

Complexity scientists reflect on the COVID-19 pandemic

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Credit: Santa Fe Institute

The COVID-19 pandemic tested our institutions and societies, from the global to the local, in unprecedented ways. And the sheer speed of the novel coronavirus's spread meant that scientists, public health officials and medical professionals were left scrambling to understand it in real time, as the death toll rose. It may be one of the most complex and challenging public health crises the world has ever known.

Now, almost two years after the global rise of COVID-19, which has claimed more than five million lives worldwide so far, researchers are beginning to reflect on the pandemic's many lessons. "[The Complex Alternative: Complexity Scientists on the COVID-19 Pandemic](#)," a new book from the SFI Press, offers reflections and recommendations from more than 60 members of the Santa Fe Institute community. In this elegantly designed book—a tome of varied perspectives on the wide-ranging implications of the COVID-19 pandemic—researchers from across the sciences weigh in on topics ranging from modeling transmission to decision-making in the face of uncertainty, to how wildlife responded to suddenly empty cities.

This collection of articles, written for a [general audience](#), underscores the importance of resisting simple answers in combatting a phenomenon as complex as a global pandemic and instead recognizing its inherently messy nature. Much of what went wrong during the pandemic can be attributed to overly simple, one-size-fits-all "solutions," such as questionable remedies or the singular efficacy of isolation, SFI's David Krakauer and Geoffrey West write in the book's introduction. While there is often great comfort in embracing simplicity, "there can also be a certain naiveté in the excessive elegance that sometimes accompanies simplicity. And of greater concern is the danger in the desire for expediency—to explain every event or phenomenon as if it had a single cause and to flatten reality into a linear chain-like narrative whose future is as predictable as its past is comprehensible." The book, they add, "disavows simple explanations and solutions in favor of a concerted effort to come to terms with the whole matrix of the pandemic and all its messy parts."

As we struggle to grasp the full magnitude of the damage the [pandemic](#) has wrought, "The Complex Alternative" offers a wealth of nuanced insights into what we've learned—and makes an important contribution to the conversation about what we must do to better prepare for the next

one.

Provided by Santa Fe Institute

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