DARK WINTER: AN INSIDER'S GUIDE TO PANDEMICS AND BIOSECURITY

Raina MacIntyre's new book explores one woman's journey through a pandemic and the lessons it holds for us as we encounter future pandemics.

By Richard Slaughter

Pandemics have occurred throughout history causing enormous suffering and the loss of uncountable human lives. Possibly the best-known pandemic is the "Black Death," which swept across Europe in Medieval times (1347-1351) closely followed by what has been called The Spanish Flu (February 1918 – April 1920), which also carried away many otherwise healthy young adults in the early 20th Century.

Two of many reasons for the recurrence of such destructive outbreaks are poverty and ignorance. They are, however, a constant since they emerge quite regularly. The poor, as ever, remain the most vulnerable and likely to suffer, but ignorance can be moderated by access to knowledge.

Today, powerful forces are changing the human condition in new and significant ways, some of which appear contradictory or even irrational (e.g., think of the high-tech weapons used offensively against civilians in Ukraine). Scientific research moves forward at a frenetic pace in a bewildering array of different fields and disciplines. Over time, however, some of this work can have ambiguous results when expressed through disruptive applications and de-stabilizing technologies. At the same time, we recognize progressive values-, and conscience-based work, that seeks to solve problems and help make the world a better place.
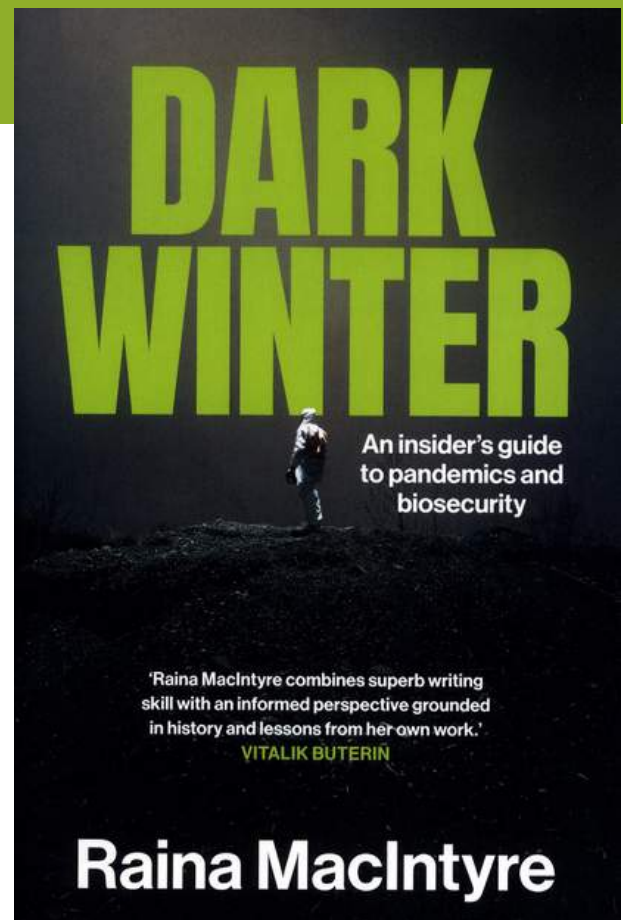
Dark Winter
Image source: amazon.com

Nowhere are these tensions and contradictions more visible and concerning than in the field of bioethics and biosecurity where a host of discoveries are generating both highly promising *and* potentially dangerous results.

WHY A "DARK WINTER"?

[Dark Winter: Dark Winter: An Insider's Guide to Pandemics and Biosecurity](#) is the story of one woman's journey through these very issues and concerns. It also is a kind of restrained manifesto that makes a case for using appropriate methods to understand and respond to dynamic changes in the biosphere, particularly in relation to viruses and other pathogens.

The author, Raina MacIntyre, is keenly aware of what happens when the early signs of a developing outbreak are missed, misunderstood or, more commonly, ignored. For example, she writes how, in 2017, information suggesting a resurgence of smallpox was emerging. The author was among those who attempted to get governments interested in responding. But Australia opted out, the U.S. election intervened, and the priorities of that government meant that the available stock vaccines was set aside for that country's use only. She writes: "because of national interest overriding global interest, disinformation and poor decisions, a pandemic that could have been stopped in less than a year became never-ending. Smallpox was well and truly back in the world…" (pages 111-112).

The author articulates a universal principle when she asserts that "whenever new means become available and are disseminated, the chance immediately presents itself that these will be used." For example, CRISPR, the gene editing tool, provided new options for "repairing" a variety of inherited diseases while, at the same time giving rise to the temptation to pursue "germ line" editing, which would change the very nature of what it means to be human. The risks are obvious, although one Chinese medico has already admitted trying it out.

More broadly speaking, the same argument also applies to viruses. Thanks in part to to the global Covid pandemic there has been a huge upsurge of research into their natural and unnatural uses. The fact that viral diseases can now be "supercharged" and used as biological weapons is hardly new, but the power of the methods and the extent of the possible damage has increased dramatically. Yet, on the whole, governments appear "stuck" in "rear view mirror" mode, reacting to and clearing up the mess with greater or lesser success. On the whole, and with rare exceptions (such as Finland) they remain blissfully unaware of how broad-spectrum, high-quality prospective analysis, has become an essential core aspect of governance itself.

A biological "winter" is on the cards for a variety of reasons. For example, "the technology has been racing ahead, becoming cheaper and more accessible." Similarly, "criminals and terrorists who previously worked in isolation can now connect in extensive global communities on the dark web…" Again, "DIY biology has emerged as a major global movement… (and)…today there are over 80 known biohacker labs worldwide."

Finally, 'the fragility of the just-in-time economy and reliance on globalized supply chains was exposed right at the start of the Covid-19 pandemic.' For these and related reasons, the author doubts that the agencies charged with keeping the nations of the world safe are prepared for another pandemic. In her considered view, "they have not grasped the scope of the modern threat landscape. Or, if they have, they may be hampered by political agendas." But, very fortunately, this is by no means the end of the story.

EPIWATCH AND BEYOND

Not content to observe from the sidelines, as it were, MacIntyre, her colleagues and students worked over several years to design and create an IT-driven methodology of environmental scanning with the above name.
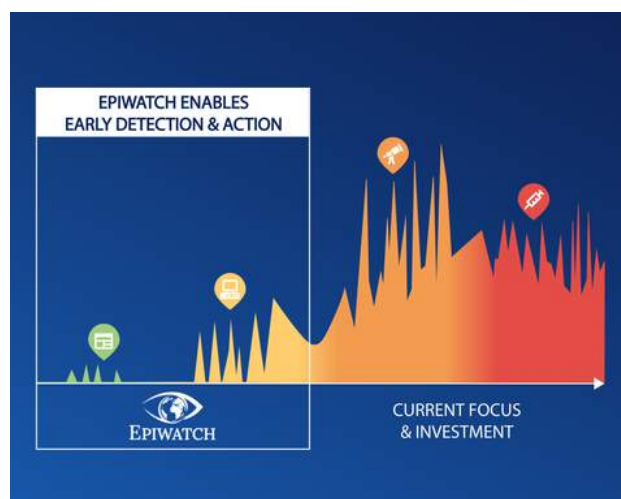
Images source: epiwatch.org

It's a classic expression of environmental scanning – the need to detect and understand changes on a particular operating environment -- but in pursuit of a new vision and cutting-edge methods. The latter scans the global environment continuously for disease-related signals of change and uses them for a very wide range of useful purposes. These include early diagnosis and warning, specific tools to facilitate collaboration and access to specialised training. The package also includes a sophisticated method of risk analysis that provides essential guidance on "what to do next."

Readers, however, should not take this reviewer's word but look up the EPIWATCH site themselves. They will, among other things, find a beautifully rendered dynamic global map of current "hot spots" and access other equally useful resources. The map is described as a dashboard where real-time information on disease outbreaks around the world are clearly indicated. The dashboard also includes a color-coded "legend" or index via which the user can discover the current number of cases confirmed in particular locations. From a Futures Studies and applied foresight perspective, this is an exemplary demonstration of how a judicious combination of positive human values and progressive purposes can be integrated with the very latest tools from the IT world to produce something of real and continuing value.

OTHER DOMAINS AND USES

There are perhaps other domains where similar techniques have been used for other purposes that might benefit from comparison, contrast and review. It's probably safe to say that perhaps most advanced (in the technical sense) methods are commonly found in military and security-related contexts where long-range thinking and planning have been actively used for many years. I speculate that the application of such tools may be lagging in relation to endangered species or studies on the shifting parameters of the global system. While there are, for example, some excellent graphics available regarding phenomena such as the 'great acceleration,' global limits and suchlike, the ones I have seen do not appear to be as 'user-friendly' or helpful as the example discussed above. An article by Sarah Holbrook in the February 2023 issue of Compass suggests what she calls 'foresight tech' may be taking off.

But that's the subject of a different article.

REFERENCE:

Sara Holbrook, (2023). Foresight Tech: Automated foresight technology – Friend or Foe? Compass, February, 74-81

Richard A. Slaughter

Richard A. Slaughter, completed his Ph.D. in Futures Studies at Lancaster University in 1982. He later became internationally recognized as a futurist / foresight practitioner, author, editor, teacher and innovator. During the early 2000s he was Foundation Professor of Foresight at Swinburne University of Technology, Melbourne. He currently works out of Foresight International, Brisbane, Australia and can be reached at: foresightinternational.com.au.

Readers may like to hear two episodes of FuturePod (113 & 116) on the 'skewed narratives' of affluent nations and avoiding a Digital Dystopia, at futurepod.org. His recent book Deleting Dystopia can also be downloaded free of charge from: https://usq.pressbooks.pub/deletingdystopia/