person of the Year and the *Sports Illustrated* annual Swim Suit Issue.<sup>2</sup> The Doomsday Clock does not represent accurate scientific forecasting. Its major purpose is to alert the broader public about the many unresolved problems the world is facing. However, its proponents insist that any decision to move the Clock's hands is based not on the gut feeling of an editor, but is the result of intense deliberation by the *Bulletin's* Board of Directors, which boasts many Nobel Laureates. In other words, the keepers of the Clock want it to be more than a mere publicity stunt. The Clock is supposed to have real meaning. Alas, there are at least three reasons why it does not.

#### 1. The Experts Speak

The first problem is the very question of what constitutes an "expert". The Doomsday Clock derives its authority from the claim that it reflects the combined wisdom of renowned authorities across a range of fields. However, while there is no reason to doubt their academic credentials, one may justifiably doubt whether these credentials allow them to determine the likelihood of (man-made) Armageddon. The early "atomic scientists" – mostly physicists – benefitted from the fact that they dealt with highly complicated



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issues that few outsiders knew anything about. Since they were the ones who had built the atomic bomb, their view about the dangers of the bomb carried considerable weight. Irrespective of their unquestioned authority on nuclear matters, however, their political instincts were, at best, average. Not only did none of their gloomy predictions come true; some of their attempts to stir up an indifferent public – for example by calculating the mathematical probability of nuclear war – were outright silly.

Even today, some physicists seem particularly prone to believing that they possess a unique voice on national security matters. However, a physicist who designs a weapon is not necessarily an authority on military strategy or deterrence theory. The physicist's unique knowledge about, say, the feasibility of certain missile defense technologies, may be important for military analysts and policy-makers alike, but this does not translate into superior insights on policy. Physicists may still benefit from the appeal of "objectivity" that is commonly associated with the natural sciences, yet when a natural scientist rants about what he considers the "insanity" of nuclear deterrence, for example, he is simply an activist with a university degree. Similarly, a physician who claims that he knows all there is to know about the effects of radiation is not an expert on nuclear deterrence, nor is he likely to pass informed judgement about the likelihood of a nuclear war, as opposed to its effects. By the same token, a Nobel Laureate in biology has probably less to say about matters of nuclear deterrence than a Nobel Laureate who had devoted his entire life to matters of security, like, for example, the late Thomas C. Schelling. A Nobel Prize is awarded for outstanding achievements in a certain field; it does not imply that the recipient is a universal genius who can speak authoritatively on everything.

### 2. What do we really know?

The second problem of the Doomsday Clock is the method and quality of analysis. How do you judge the imminence of nuclear war or other disasters? Is the world really inching away from the brink when Russia and the US have concluded a treaty that reduces the number of warheads by 20 percent? Is such an agreement really a game-changer, when at the same time North Korea is moving closer to a long-range missile that can strike the US homeland, and China's territorial assertiveness increasingly has a military dimension? How do you weigh "intangibles", such as human behaviour, which is arguably much more decisive for determining humanity's future than technological developments? The keepers of the Doomsday Clock do not seem to be bothered by such considerations, and there may be a simple reason why. As Keith Payne observed, "the movement of the clock seems to have been affected only by developments in the areas of nuclear testing and formal arms control."<sup>3</sup> Whether these developments bear any relationship to the likelihood of Armageddon is questionable, but it reflects the nuclear-centric, mechanistic worldview of "atomic scientists".

And there is more. The obsession with nuclear issues has led the keepers of the Clock to revert to rather dubious analytical approaches when deciding to move the Clock's hands. For example, like the Nobel Prize Committee, who awarded the incoming US President Barack Obama the prestigious Prize as a down payment for *future* achievements, the keepers of the Doomsday Clock decided to set it back by several minutes simply because they *expected* President Obama to do great things, notably on nuclear disarmament.<sup>4</sup> In short, the *Bulletin's* Board of Directors, like the Nobel Prize Committee, had not arrived at their respective judgements by weighing the merits of a certain policy. They had simply tried to encourage what they considered to be the *right* policy. This is not analysis but political advocacy.



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Over the past ten years, the keepers of the Clock have tried to move away from their previous nuclear-centric approach. Originally meant to apply only to nuclear annihilation, the Clock now professes to amalgamate many other worrisome developments, such as climate change, robotics, genetic engineering, and cyber threats. No one will doubt that these developments entail significant risks, but putting such a smorgasbord of diverse issues into one apocalypse-basket appears even shallower than the *Bulletin's* erstwhile nuclear emphasis. Cyberattacks can cause major societal disruptions and even destruction, but is the challenge really on a par with nuclear war? Climate change can lead to all kinds of natural disasters, and even aggravate conflicts, but is it really heralding the end of mankind? In short, the apocalyptic message is not becoming sharper, but increasingly muddled.

### 3. The Doomsday Scare

The third problem with the Doomsday Clock lies in the notion of “doomsday” itself. Even if one ignores its pseudo-religious references, selling policy prescriptions based on the argument that otherwise the world is about to go to hell in a handbasket is highly problematic: while it may scare some people into activism, it may also lead others into fatalism. If the end of the world is nigh, what is the point of trying to search for solutions? Hence, the doomsday approach is more hindrance than help. It amounts to a permanent vote of no confidence in the mainstream political process, be it with respect to national security, scientific advances, or environmental issues. Its apocalyptic imagery conveys a sense of drama and urgency that de-values gradual approaches, as they will always appear insufficient when compared to the magnitude of the challenges. According to the Clock, mankind is in a permanent state of emergency. However, as one observer aptly put it: “You can't live your life at 3 minutes to midnight”.<sup>5</sup>

Most importantly, perhaps, the doomsday metaphor casts a verdict about the state of the world that largely ignores humanity's ability to get things right. A US professor once asked her students to come up with their own “Doomsday Clock”, and then explain why they chose a certain time. She was surprised to learn “that many students resented what they saw as the manipulative nature of physicists choosing the last 15 minutes before midnight as their starting point. Many of them argued for placing the hands at 9:00 or 10:00 or 11:00 – not because they were insisting that nuclear weapons were of little importance, but because they believed that their own starting points placed more faith in the power of human beings to maneuver within difficult straits.”<sup>6</sup> Unlike some past and present “doomsdayers”, whose claim to authority exceeds their subject matter expertise, the students displayed common sense. In so doing, they exposed the Doomsday Clock for what it really is: a hopelessly old-fashioned – and hopelessly arrogant – attempt at scaremongering.

In sum, neither the broadening of the list of apocalyptic threats nor the famous names of some Board members will be able to salvage an approach that appears increasingly “retro”. This is not to belittle the dangers that mankind could face by nuclear war, pandemics or other major challenges. However, the idea that a small group of “wise” men and women can judge the state of an ever more complex world is out of touch with the very world these experts purport to analyse. That's why the “Doomsday Clock” is doomed.



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1. It is two and a half minutes to midnight, *2017 Doomsday Clock Statement*, available at <http://thebulletin.org/sites/default/files/Final%202017%20Clock%20Statement.pdf>.
2. Neil Steinberg, Why doomsday clock won't hit 12, *Chicago Sun-Times*, 19 January 2007 (<https://web.archive.org/web/20070210025357/http://www.suntimes.com/news/steinberg/217470,CST-NWS-stein19.article>).
3. Keith B. Payne, "Precision Prediction," *National Review*, 18 January 2010, available at <http://www.nationalreview.com/article/228975/precision-prediction-keith-b-payne>.
4. Towards the end of President Obama's tenure, two members of the Nobel Prize Committee stated publicly that he should return the award, as he had not fulfilled the expectations set in him.
5. Anders Sandberg, quoted in Tia Ghose, "Is the Doomsday Clock Still Relevant?," *Live Science*, 24 February 2016, available at <http://www.livescience.com/53801-doomsday-clock-relevance.html>.
6. Katherine Pandora, "Does the 'doomsday clock' keep the right time?," *Petri Dish*, 30 January 2016 (originally published 2007), available at [http://www.katherinepandora.net/petri\\_dish/2016/01/one\\_of\\_the\\_most.html](http://www.katherinepandora.net/petri_dish/2016/01/one_of_the_most.html).

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