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SMALL MOBILE PIECES OF NATIONAL SOVEREIGNTY?

Uncrewed Vessels, Naval Diplomacy, and the Challenge of Signaling

Richard Dunley

On 1 September 2022, the Iranian frigate *Jamaran* seized two USN Saildrone Explorer uncrewed surface vessels (USVs) that were operating with the U.S. Navy's Fifth Fleet in the Red Sea. Two American destroyers responded to the incident too late and after negotiations between the governments, Iran released the USVs the next day.¹ Earlier the same week, the Iranian Islamic Revolutionary Guard Corps Navy unsuccessfully attempted to seize another USV in the Arabian Gulf and only was thwarted by the intervention of a USN patrol craft, USS *Thunderbolt* (PC 12).² Shortly after, Elaine D. Luria (D-VA), then a member of the U.S. House of Representatives and herself a retired naval officer, suggested that these incidents called the viability of the U.S. Navy's push to expand the use of uncrewed and autonomous vessels into question. If crewed vessels were needed to enable their safe operation and "essentially rescue" USVs under threat, this might negate the advantages USVs supposedly offered.³

Luria's concerns about the security of uncrewed systems at sea are shared relatively widely; however, Iran's actions point to broader implications about the status and utility of uncrewed platforms that have received less attention. Iran's willingness to seize the USVs demonstrates how potential adversaries view uncrewed platforms differently from crewed ones—a view validated by the limited American responses. Iran's unusual boldness and the USN's comparatively muted response both highlight how USVs' value and status are different from those of traditional warships.

In many respects, this is unsurprising. The Saildrone is a small, unarmed, comparatively cheap system that arguably has more in common with a sonar buoy or torpedo than with a large crewed warship.⁴ However, uncrewed naval

vessels are growing rapidly in size, complexity, and cost. The U.S. Navy already is operating some significant USVs, albeit primarily in a test environment, and is set to embark on the acquisition of a new class of large uncrewed surface vessels (LUSVs) starting in 2025. Each of these is to be two to three hundred feet long, with a displacement of up to two thousand tons, and equipped with thirty-two vertical-launch-system missile tubes.⁵ The U.S. Navy views LUSVs as “additional fleet units” that will serve as “a key enabler of the Navy’s Distributed Maritime Operations Concept,” which is the service’s conceptualization of how it will fight a major conflict.⁶ This shift in the scale and significance of uncrewed naval vessels poses some serious questions about where they fit into modern conceptions of both naval technology and identity, and what the operational and political implications of their integration will be.

The widely held belief that a technological tipping point around remote and autonomous capabilities has been reached has led to significant debates on a number of issues related to the deployment of uncrewed platforms at sea. These include the legal status of uncrewed vessels, their ongoing technological challenges, and whether they are sufficiently mature to operationalize.⁷ Navies also have devoted considerable attention to discussing the potential war-fighting utility of uncrewed platforms, although a clear concept of operations arguably still is lacking.⁸

Very little, however, has been written about the impact of the shift to uncrewed platforms on peacetime naval operations.⁹ The comparative maturity of uncrewed aerial vehicles (UAVs), both technologically and operationally, means that there is a growing scholarly literature on their use, including at points below the threshold of conflict.¹⁰ This provides a useful grounding from which to explore the potential implications of a parallel shift to uncrewed platforms in the maritime domain.¹¹

Within the broad sweep of peacetime naval operations, this article will focus on naval diplomacy, where the shift toward uncrewed platforms is likely to have profound, if difficult-to-predict, implications. The ability of navies to act as communicative tools has been understood on a practical level for centuries and increasingly is the subject of sophisticated theorization.¹² These activities exist on a spectrum ranging from hard to soft power and frequently are divided into two broad categorizations, described by Ken Booth as “naval power politics” and “naval influence politics” and by Kevin Rowlands as “coercive diplomacy” and “preventive diplomacy.”¹³ At the heart of this distinction are the means used to communicate the message. Hard-power naval diplomacy relies primarily on signaling endeavors, while soft-power naval diplomacy generally involves engagement activities. The challenges of conducting engagement activities using uncrewed platforms are very significant because of the degree to which such activities are related directly to the human element—the crew.¹⁴

This article, however, will focus on the more-conceptual challenges regarding signaling, which are bound up less in the crew as a capability and more in the way the removal of that crew may shift perceptions on the status of warships. In doing so, it will make two main arguments regarding the effectiveness of uncrewed platforms for conducting naval diplomacy that navies need to consider carefully before they embrace autonomous technologies too wholeheartedly.

First, this research suggests that USVs will not be as effective at signaling,

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because their innate characteristics mean that they lack the symbolic nature of warships, and they will be far less capable of sending what are called “costly signals.” As the proportion of uncrewed platforms within fleets increases,

this may impact the ability of navies to carry out core peacetime missions.

The second argument is that a shift to using uncrewed platforms to conduct naval signaling operations will introduce additional risks in two key areas. The removal of personnel from vessels and changes in the perceived status of the platforms increase the possibility that adversaries will respond to signaling or coercion with kinetic force. This in turn may or may not prove significantly escalatory, depending on how the nation conducting the signaling operation views the uncrewed platforms. The second way in which the shift toward autonomous vessels will increase risks is through the additional uncertainty that comes with their deployment. Most naval signaling and diplomatic activity take place within a well-understood framework of rules and accepted behaviors that have evolved over time, but uncrewed platforms introduce significant uncertainty into this system. In doing so, they raise the possibility of a misunderstanding.

THE STATUS AND CHARACTERISTICS OF WARSHIPS

The question whether an uncrewed vessel can be classified as a warship under international law has been the subject of considerable debate.¹⁵ There is a clear definition of a warship in international law that derives originally from Convention VII of the 1907 Hague Conference and that has been incorporated since then into article 29 of the UN Convention on the Law of the Sea. This states that a *warship* must belong to the armed forces of a state, bear external markings distinguishing its nationality, be under the command of a commissioned officer, and be manned by a crew under regular discipline.¹⁶ The degree to which remote supervision of autonomous systems aboard an uncrewed vessel conforms with the latter two criteria remains an open question.

It is, however, already apparent that major Western maritime states will push hard for uncrewed vessels to be defined as *warships*, given the benefits that accrue therefrom in terms of rights.¹⁷ One of the most significant of these, in this context, is the sovereign immunity that is enjoyed by all government-owned noncommercial vessels, including warships. The granting of this immunity is intimately bound up with the status of warships; however, it arguably is merely a limited legal codification of a much wider norm regarding that status. Booth identifies seven attributes of warships as diplomatic instruments.¹⁸ Most of these are related directly to the technological characteristics of warships and the medium of the sea. The most obvious exception to this is symbolism. This attribute is critical to the ability of warships to act as signaling tools. The exceptional characteristics of warships in this respect have long been acknowledged—it is the basic premise behind Oliver Cromwell’s oft-quoted remark that “a man-of-war is the best ambassador.”¹⁹ More recently, the classic statement comes from Laurence W. Martin, who wrote that the “conception that ships are small mobile pieces of national sovereignty makes them particularly suitable to symbolize the nation from which they come.”²⁰ This symbolism makes them potent vehicles for a policy of prestige. Hans J. Morgenthau argued of ships that, because of the “great impressiveness of their appearance” and “high mobility,” navies are able to “bring the flag and the power of a nation to the four corners of the globe.”²¹

These ideas are not restricted to the Western tradition of maritime thought. The Soviet admiral Sergey G. Gorshkov wrote in a similar vein that a “warship is regarded as a specific organ of the state and operates with the full authorization of its authorities and at the same time is a representative of the armed forces. Therefore, the activity of any warship at sea may involve tasks of a military-diplomatic nature.”²² Senior Chinese naval officers also have noted that “[n]avies possess many specific characteristics that differ from those of the armed forces”; an officially sanctioned history of the People’s Liberation Army Navy (PLAN) states that “warships are mobile territory.”²³ This perception that a warship is more than a piece of equipment with certain legal rights, and is instead a symbol of the state itself, is at the heart of what makes it a powerful signaling tool.

A key question going forward is whether uncrewed vessels will be viewed in the same way. American international lawyers—notably, James Kraska and Raul Pedrozo—have asserted that in legal terms uncrewed vessels are warships and therefore are afforded the rights befitting that status.²⁴ The current evidence regarding the wider norms and perceptions paints a different image. The incidents involving the Sailerone USVs are only one of a number of indicators suggesting that states do not view uncrewed vessels in the same way that they do crewed ones. In 2016, a Chinese naval vessel seized an underwater glider that had been deployed from USNS *Bowditch* (T-AGS 62) in waters off the Philippines.²⁵ The

Chinese returned the glider a few days later. In its statement following the seizure, the Pentagon noted that the glider was “a sovereign immune vessel of the U.S. Navy” and described the Chinese actions as “inconsistent with both international law and standards of professionalism for conduct between navies at sea.”²⁶ The reference to *sovereign immunity* is reflective of legal arguments on this issue.²⁷ However, American actions viewed through a wider lens point to the gulf in attitudes toward incidents involving uncrewed platforms as opposed to incidents involving crewed ones. While the United States objected to China’s actions, its response was relatively muted. This is particularly notable when contrasted with the 2001 crisis sparked by an incident involving an EP-3 reconnaissance aircraft that landed in Hainan after colliding with a Chinese jet.²⁸

It could be argued that this limited U.S. response simply reflected the fact that both the glider and the Saildrone USVs are inexpensive and (as far as we know) contain little by way of sensitive information. However, the experience with the more mature technology of UAVs suggests otherwise. In 2019, Iran shot down an American Global Hawk UAV near the Strait of Hormuz. This is one of the largest and most sophisticated UAVs currently in service with the United States, with each one costing around \$130 million.²⁹ Despite this, the Iranian attack clearly was viewed differently from one on a crewed platform. An Iranian general later reported that Iranian forces specifically targeted the drone instead of a crewed P-8 Poseidon aircraft, which they claimed also had entered Iranian airspace, to lessen the impact of the action.³⁰ This attitude was paralleled in the response from the American administration. President Donald J. Trump stated that “it would have made a big, big difference” had any U.S. personnel been killed, and even went so far as to remark that the Iranians “had it [the P-8] in their sights and they didn’t shoot it down. I think they were very wise not to do that. And we appreciate that they didn’t do that. I think that was a very wise decision.”³¹ A 2023 incident involving a collision between an MQ-9 Reaper UAV and a Russian Su-27 fighter aircraft that resulted in the drone crashing into the Black Sea elicited a similarly limited response. When discussing the event, Pentagon press secretary Pat Ryder remarked plainly that the “practice of the U.S. has been not to retaliate against attacks against UAVs.”³²

While we still have very limited real-world experience with uncrewed naval vessels, all the evidence that does exist points to the fact that, no matter their legal status, they will be viewed very differently from crewed warships. This shift in status will have profound impacts on how uncrewed platforms can be used for signaling purposes.

WARSHIPS AND SIGNALING

Warships can be used for signaling purposes across the spectrum from soft to hard power. These displays of naval power politics most commonly are associated

with the harder end of the naval-diplomatic spectrum—in particular, coercion, which generally is subdivided into compellence and deterrence.³³ Navies consistently have proved to be adept tools for carrying out such actions, some of which have earned the moniker *gunboat diplomacy*.³⁴

In recent years, the United States has deployed aircraft carriers consistently to the Middle East in response to perceived threats from Iran. When announcing one such decision in May 2019, the then assistant to the president for national security affairs (i.e., national security advisor), John R. Bolton, noted that the deployment was designed “to send a clear and unmistakable message to the Iranian regime.”³⁵ The deployment of a carrier strike group (CSG) is a significant step, but even activities on a far more limited scale can communicate a message clearly. Joint British and Dutch operations in the Black Sea in 2021 were limited in both scale and duration; however, there is little doubt that the message of European support for Ukraine, intended to deter further Russian aggression, was received clearly.³⁶

This speaks to crucial differences between naval diplomacy and most other types of military diplomacy seeking to coerce or deter. Warships have significant “sustained reach,” meaning that deploying a warship to a region does not necessarily rely on the support of a nearby country.³⁷ Also, warships are deployed overseas regularly, taking advantage of the neutral connecting fabric of the oceans; this means that naval diplomacy on all levels can and does occur within a relatively regular cycle of operations. Together, these characteristics of naval activity allow for a far more gradated approach to deterrence or coercion than do other forms of military diplomacy, such as forward deployment of ground or air forces, or even mobilizations. This in turn means that such activities can be used in situations well short of a crisis.

Signaling does not have to be so adversarial in nature, and, as both Rowlands and Booth have pointed out, there frequently are multiple subsidiary audiences beyond the primary intended “target.” One obvious example of this is how signaling operations often can be as helpful in reassuring allies as in deterring adversaries. Thus, while the deployment of two CSGs to the South China Sea during the Taiwan Strait crisis of 1996 was intended as an act of deterrence and generally has been viewed in this light, it also served to reassure the Republic of China government of American support.³⁸

Sitting somewhere between coercion and reassurance is the use of navies as signaling tools for what might best be described as the assertion of rights. The most obvious example of this is the U.S. program of freedom of navigation operations (FONOPs), which is designed to give material form to the “U.S. policy of exercising and asserting its navigation and overflight rights and freedoms around the world.”³⁹ On one level, these operations are a challenge predicated on the narrow legal grounds of the rights of warships (and ships more generally) at sea. However, they

also go well beyond being purely a legal challenge; as Michael P. O'Hara has noted, the United States at times has used "operational assertions as a legal pretext for signaling American power."⁴⁰ Arguably, such operations then fit back into the regular spectrum of naval diplomacy as a form of coercion; however, these FONOPs have taken on such a significance that it is valuable to explore them separately.

Warships are generally accepted as being particularly effective at this type of signaling activity, owing to their ability to exploit the commons of the seas to project power into a region and sustain it. As a previous *British Maritime Doctrine* summed it up, "Maritime forces can maintain presence without occupation; coercion without embroilment."⁴¹ The strength of the capability may impact the qual-

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ity of the signaling; however, as Edward N. Luttwak has pointed out, the significance of this often is exaggerated. He has argued that on many occasions the "effect on the local balance of power may be insignificant." Yet this does not matter, because "the purpose

is to affirm a commitment of national power."⁴² In this signaling role, warships' symbolic qualities as "small mobile pieces of national sovereignty" are arguably more important than their particular combat capabilities. The British and Dutch warships deployed to the Black Sea in 2021 were capable platforms, but by themselves they were unlikely to alter the balance of power significantly. Their value as communicative tools came not from their specific combat capabilities but from their status as symbols of British and Dutch power in a larger sense.

To assess why warships are so effective in this symbolic role, it is useful to look at the concept of *costly signals*, which has been popularized in international relations by James D. Fearon's work on crisis bargaining.⁴³ Fearon classifies actions such as mobilization or provocative force deployments as being aimed at signaling a state's resolve on a specific issue. The very costliness of the signal indicates that the state is invested in the course of action being signaled, and therefore it helps "people to update their beliefs about others' preferences and intentions in situations where it may pay to dissemble."⁴⁴ In other words, costly signals are better than "cheap talk" at communicating resolve. Costly signals are a particularly useful way of explaining why naval diplomacy is effective, in terms not merely of deterrence but also of reassurance.⁴⁵ The status of crewed warships discussed above is a core element of why their deployment can be seen as sending a costly signal.

To understand this, it is useful to look at the three categories of costly signals set out by Amy Zegart: "blood, or the risking of human lives; treasure, or

the financial costs of action; and political or reputational costs.”⁴⁶ These factors are connected closely to the concept of the status of warships. The first two are important drivers of that status, as well as arguably being factors in and of themselves, while the third is inextricably tied up with that status.

Placing personnel at risk long has been understood to be a clear signal of resolve, through the frames of both deterrence and reassurance. In 1910, the French general Ferdinand Foch famously is supposed to have responded to a question over the scale of a British commitment to the Continent by saying, “We only ask for one corporal and four men . . . and I promise to do my utmost to get them killed.” This, in Foch’s eyes, would ensure “that England will follow them as one man.”⁴⁷ These ideas now are bound up in the idea of so-called *trip-wire forces*, a concept and term developed largely in reference to U.S. Army deployments to Berlin during the Cold War.⁴⁸ The deployment of naval vessels is rarely viewed directly in this manner, but the presence of crew is unquestionably an important element of the costliness of the signal being sent. Sending a warship into a region means the commitment of a considerable number of personnel, ranging from around fifty for an offshore patrol vessel all the way up to five thousand for an aircraft carrier. It therefore represents a significant potential cost if an adversary responds aggressively. This cost, and the escalation it would represent, acts to restrain the adversary from interfering with the operation. At the same time, the willingness of the state conducting the naval diplomacy to accept that risk is a clear signal of its resolve.

The financial costs of naval signaling operations are less obvious but still significant. Fearon in his discussion of costly signals highlights how *sunk costs*—that is, costs that are incurred *ex ante*, or before any decision has been made—are an effective costly signal.⁴⁹ Jonathan D. Caverley puts it more bluntly: “Setting money on fire credibly tells the world how much you value something.”⁵⁰ Building up and maintaining navies is extremely expensive, and doing so gives an indication of a state’s geostrategic aspirations. The trilateral security partnership of Australia, the United Kingdom, and the United States known as AUKUS—particularly, Australia’s decision to acquire nuclear submarines—is a powerful signal of Australia’s perception of its strategic interests and its willingness to defend them, precisely because the initiative comes with such an eye-watering price tag.⁵¹ The deployment of these very expensive assets to a particular region is a clear statement of intent, not least because of the opportunity cost involved.⁵² Most countries have more areas of interest than they have ships available to deploy, and therefore every deployment comes with an opportunity cost. The decision to undertake a signaling operation comes with a sunk cost precisely because it deprives the state of using that vessel elsewhere, and therefore signals intent.

The reputational cost of naval signaling is clear, and is bound up closely with the symbolic nature of warships. It is widely accepted that “leaders, policy elites,

and national populations are often concerned, even obsessed, with their status and reputation.”⁵³ Warships, as previously noted, are powerful symbols of the nation, embodying much of its status and reputation. This even extends to the question of ships’ names, which frequently are used to connect the vessel to the state.⁵⁴ This status is a central element of the utility of warships as signaling tools, not least because such signaling comes with a cost if the ship is endangered. A classic example of this is the German decision in 1939 to rename the cruiser *Deutschland* (to *Lützow*) because of the “highly undesirable psychological blow” that would result from its loss.⁵⁵ A more recent similar example is the April 2022 sinking of the Russian flagship *Moskva*, in the Black Sea. The action was a major blow to Russian naval power in the region, but, as one commentator noted, the wider impact was “more about psychological damage than material damage.”⁵⁶ The sinking of the flagship of a major Russian fleet, and a ship named for the Russian capital at that, was a huge blow to the prestige of the regime and a massive propaganda coup for the Ukrainians. Reputational commitments are, as Thomas C. Schelling has noted, all about “the public ritual” of commitment, and through such actions the signaler is “not merely *communicating* an intention or obligation we already had, but actually *enhancing* the obligation in the process.”⁵⁷ For all the reasons discussed above, warships are ideally suited to signal such a commitment.

Reputational risk within naval signaling is closely intertwined with risks in terms of blood and treasure, and all three are inextricably linked to the status of warships. In April 2020, the U.S. government responded to tensions between China and Malaysia in the South China Sea by ordering the amphibious assault ship USS *America* (LHA 6) to transit the contested waters. This was a large, expensive, and very powerful warship, with a large crew, and it bore the name of the country from which it came. There scarcely could be a more transparent indication that the American government was sincere in its concern over the events and was willing to back up its contention that China “should cease its bullying behavior and refrain from engaging in this type of provocative and destabilizing activity.”⁵⁸ This deployment offers a clear example of how the status of warships as symbols, incorporating the aspects of costly signals, helps communicate clearly the signaler’s interest and resolve.

The question whether uncrewed platforms can be effective at signaling remains up for debate. Any signaling process is an act of communication in which the signal recipient has as much agency as the sender. It does not matter how strong you believe your signal to be if the intended target ignores or misinterprets it.⁵⁹ Given recent experience with uncrewed platforms at sea and in the air, it seems reasonable to suggest that such units are going to be less capable of sending costly, and therefore effective, signals.⁶⁰ The removal of the crew from a vessel ensures that any risk to personnel will be far more limited; indeed, this is a crucial element

of the rationale for the drive toward uncrewed platforms. Similarly, the stakes in terms of reputation appear to be far lower. The experience of the few incidents that have occurred involving uncrewed platforms suggests that politicians and the public do not view these platforms as symbolizing the status or reputation of a nation in the same way, and therefore the reactions following any attacks on or interference with them have been far more muted. The question of cost is less

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clear. While uncrewed platforms are intended to be significantly less costly than their crewed cousins, this does not make them cheap. There still are going to be considerable financial and opportunity

costs in any uncrewed signaling operation, but they are likely to be significantly less than those of an equivalent crewed mission. Taken together, these factors will reduce dramatically the costs, sunk and potential, of any naval signaling operation. In doing so, they arguably will make those same signaling endeavors far less effective.

This impact can be seen clearly by looking at the case of FONOPs. A number of scholars and commentators have argued that FONOPs are “a mission for unmanned systems.”⁶¹ From a legal perspective, Kraska and Pedrozo have argued that uncrewed vessels “may exercise the right of innocent passage in foreign territorial seas and archipelagic waters” and transit passage through straits, suggesting that they can assert the core legal rights involved in any FONOP.⁶² The advantages of using uncrewed vessels are seen as obvious; USVs are portrayed as a cost-effective way to increase the number of FONOPs conducted while also reducing the risk. The latter point is argued to be particularly important; as Erich Grome notes with regard to such operations in the South China Sea, “Should Chinese forces attempt to seize or destroy these vehicles, there will be no American sailors captured or killed; just some expensive fireworks.” Uncrewed platforms therefore would allow “the United States to continue to assert freedom of navigation and international law without putting American lives in harm’s way.”⁶³

Although from a very narrow legal perspective this point may be correct, any wider analysis rapidly highlights the flaws in such arguments. FONOPs are effective assertions of American commitments and interests in a region such as the South China Sea precisely *because* they come with a degree of risk, not *in spite of* it. A decision that it was too risky to continue with FONOPs by crewed vessels and therefore to replace them with uncrewed platforms rightly would be seen by both allies and potential adversaries as a step back in commitment, and it likely would serve to embolden those adversaries.

Of course, the comparative costlessness may bring its own advantages. The limited risks in terms of blood and reputation may encourage states to engage in signaling operations that they would have considered too risky for a crewed vessel. Furthermore, the reduced cost, together with other attributes of uncrewed platforms, such as their endurance, may enable greater persistence of presence, which in turn could be seen as signifying greater commitment. There are, however, reasons to doubt whether either of these developments would be particularly helpful. Deploying a less convincing signal of resolve into a scenario where you are unwilling to risk a more costly one is a dangerous approach, and one that has the potential to backfire if the other party escalates. Equally, while greater presence of effective signaling platforms may be advantageous, the persistent deployment of weak assets appears likely to result simply in more opportunities for a crisis, as opposed to greater impact.

The existing scholarship on UAVs suggests that the implications of conducting signaling operations with uncrewed vessels could play out in multiple ways. Zegart's research on drones and coercion acknowledges that they constitute less-costly signals, but she argues that this is what makes threats using uncrewed platforms credible. She distinguishes "the costs of signaling from the costs of fighting," and in doing so suggests that the relative "cheapness" of drone operations is precisely what makes the threat of conducting them more plausible.⁶⁴ This argument is an interesting inversion of accepted wisdom, but it really makes sense only within the narrow frames of the example, in which drones are a neat substitute for military operations involving humans, and in which the impacts of the operations (i.e., casualties) are not considered.

The idea that uncrewed platforms might encourage policy makers to take greater risks focuses attention on crisis escalation. Traditional scholarship has suggested that technologies that reduce the cost of using military force will make such action more likely, and are therefore escalatory. Work by Erik Lin-Greenberg on UAVs challenges this. By focusing on the potential losses of drones, he argues that the comparative costlessness means that there is a degree of "remote-controlled restraint," in which policy makers feel less pressure to respond to the loss of uncrewed assets as opposed to crewed ones. Through this, "drones appear to limit destabilizing escalation precisely because their use incurs low costs and risks."⁶⁵

Exactly how such conclusions would map onto naval signaling operations using uncrewed platforms is far from clear. In certain circumstances, the cheapness of uncrewed naval platforms may make threats using them more credible, but the greater scope and nuance of naval diplomacy appear likely to limit the value of such an effect. The concept of remote-controlled restraint seems to have more salience, although whether this will impose greater limits on crisis escalation or merely shift the relative thresholds is more questionable.

Perhaps the greatest concern is that the reduced cost of using uncrewed platforms to exert force will lead to more-frequent resorts to violence, especially in scenarios in which both sides are deploying such platforms. Erik Gartzke has argued that “[r]obot armies also make it easier for leaders to contemplate much more frequent uses of force at lower intensity levels.”⁶⁶ This appears particularly relevant in the maritime domain, where the absence of civilian populations and other characteristics of the domain itself offer the potential for relatively “clean” use of force. Thus, there appears to be the genuine prospect that the proliferation of uncrewed platforms conducting signaling and other confrontational naval-diplomatic missions will lower the threshold for the resort to kinetic force within strategic competition. This may, or may not, present significantly greater risks of escalation, depending on the degree of remote-controlled restraint on the part of the powers involved. However, it would alter dramatically the core calculus underpinning all coercive naval signaling operations.

LOST IN TRANSLATION?

The conduct of naval diplomacy consists of acts of communication. The analysis above is an attempt to unpack some of the language used within these acts of communication. There is, however, also a *grammar* to this language: a set of rules of the game that shape how naval diplomacy can be conducted.

At their most formal, these rules are legal agreements, such as the 1972 Incidents at Sea agreement between the United States and the Soviet Union.⁶⁷ It sets out regulations covering the movement of ships at sea when in proximity to vessels of the other party. It also sought to provide a framework for the two parties to work through any incidents that did occur, enabling them to minimize the risk of escalation. It is regarded widely as having been very effective at reducing the number of incidents, and “more importantly they have become less sharp and potentially dangerous.”⁶⁸ The Code for Unplanned Encounters at Sea is a more recent (2014) attempt at a similar, although nonbinding, confidence-building agreement signed by twenty-one Pacific-oriented nations.⁶⁹

Beyond this category, there are numerous unwritten rules and assumptions that frame expectations of the behavior of actors within naval-diplomatic exchanges.⁷⁰ While China might complain about the activities of American and other warships in the South China Sea, and Western media and governments might critique the activities of the PLAN in response, this is largely performative, with both sides fully anticipating the actions of the other.⁷¹ The strength of reaction following the occasional incidents in which one side or the other is seen to have overstepped the “rules” highlights the degree to which these acts of naval diplomacy are calibrated very carefully within a known framework of expectations.⁷²

However, even when the rules, or the grammar, of this type of naval-diplomatic communication are well understood, the potential for a misunderstanding is very real. China and the United States acknowledge this more or less openly when they discuss their engagements in the South China Sea and beyond, and it is the focus of their Military Maritime Consultative Agreement (of 1998, suspended in 2022).⁷³

A number of factors have the potential to escalate these risks further. One notable development in East Asian waters is the growth of coast guard and paranaul forces, whose personnel tend to be less professional and more willing to take risks.⁷⁴ Equally, developments in technology, most especially the growth of uncrewed platforms, threaten to disrupt and break down the known framework of expectations that informs actions around naval diplomacy.⁷⁵ The novelty of the technology means that we have very little in terms of a frame of reference to shape decisions about what are appropriate actions and how an adversary might respond. For example, a state such as Iran or China might decide to interfere with an American LUSV, believing that such an action would be treated as equivalent to the recent seizures of Saildrones and similar. If, however, the United States interpreted such an action as being akin to an attack on a crewed warship, the scope for major escalation is self-evident.

Beyond this underlying uncertainty related to attitudes toward uncrewed platforms, there are considerable opportunities for issues to arise out of information asymmetry, in which one side has greater or better information, leading to an imbalance of knowledge. The potential for conflict to result from a “rational miscalculation due to lack of information” is well understood.⁷⁶ It has been argued that uncrewed platforms offer the potential to reduce this, as their persistent intelligence, surveillance, and reconnaissance (ISR) capabilities could improve situational awareness and reduce information asymmetries.⁷⁷ However, on a more operational level, the application of uncrewed technology in the maritime domain has the potential to increase these information asymmetries. Within the U.S. Navy’s discussion of the move to uncrewed vessels there is a growing acknowledgment that an optionally crewed approach may be both helpful and necessary in the short-to-medium term. An LUSV or similar vessel would have the capability to sustain a small crew; however, the personnel would not be essential to the operation of the vessel.⁷⁸ This could mean that other powers, including the intended recipients of any signaling, would be uncertain about whether the vessel was crewed at a particular time. In some ways, this could be of considerable advantage to the signaling power, but it obviously gives scope for misunderstanding caused by a lack of information.

There are similar potential information asymmetries with regard to the sensitivity of the systems and network connections on any uncrewed platforms. Given

the centrality of networks to modern warfare, the seizure of or interference with a vessel that contains highly sensitive information, or that might provide access to those networks, could present a threat disproportionate to the size and signifi-

Given recent experience with uncrewed platforms at sea and in the air, it seems reasonable to suggest that such units are going to be less capable of sending costly, and therefore effective, signals. The removal of the crew from a vessel ensures that any risk to personnel will be far more limited; indeed, this is a crucial element of the rationale for the drive toward uncrewed platforms.

cance of the vessel.⁷⁹ For example, while the United States has been relatively restrained in its responses to the seizure of the Sairdrones, it might respond very differently to similar action toward other small ISR-focused platforms, if they are closely integrated into the wider network. Again, this distinction might not be ap-

parent to the other power, so the asymmetry of information could lead to very different assumptions about the value of the platform, and therefore about the likely response to any actions.

As has been noted already, each naval-diplomatic action has multiple audiences, and signalers need to take care to consider how their actions will be received beyond their immediate intended audience. The shift to uncrewed vessels and the resultant change in the perceived status of the vessel could have serious implications here. The shift to what are sometimes popularly characterized as “robot ships” risks altering the way the dynamic of the relationship between the signaler and its intended recipient is viewed, with the deployment of uncrewed vessels being seen as disproportionate or aggressive.

One scenario in which this would be particularly notable is in any interaction with a coast guard or maritime militia-style vessel. The use of coast guards and other maritime-law-enforcement agencies in contested environments has grown exponentially in recent years, precisely because of their ability to “civilianize” actions and present a less aggressive image than a “gray hull” naval vessel.⁸⁰ This contrast is likely to be even more stark if coast guard vessels are juxtaposed against uncrewed vessels. In an extreme scenario, in which a coast guard or civilian-style maritime militia fishing vessel attempted to interfere with or tow away an armed USV, there would be serious questions over how the USV operators could respond. While a resort to force might be legally justifiable, the imbalance in firepower and likely casualties between the two sides would make such action hugely problematic from the point of view of international public perception. Geoffrey Till has noted that platforms conducting naval-diplomatic missions, especially signaling ones, “must be able to look after themselves, but in a way that does not undermine the mission.”⁸¹ The seizures of the Sairdrones highlight the challenges facing

uncrewed platforms in this respect; however, as the second half of Till's comment implies, simply arming them does not necessarily resolve the problem.

Across a wide range of issues, the shift toward uncrewed platforms will create additional uncertainty and has the potential to increase risks of an incident at sea provoking a crisis. This is not something that necessarily can be avoided, and technological and operational imperatives seem likely to continue to drive existing trends toward the development of uncrewed vessels and their deployment in contested environments. However, there does seem to be scope for further information-sharing and confidence-building measures to reduce the potential for misunderstandings as far as possible. Given the nature of the signaling process within naval diplomacy and the obvious incentives for dissembling, this is likely to be challenging; however, developing some method to reduce the uncertainties introduced by a move to uncrewed platforms would be advantageous to all in the long run.

Within the next decade, uncrewed vessels are going to become an increasingly important part of naval capability; there are suggestions that by 2050 up to 40 percent of the U.S. fleet will be uncrewed.⁸² This will have profound impacts on the ability of navies to conduct naval diplomacy. All the existing evidence suggests that uncrewed platforms will lack key elements of the status and symbolism that make warships such effective signaling tools. This is more a feature than a bug of the technological transition. The very attributes that make uncrewed platforms so appealing to navies—the reductions in cost and personnel—are precisely the reasons why such vessels will be less capable of transmitting costly signals. This is not to suggest necessarily that navies are pursuing the wrong path. For obvious reasons, they must prioritize their military role, and, as the historian Lawrence Sondhaus has pointed out, “deterrence always has been largely psychological, and . . . the force which best deters is not necessarily the same as the force which, in actual warfare, would best attack or defend.”⁸³

Any transition toward uncrewed platforms also will serve to introduce significant new risks to naval signaling operations in two key areas. The first is that changes in the cost equation driven by the removal of personnel and shifts in the status of vessels may result in a greater willingness to resort to kinetic force. Such a reduction in the threshold for the use of force may not increase the risk of war if it is accompanied by an accepted restraint in terms of escalation; however, it would change radically the calculus for and the conduct of naval signaling operations. The second, and more immediate, shift is that the insertion of uncrewed platforms into the existing structures of naval diplomacy is likely to increase uncertainty. USVs do not fit easily into the current “rules of the game,” and there are considerable opportunities for misunderstandings and potentially dangerous information asymmetries.

On a practical level, it is possible to view the transition from crewed to uncrewed vessels as being a limited shift from direct control to remote control, with the resultant transfer of personnel from ship to shore. Such an approach would suggest that once the operational challenges are worked out, this would have little impact on the business of exerting naval power. While this may be true for elements of the core war-fighting role, it ignores the way in which much of the activity of navies in peacetime relies on the wider attributes of warships. The shift from crewed to uncrewed vessels will have profound impacts on these wider attributes, and through these on tasks such as naval diplomacy. It is essential that these implications be considered carefully before navies proceed too far down the path toward uncrewed platforms.

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