# RESEARCH SHORT

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# Complexity, COVID, and the Failure of Strategic Incrementalism

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The speed, scope, and impact of the COVID-19 pandemic on both the real and—even more so—virtual world underline how today's complexity is truly unprecedented. Nonetheless, evidence suggests the national security community remains ambivalent about the magnitude of the change. This ambivalence is problematic because it breeds incremental measures that are inadequate to the fundamentally new and different nature of the challenge.

If the COVID-19 pandemic proves anything, it is that the U.S. national security community is correct when it says that today's world (i.e., post-Cold War and multipolar) is complex.

And say it, it does. Take a look, for example, at three of the most recent strategy documents the community has produced. The *2017 National Security Strategy*? Three times.[2] The *2018 National Defense Strategy* (summary)? Four times.[3] The *2019 National Intelligence Strategy* (NIS)? Six times.[4] And those are only the explicit mentions—the above counts do not include the many descriptive mentions of complexity that do not use the exact term.

> A complex system is composed of a large number of interacting and interdependent components, without central control, whose emergent (i.e., nonlinear) behavior cannot be explained or predicted from understanding the sum of the behaviors of the individual components.[1]

However, these documents do not just say that today's world *is* complex. Almost all of these instances at least imply (and many are explicit) that the nature of today's complexity is fundamentally different from the complexity of the past. Is that true? Moreover, does the national security community writ large really believe it? The answer to the first question is undoubtedly yes. The answer to the second question is—unfortunately—much less certain.

## Extraordinary Complexity ...

The nature of today's complexity is revolutionary, as the COVID-19 pandemic makes clear. Never in history has a pandemic been able to emerge and spread with the speed, global scope, and impact of COVID-19. Due largely to comprehensive modern transportation links and commerce patterns, there are few parts of the world and few people that are not physically accessible within 20 hours.[5] Most conspicuously, the post-Cold War world has not only seen the largest piece of previously disconnected territory—Russia—connect and integrate, but it has also seen, in China, the largest previously disconnected population do the same.

Given this growth in interconnectivity and interdependence, it is no wonder that COVID-19 has been able to emerge and spread around the world in the exponential way it has. That emergent behavior—which would have been impossible during the Cold War because there just was not enough physical interconnectivity and interdependence—makes it hard to argue that the complexity of the post-Cold War era is not really different.

But even if one still somehow insists that the above does not represent anything fundamental*y* different, what about the virtual world's complexity? COVID-19's physical impact has been matched and maybe exceeded by its virtual reach. This is largely due to the fact that only in the past 30 years has it become possible for *anyone*—not just governments, corporations, and/or the supremely wealthy—to effectively broadcast. Today, the World Wide Web (born only in 1989[6]) permits anyone's ideas, fears, hopes, information, lies—you name it—to rapidly and widely propagate. Is it any wonder then that COVID-19 could be perceived in so many, often conflicting, ways in the public health sphere? Not to mention the pandemic's having such immediate and extraordinary impact in domains beyond public health?

To illustrate this latter point, consider how quickly the COVID-19 pandemic has been able to bring the global economy to its knees. It took the Great Depression several years to reach its nadir. It took COVID-19 mere weeks to inflict similar economic damage.[7] And because global Internet penetration is only at around 53.6 percent, that capability for emergent phenomena to virtually appear, propagate, and disrupt is only going to grow.[8] All told, virtual interconnectivity and interdependence, as exemplified by COVID-19's virtual transmission and amplification, give entirely new meaning and relevance to the expression "to go viral."

## ... Wait, Maybe Not

Despite the seemingly incontrovertible nature of the change described above, the national security community's belief in the magnitude and significance of the change seems much less certain. A die-hard group of so-called complexity adherents—myself included—have been writing passionately and prolifically for decades now about the growing relevance of complexity science and perspectives to the post-Cold War national security environment. Indeed, collectively, we are probably the ones most responsible for the many mentions of complexity referenced above (as well as countless similar mentions in previous strategic documents and analyses).

But looking beyond these various mentions/references to complexity in the midst of the COVID-19 pandemic, it has become clear that we have failed to make our point. To be blunt, the larger national security community does not really believe in the importance or significance of what we have been saying. While the community may have thrown us some bones, the truth is that we have been met with the response that Indiana Jones got at the end of *Raiders of the Lost Ark*: "... and it will be [studied], I assure you, Dr. Jones ... we have top men working on it right now." Cue the ark being boxed up and buried deep in an immense government warehouse—the cinematic equivalent of a mention in a strategy document.

How can we not be dealing with complexity within the national security community when references to complexity seem to be everywhere? Well, let's start with the aforementioned strategy documents. Despite the specific complexity mentions referenced above, the bulk of the strategies themselves seem largely evolutionary in nature. That is to say, while the obligatory language of "innovation" is present throughout, the prescribed measures seem to be mostly about improvement and not so much about stopping something old and starting something new.

For a particular example of this, consider the concept of "anticipatory intelligence" as most recently articulated in the 2019 NIS. The idea for what would eventually become the distinct intelligence discipline of anticipatory intelligence was originally conceived with unprecedented complexity in mind.[9] The underlying notion was that in a complex world where phenomena—like pandemics—can suddenly emerge and propagate unconstrained, it is simply too late to respond once an issue has emerged. The description of anticipatory intelligence in the NIS explicitly acknowledges this stark reality but then quickly devolves into a mishmash of "improve," "increase," "expand," and "reinforce." That is to say, just enhancement (another

favored word throughout the document) of existing capabilities. In implementation, anticipatory intelligence has been watered down; it is no longer about doing something new and different, which was, of course, the original point.

This seemingly reflexive tendency to quickly start discounting, downplaying, and/or dismissing the very complexity that was just acknowledged also tends to be the case as soon as one moves beyond the documents and starts to actually engage with national security practitioners. I speak to countless groups, classes, symposia, and meetings across the national security establishment every year, and in these assorted discussions the community's enduring ambivalence regarding the magnitude of the change is often highlighted. It usually does not take long before someone, almost inevitably, will give voice to what many in the room really seem to be thinking: Well, the world has always been

> The textbook example for how an organization needs to change so as to be able to cope with extreme complexity can be found in *Team of Teams,* coauthored by General Stanley McChrystal.[10] In the book, he examines the various cognitive, organizational, behavioral, and evaluative (feedback) changes, as well as other changes, that an organization must undertake to maintain its effectiveness and relevance in the new security environment. However, if you look around the national security community you will, unfortunately, still be hard pressed to find organizations that embody those characteristics.

complex, hasn't it? (Heads nod.) After all, pandemics have happened forever. (Murmurs of assent.) Things aren't really quite so different, are they? (Questioning looks aimed at me and sighs of relief.)

## The Cold War's Complicated Legacy: Ambivalence and Unpreparedness

It is true that the world has always been complex on some level. No one seriously disputes that fact. Nor is it disputable that the national security community's formative experience—even today—remains the Cold War. But the Cold War was not particularly complex; it was, in systems parlance, complicated.[11] That is to say, it was essentially a two-body problem, and therefore it lacked the highly interconnected and interdependent conditions that spawn nonlinear (emergent) phenomena. All told, the Cold War's primacy in the eyes of the national security community basically eclipsed the complexity of the larger world. But, even so, the complexity that did exist in the background—remember this was pre-World Wide Web—was simply lesser than that of today.

This enduring prevalence of the Cold War's complicated notions and the ambivalence with regard to complexity that those notions have bequeathed can be seen in how stunningly unprepared the national security community is for the complexity that it now confronts. For evidence, one again need only look at COVID-19. COVID-19 renders irrelevant most of the traditional security assumptions—military, intelligence, diplomatic—upon which the national security community stands. COVID-19 has no central head to be decapitated, shocked, or awed. It has no ships, tanks, planes, or satellites. It has no classified plans to be stolen. And it cannot be bargained with, threatened, or persuaded to stand down.

At the time of this writing, COVID-19 has killed more than 60 times the number of Americans killed on 9/11 and more than 75 times the number killed at Pearl Harbor. Moreover, many aspects of our society have been profoundly—and probably permanently—disrupted. When it comes to national security in today's world, things truly are very different.

## Globalization Is Reshaping Itself, Not Receding

Given the above, it is no wonder that the national security community would look for reasons to question this reality. The latest form this doubt takes is the argument that increasing complexity— as manifested in globalization—has now probably crested and that developments like onshoring (sometimes called reshoring), 3-D printing, the increasing availability of viable local energy sources (e.g., fracking, wind, etc.), resurgent nationalism, the United States-China trade war, and the like will now start unwinding the world's interconnectivity and interdependence.[12] This line of argumentation has been misleadingly bolstered by COVID-19 and the associated restrictions or constraints on physical movement that the pandemic has, at least temporarily, imparted.

It is certainly true that globalization has been evolving for some time, and that process will surely be influenced in various ways by COVID-19. However, the old, physical measures of how much stuff is shipped around the world are no longer the best barometer of globalization.[13] Today, the global economy is increasingly digital (i.e., virtual), and consequently the traditional metrics of trade (value of shipped goods) no longer capture the, well, complexity of the modern supply chain.[14]

Furthermore, for whatever crimp on physical interconnectivity and interdependence the COVID-19 pandemic may have helped impose, its effect has been the exact opposite in virtual/digital terms. The COVID-19 pandemic has seen virtual interconnectivity and interdependence spike as impeded physical links have been compensated for and/or overcome by virtual ones.[15] People will eventually go back to the office and school. But teleworking, online education, and other growing virtual connections are unlikely to shrink back to pre-pandemic levels.[16]

All told, the world's interconnectivity and interdependence are not so much going to unwind as take on new forms and patterns—especially virtual. And these new manifestations must become primary drivers for how the national security community conceives of itself, its roles, and its responsibilities. Nation-states and traditional military threats still matter. However, short of outright war (and maybe even then), their power will probably be determined more by their ability to manipulate the world's interconnectivity and interdependence—networks: political, economic, social, *and* military—than by traditional military power.

## Unprecedented Complexity Demands Unprecedented Strategies

At the end of the day, the essential question that still needs to be asked is: *why does it matter* if the national security community truly believes in the fundamental nature of the change that

today's complexity represents? Well, the answer is not that complex—it is actually quite simple: fundamental change demands fundamental changes.

Unfortunately, to look at the national security community's changes—both proposed in assorted strategies and concrete in implementation—is to see mostly incremental initiatives aimed at improving, enhancing, upgrading, reinforcing, and the like. Oftentimes these incremental changes get characterized in "powerful" terms—better!, stronger!, faster!, smarter!—that are practically Orwellian in that they aim to "give an appearance of solidity to pure wind."[17] As good as they sound (who does not want to be better, stronger, faster, and smarter?), what these characterizations too often really mean is that the national security community is just going to keep on doing more of what it has been doing. But just doing more of the same in this vastly more complex strategic landscape is not going to cut it. What is needed is something truly different.

It is often said that the first step in any effort to change is to acknowledge you have a problem. Perhaps, if there is a positive to be found in the tragedy that is the COVID-19 pandemic, it will be the acknowledgement—for real—by the national security community that the world's complexity represents a strategic challenge that is fundamentally different. And in turn, hopefully it will recognize just how unprepared its incremental strategies have undeniably left it.

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If you have comments, questions, or a suggestion for a *Research Short* topic or article, please contact the NIU Office of Research at **NIU_OOR@dodiis.mil**.

# Endnotes

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