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TEACHING PUBLIC DIPLOMACY AND  
THE INFORMATION INSTRUMENTS  
OF POWER IN A COMPLEX  
MEDIA ENVIRONMENT

Maintaining a Competitive Edge

Edited by:



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## TRANSMITTAL LETTER

### To the President, Congress, Secretary of State and the American People:

The United States Advisory Commission on Public Diplomacy (ACPD), reauthorized pursuant to Public Law 114-323, hereby submits this special report, “Teaching Public Diplomacy and the Information Instruments of Power in a Complex Information Environment: Maintaining a Competitive Edge.”

The ACPD is a bipartisan panel created by Congress in 1948 to appraise all U.S. government efforts to understand, inform and influence foreign publics. The Commission makes recommendations to improve the Public Diplomacy (PD) functions vested in U.S. government entities such as the Department of State, the U.S. Agency for Global Media, and other interagency partners.

In today’s complex and increasingly competitive global information environment, it is absolutely essential that information outreach, advocacy and influence initiatives are coordinated across the U.S. government interagency. This requires a basic shared understanding and definition of the information space in all its complexity, as well as broad knowledge of the full range of the information instruments of power—what they are, how they can be best deployed, and their strategic effects.

To build a body of expertise around the teaching of public diplomacy, information and influence activities, the ACPD convened a group of military and civilian educators and practitioners at the National War College in Washington, DC. This special report summarizes their findings and, we believe, marks the beginning of a sustained

and productive exchange of ideas, as well as a genuine commitment to improving U.S. government PD initiatives across the interagency.

We greatly appreciate the skill and dedication of public diplomacy and information operations practitioners and their teachers in the Department of State and the Department of Defense, whose expertise is reflected here.

Respectfully Submitted,



Sim Farar, Chair (California)



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# EXECUTIVE SUMMARY

## Overview

As the United States again postures itself for an era of great power competition, it is important for our military and diplomatic leaders to engage effectively in an increasingly complex, and often hostile, media environment. This requires a basic shared understanding of the information space in all its complexity, as well as broad knowledge of the full range of information instruments—what they are, how they can be best deployed, and their strategic effects. Professional Military Education (PME) institutions and the Department of State’s Foreign Service Institute (FSI) in particular play a key role in helping foreign policy practitioners across the interagency to conceptualize and manage the information space, from its multiple challenges to its ever-expanding range of tools and capabilities.

To build a body of expertise around the teaching of public diplomacy, information and influence activities, the U.S. Advisory Commission on Public Diplomacy (ACPD) convened a group of military and civilian educators and practitioners at the National War College in Washington, DC in January 2020 to share theoretical approaches and best practices. This symposium, the first of its kind, produced a groundbreaking discussion about

lessons learned and future challenges. The panelist essays included in this volume focus on several related themes: Conceptualizing the Information Space; Understanding Influence Strategies; and Public Diplomacy, Intelligence, and Information Operations in the Practitioner Classroom.

**Conceptualizing the Information Space** offers a framework of connectivity, content, and cognition to inform information statecraft, describes how global public attitude assessments can shape public diplomacy and information outreach strategies, and reinforces the need for improved skills in persuasive communications. **Understanding Influence Strategies** suggests a new way to define influence effects, looks at the impact of cultural bias on influence impacts, and examines the need to review our assumptions about the nature of media based influence campaigns. The section on **Public Diplomacy, Information, and Intelligence Operations in the Practitioner Classroom** provides approaches to teaching public diplomacy for a digital age, using simulation tools to prepare for engagement in complex information operations, and defining the role of intelligence capabilities in the information domain.

In another first, this publication also offers a set of academic course overviews which illustrate current approaches to the teaching of public diplomacy and the information instruments of power at select PME institutions. Organized by institution and service, these core and elective course summaries provide a broad overview of priority areas of concentration. At the same time they serve as a useful indicator of existing trends in preparing national security practitioners to engage effectively in today's competitive information environment.

## Key Takeaways

### Getting Intended Audience Buy-In

In order for public diplomacy, influence, and information operations to be effective, they must be based on detailed knowledge of key audience interests and perceptions. Such knowledge includes consideration of existing conditions, beliefs, and attitudes that influence cognitive as well as behavioral responses to messaging content. Acquiring this knowledge is especially challenging in today's complex media environment, in which multiple sources compete for audience attention, and emotional responses to content defy rational assessment.

The lack of public trust in government and media institutions also significantly compromises messaging effectiveness. Practitioners need to understand how audiences respond to message content, and how to leverage soft power resources to build public trust in the source and the message. Practitioners must also hone their rhetorical skills in order to be persuasive in this intensely competitive information environment.

### Reassessing Assumptions About Influence Effects

Without agreement among both scholars and practitioners as to the basic definitions of influence effects, it will be difficult to establish the foundation for a common defense against malign influence operations. At the same time, it is necessary to assess ingoing assumptions about the nature of influence as well as the degree to which cultural and linguistic biases shape approaches and responses to influence strategies. Finally, while there are plenty of case studies for classroom use that describe the activities and platforms used by foreign actors to achieve hostile influence objectives, very few of them focus on why and how they work.

In order to prepare practitioners to design effective counter disinformation campaigns, scholars and teachers must move beyond simplified conclusions about message impact to understand influence, persuasion, and media-based effects.

### Incorporating Technology, Interactive Engagement, and Expertise

The global media space is defined by a near infinite amount of data produced and disseminated by rapidly evolving information technologies. Therefore, approaches to teaching effective information and influence strategies in diplomatic and military educational and training institutions must prioritize technology and data management. Within the Department of State, public diplomacy training has shifted to include modules on data literacy, audience segmentation, media landscape analysis, and impact measurement and evaluation. Education at FSI and PME institutions has also become increasingly interactive, pushing students to acquire hands-on experience in information and influence operations. Wargames in particular can promote the application of doctrine to real world challenges. Students are also learning directly from active duty experts how to adapt information tools and capabilities

to the demands of hybrid warfare. Intelligence community thought leaders, for example, have made substantial contributions to the understanding of great power competition in the “grey zone.”

### Conclusion

In this complex and mutable media environment, it is absolutely essential that information outreach, advocacy and influence initiatives are coordinated across the interagency to assure consistent and cohesive messaging, programming, and impact assessment. This requires a basic shared understanding of the scope and components of the information space in all its complexity, as well as broad knowledge of the full range of information instruments—what they are, how they can be best deployed, and their strategic and operational effects.

This shared knowledge and understanding of the information environment begins in the PME and FSI classrooms, where future leaders of the foreign policy interagency are educated. We hope this publication marks the beginning of a sustained and productive exchange of ideas, and a genuine commitment to improving the way we conceptualize and teach the global information space. Our national security and prosperity depend on it.





# CONCEPTUALIZING THE INFORMATION SPACE

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# A 3CS FRAMEWORK FOR CONCEPTUALIZING THE COMPETITIVE INFORMATION ENVIRONMENT

A century ago British historian and theorist J.F.C. Fuller argued for leaders to recognize the technological innovation of armored warfare and its potential for changing the character of war.

Fuller presciently envisioned how innovations in information communication technologies continue to influence the character of war and expand strategic competitions beyond physical battlefields in the future.

[The] method of imposing the will of one man on another may in turn be replaced by a purely psychological warfare, wherein weapons are not used or battlefields sought or loss of life or limb aimed at; but, in place, the corruption of the human reason,

the dimming of the human intellect, and the disintegration of the moral and spiritual life of one nation by the influence of the will of another is accomplished.<sup>1</sup>

One hundred years later, practitioners and scholars are still looking at ways to understand and engage audiences in an information environment that one expert has described as “an amorphous digital skin stretched across the entire planet.”<sup>2</sup> Given the perennial imperative to prepare PME students to function effectively in the global media space, we challenged symposium panelists to address theoretical as well as practiced based approaches to understanding and using communications technologies. The 3Cs model



(connectivity, content, and cognition) offers a useful conceptual framework to deconstruct, understand, and address the global information space in support of national security interests.<sup>3</sup>

## Connectivity

Connectivity encompasses the physical and virtual media technologies by and through which people communicate. The oldest form of media technology is people-to-people relationships and the social networks formed within private and public spheres. Layered on top of face-to-face personal relationships, information communication technologies (ICT) have increased the quantity, efficiency, and speed of social connections. Yet, one must consider the range and intensity of such connections. Despite the popularization of six degrees of separation across popular culture, three degrees across social networks may characterize the actual influence of one's connections.<sup>4</sup>

As societies adopted the newspaper and telegraph, radio and television, and the internet and social media platforms, the modalities of connections also broadened. ICT innovations in the 19th and early 20th centuries established predominantly monologue-driven, technologically-based connections based on the existing hardware capabilities. Today's media technologies increasingly enable multi-directional, dialogue-based and even collaborative connections.<sup>5</sup> Complex public-private dynamics including private sector algorithms informed by business models, and public sector regulations and legislation influence the structure, reach, security (and even content, to an extent) of these technologically and commercially-based connections. The information environment encompasses all such influences on the conduits of content between senders and

receivers. Disciplines as diverse as public policy and political science to engineering technology, cyber security, and business contribute insights to aspects of connectivity.

## Content

Physical and virtual social connections and networks provide pathways for the transmission of content. Content encompasses shared rhetoric and discourses, ideas and images, as well as actions and behaviors that continually shape how humans understand themselves and the world around them. Communications and media, public relations and rhetorical studies hone acumen in crafting purposeful and persuasive content. Trends over time highlight the evolving complexity in the sources and substance of content that influences beliefs, attitudes, and human behavior.

Typographically and rhetorically-based, authoritative-driven content characterized by precise, concrete and contextual language historically dominated connective pathways. Over time, societies have afforded more prominence to image-based, entertainment-driven content that in many cases employs subjective, abstract, emotionally-argumentative and opinion-based language.<sup>6</sup> In particular, with the advent of 24 hour cable news and the Internet, there has been a democratization and explosion of such content. Within this crowded space, state and non-state actors increasingly also have reaffirmed efforts to provide (and sometimes control) overarching narratives through powerful, symbolic strategic communication.<sup>7</sup> This "paradox of plenty" of both emotive and rational content taxes audiences' attention, making the source's character and reputation critical in determining how audiences receive and process content.<sup>8</sup>

To enhance our ability to operate in the global information space, it is imperative for scholars and practitioners to account for human and virtual connections, appreciate the emotive and rational aspects of content, and consider the existing conditions, beliefs, and attitudes that influence cognition and behavioral responses.

## Cognition

As Walter Lippmann described in 1922, people create “pictures in our heads” and act according to those pictures.<sup>9</sup> Human cognition involves processing content that ultimately creates meanings, formulates attitudes, and shapes behaviors. Across time, humans have created shared narratives that influence the myriad of individual and collective identities and behaviors within societies. Cognitive, behavioral, social, and political psychology, as well as fields such as anthropology and sociology provide insights into the processes by which human brains translate content into meanings and social behaviors, the aspiration of purposeful communications.

The human brain is structured for automatic, instinctive responses as well as deliberative, logical responses to content, with a myriad of cognitive biases operating throughout our life.<sup>10</sup>

It is important to note that human cognition is inherently an individualized activity influenced by languages and cultures, experiences and emotions, including the trust one places in information sources. It is therefore essential to understand the broader and daily context in which specific audiences are situated, as well as their existing attitudes and beliefs in order to craft and implement successful persuasive communicative activities. However, given the complexity of the human social condition around the globe, it is difficult to anticipate and evaluate cognitively based attitudinal and behavior changes. Technological tools may assist; yet most technologies are built according to the designers’ own biases and backgrounds and therefore do not yet have the ability to represent a universal human cognitive process.

## Conclusion

For centuries, national security and foreign policy practitioners have engaged in activities designed to inform and influence audiences in support of national interests and policy objectives. To successfully design and implement persuasive (and coercive) communicative strategies requires an understanding of the complex, competitive information environment that is layered upon and integrated within our physical environment. The 3Cs of connectivity, content, and cognition provide a useful framework to guide scholars and practitioners through the process of teaching students to understand and engage in the global information space.

Connectivity highlights the multifaceted elements of media technologies that facilitate communication between senders and receivers. These include people-to-people networks as well as the myriad of private and public sector information communication technologies and capabilities, policies, regulations, and

legislation that affect the conduits of content. Content centers on the verbal, written, visual and physical messages and cues relayed by an increasingly crowded field of actors with differing reputations and sources of credibility. Ultimately, content is filtered through human cognitive processes that are biologically-based, but environmentally influenced. Intended messages are not always those received. Cognition works to create the “pictures in our heads” and shape human responses.

The practice of communicating effectively in a competitive information environment is informed by multidisciplinary scholarship. To enhance our ability to operate in the global information space, it is imperative for scholars and practitioners to account for human and virtual connections, appreciate the emotive and rational aspects of content, and consider the existing conditions, beliefs, and attitudes that influence cognition and behavioral responses. Elegant and enduring, the 3Cs framework encompasses the essential and ever-evolving elements of the global information space.

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PEW RESEARCH CENTER

# ATTITUDES AND THE INFORMATION ENVIRONMENT FOR PUBLIC DIPLOMACY

The information space for public diplomacy professionals has changed dramatically in recent years, with the development of new technologies and platforms, and the emergence of an increasingly interconnected world. Practitioners have more tools at their disposal than ever, but they also face more competing voices than in the past. And they must communicate with their audiences at a time of decreasing public trust in institutions such as media and government.

Trust in the United States has waned in recent years as well, creating challenges for American public diplomats. President Donald Trump is significantly less popular than his predecessor Barack Obama across much of the globe, and Trump's unpopularity has led to a more negative image for the U.S. in many nations. Understanding public opinion is crucial for understanding how people get and share information, as well as for understanding how they think about the U.S.

These two topics are core subjects for the international public opinion research we conduct at the Pew Research Center, and they are central to the work of public diplomacy. On both fronts, diplomats today must navigate an increasingly complicated public opinion terrain. Publics are learning more about the world through the new channels available to

them, but many also believe new technologies are having negative consequences for politics and society. At the same time, diplomats looking to communicate with audiences about the U.S. face a complex environment where many have lost confidence in the world's leading superpower, but they still want to see the U.S. play a leadership role in solving global challenges.

## A Shifting Information Environment

One of the major global trends Pew Research Center surveys have documented in recent years is the explosive growth of information and communication technologies. In particular, internet and social media usage has expanded rapidly, and while there is still a digital divide between wealthier nations and the rest, that divide is shrinking. Across 18 economically advanced nations surveyed in 2018, a median of 90% said they use the internet, while 67% used social media. Across nine emerging economies, a median of 60% used the internet while 49% were social media users.<sup>1</sup>

These technological changes are clearly having a significant impact on politics and society, and average citizens see a mixture of both positive and negative effects. On the positive side, people say they are becoming more informed. A 2018 Pew survey of 11 emerging economies

around the world found a median of 78% across these nations saying that access to mobile phones, the internet, and social media have made people more informed about current events. And three-quarters of social media users said they frequently or occasionally come across content that introduced them to a new idea.<sup>2</sup>

However, most of those surveyed also felt that the internet and social media have made it easier to manipulate people with false information and rumors. And most social media users said they regularly see content that is obviously untrue, as well as content that makes people feel negatively about groups of people different from them.

Thus, public diplomacy practitioners must keep in mind that many people believe these new platforms and channels are providing them with opportunities to learn more about the world, but they are also wary of some of the content they see online – they’ve learned that social media can be a place for manipulation, deception, and social division.

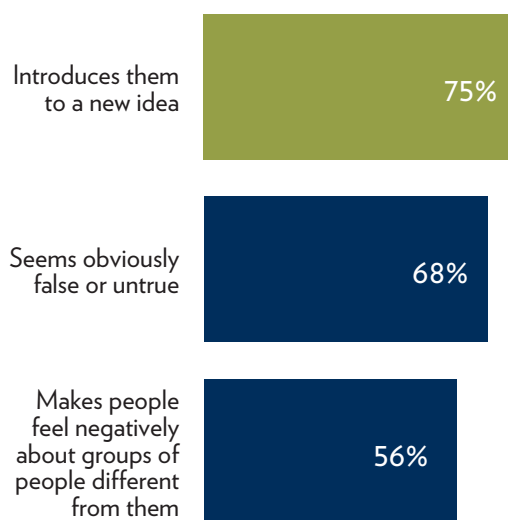
However, online platforms can also be a place for getting news. In a 2017 Pew study, a median of 36% across 17 advanced economies, and a median of 33% across 21 emerging economies, said they turn to social media at least once a day to get news.<sup>3</sup> In nearly every country surveyed, young people were significantly more likely to get news daily via social networking.

## MIXED VIEWS ON THE IMPACT OF TECHNOLOGY AND SOCIAL MEDIA

**% of adults** who say access to mobile phones, the internet and social media have made people ...



**% of social media platform and messaging app users** who frequently/occasionally see articles or other content when they use social media that ...



**Note:** Percentages are medians based on 11 countries. Social media and messaging app users include those who said they use one or more of the seven specific online platforms measured in this survey.

**Source:** Mobile Technology and Its Social Impact Survey 2018.

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For example, 81% of Vietnamese ages 18-29 use social media for news on a daily basis, compared with just 3% among those 50 and older.

The same 2017 survey asked respondents about the types of news they follow. As one might expect, national and local news top the list. Still, in many countries there is substantial interest in international news. Across the 10 European nations polled, a median of 65% said they follow international news closely.

While there is less overall interest in news specifically about the U.S., substantial numbers do follow U.S. news in many nations, especially in the Asia-Pacific, sub-Saharan Africa, and

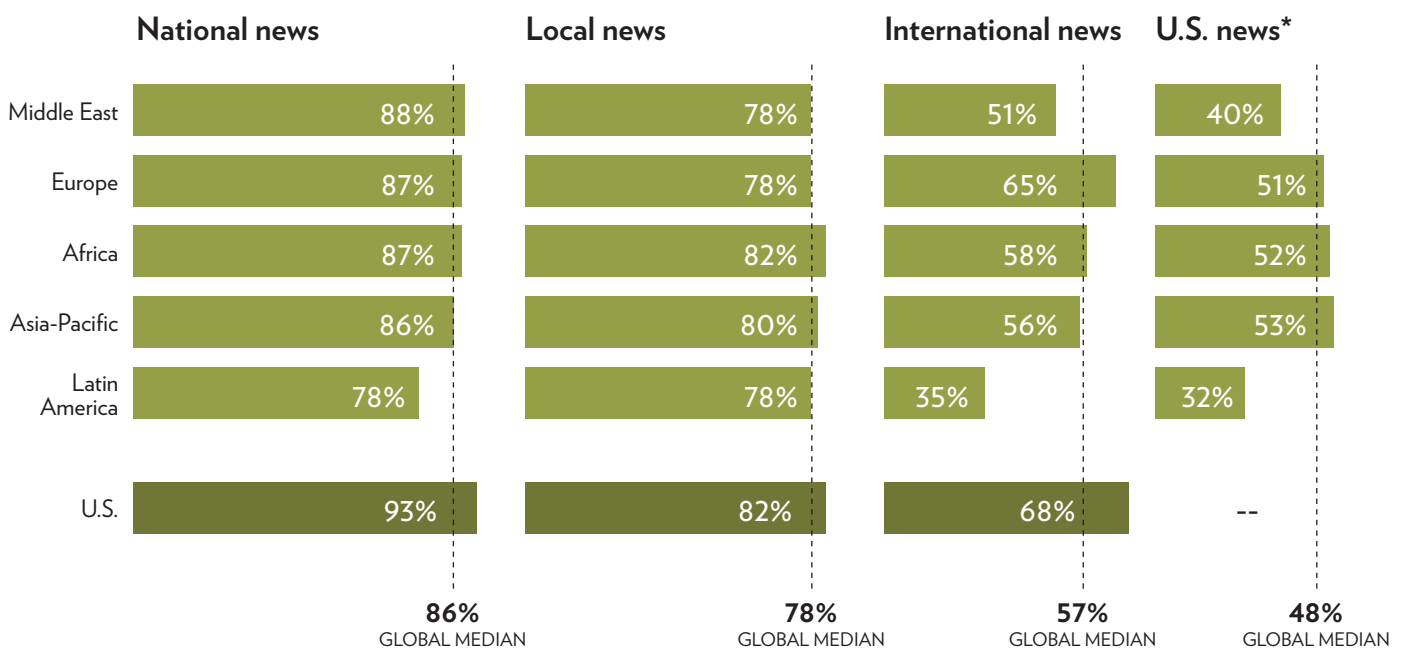
Europe. Perhaps unsurprisingly, Canadians express the strongest interest in news about their neighbor to the south – 78% follow it closely. However, roughly six-in-ten or more also follow news on the U.S. closely in the Netherlands, Japan, Germany, Australia, the United Kingdom, South Korea, Tanzania, and Kenya.

## America's Declining Image

America's global image has suffered a sharp downturn over the past few years. The shift from the Obama administration to the Trump presidency was an unwelcome change for many around the world, and in some places the difference in ratings for the two presidents was dramatic. For instance, while a remarkably high

### HOW CLOSELY DO YOU FOLLOW NATIONAL, LOCAL, INTERNATIONAL, AND U.S. NEWS?

Regional medians saying they closely follow each type of news



\* Question about U.S. news was not asked in the United States.

**Note:** Global median across 38 countries. Europe regional median excludes Russia.

**Source:** Spring 2017 Global Attitudes Survey.



**Public diplomacy practitioners must keep in mind that many people believe these new platforms and channels are providing them with opportunities to learn more about the world, but they are also wary of some of the content they see online – they’ve learned that social media can be a place for manipulation, deception, and social division.**

93% of Swedes expressed confidence in Obama to do the right thing regarding world affairs in 2016, only 10% said the same about Trump the following year.

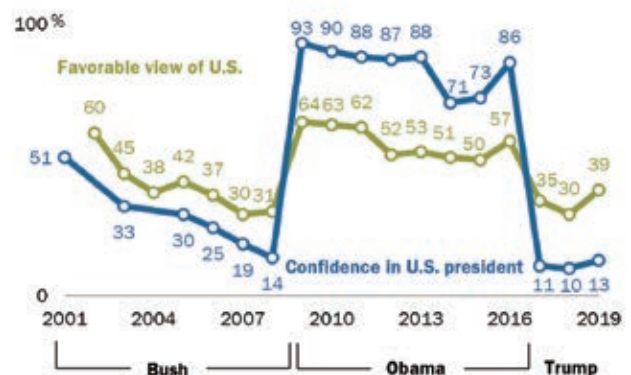
In our 2019 survey, a global median of just 29% had confidence in Trump.<sup>4</sup> Views of the U.S. were more positive – a median of 54% gave a favorable rating – although ratings for the country were also down significantly from the Obama years in most nations where trends are available.

Germany illustrates how confidence in the American president and attitudes toward the U.S. often move in tandem. Ratings for both the president and the country declined over the course of George W. Bush’s presidency, in reaction to the Bush administration’s foreign policies. Ratings improved sharply during the Obama years, before plummeting in the aftermath of Trump’s election. German attitudes toward the U.S. and its president over the past three years have resembled those from the end of Bush’s second term.

Still, even though the ratings might be similar, criticisms of the U.S. today are often different from those voiced during the Bush era, when America was seen as an unchecked superpower, unconstrained by international institutions.

### CONTINUING NEGATIVE RATINGS FOR TRUMP AND U.S. IN GERMANY

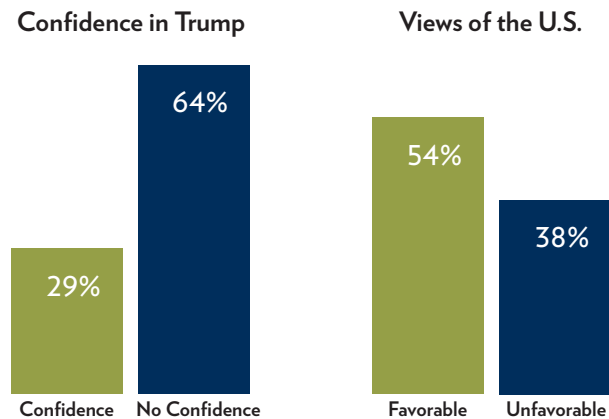
Among Germans ...



Source: Spring 2019 Global Attitudes Survey.

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## PUBLICS AROUND WORLD EXPRESS LITTLE CONFIDENCE IN TRUMP, BUT MAINTAIN RELATIVELY FAVORABLE VIEWS OF THE U.S.



**Note:** Percentages for confidence in Trump are medians based on 32 countries. Lithuania was excluded due to a processing error. Percentages for views of the U.S. are medians based on 33 countries. Don't know responses not shown.

**Source:** Spring 2019 Global Attitudes Survey.

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In contrast, during the Trump years, critics have been less concerned about the U.S. throwing its weight around the world and more worried about an America that is rejecting international cooperation and withdrawing from global leadership. Global publics have voiced strong opposition to Trump's policies such as withdrawing from climate agreements, withdrawing from trade agreements, and pulling out of the Iran nuclear deal.

While the president and the administration's policies are extremely important, they are not the only factors shaping opinions of the United States. American ideals and culture also play an important role. Even during moments when the U.S. is broadly unpopular, it often has strong soft power assets. Survey research has shown

that many people, for example, admire the U.S. for its technology and science.

And the American people are well-liked in most nations. Across 37 countries surveyed in 2017 – the first year of the Trump presidency – a median of 58% expressed a favorable opinion of Americans.<sup>5</sup> U.S. popular culture also got high marks – a median of 65% said they like American music, movies, and television – and in nearly every country young people are especially likely to embrace American pop culture. Still, people can have too much America in their lives. Even though they may enjoy U.S. culture, most say it's a bad thing that American ideas and customs are spreading to their countries.

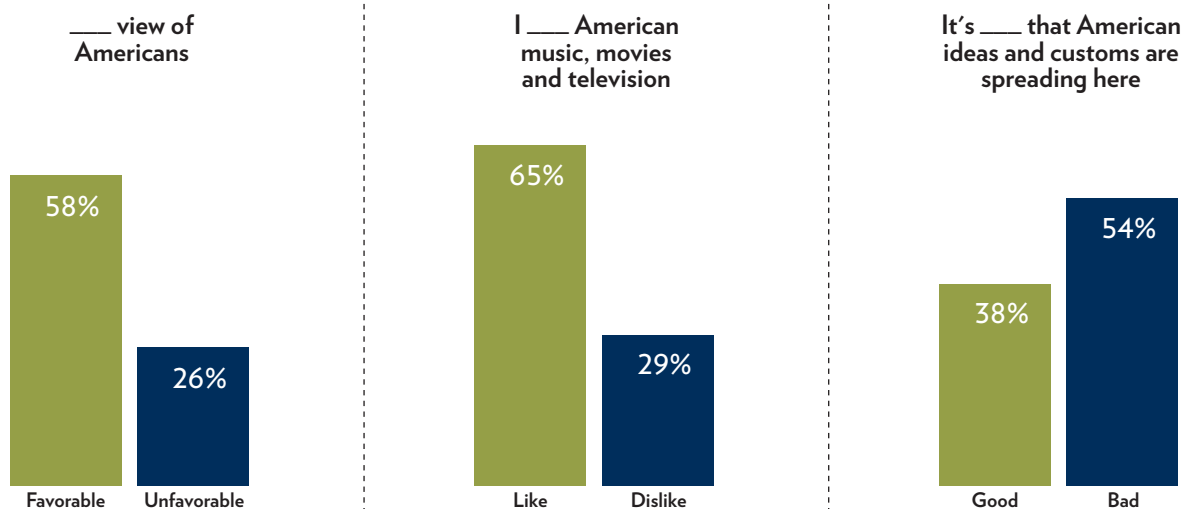
## Public Diplomacy and Public Opinion

For public diplomacy professionals, U.S. soft power helps provide a reservoir of goodwill they can draw from when communicating with international audiences, even when other factors may be tarnishing the American brand.

As the Obama rebound showed, the U.S.'s reputation can bounce back from periods of anti-Americanism, and there are signs it could do so again. While our surveys have found widespread negative ratings for Trump over the past three years, we have also discovered plenty of evidence that people haven't given up on the U.S. In a 2018 poll, we asked respondents whether they would rather live in a world with the U.S. or China as the leading power.<sup>6</sup> A median of 63% across 25 nations said the U.S., while just 19% preferred China. People around the world may be unhappy with the American president and his approach to foreign affairs at the moment, but they still want to see America playing a leadership role on the world stage.

For practitioners of public diplomacy, this desire for U.S. leadership creates opportunities. But to take advantage of these opportunities, diplomats will need to leverage the aspects of American soft power that matter most in the

## ATTITUDES TOWARDS THE AMERICAN PEOPLE AND U.S. CULTURE



**Note:** Percentages are global medians based on 37 countries.

**Source:** Spring 2017 Global Attitudes Survey.

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current environment. And at a time when the U.S. government is not especially popular, this could mean non-governmental actors will be especially important.

For instance, in a world struggling with COVID-19 and its aftereffects, America's strong reputation for science and technology could lead many to turn to U.S. universities and research organizations for ideas about addressing this pandemic and preventing the

next. Similarly, this crisis has made information and communication technologies even more central to the lives of people around the world, and moving forward, many will look to Silicon Valley for the next technological innovations in our work and home lives. Views about American leaders and policies will inevitably ebb and flow, but the vitality and creativity of American society will continue to have widespread appeal.

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# BRINGING CLASSICAL RHETORIC TO THE MODERN WARFIGHTER

We hear the word *rhetoric* today, and we think: what? Idiots full of sound and fury signifying nothing.<sup>1</sup> *Rhetoric* has gotten a bad rap because of those who communicate with ill intentions—merely to make money, to be seen, to win an argument or an election at any cost. Rhetoric, as I speak of it today, is what we believe it to be—what it’s become—bad faith offered by bad actors.

However, it is so much more: it is both a discipline encompassing the history of how humans articulate ideas and disseminate knowledge, *and* it is the art of employing appropriate strategies for purposeful and effective communication. It is also inherently collaborative, bringing together thinkers and speakers and audiences. Rhetoric is an important term to recover and redefine for today’s leaders learning through a professional military education enterprise.

Rhetorical education was at the core of democracy as it first evolved. Educated citizens were *the* vital factor in making democracy happen. In the absence of citizens who were effective communicators—speakers, writers, listeners, readers--tyrants thrived. And they still do. Working together the rhetorically savvy collaboratively created and sustained democracy. And they still can. Words mattered then, and they matter now.

The difficulty that arises in our kind of ultra-uber-democratic environment is that most participants in our global *agora* lack the experience of rhetorical education which fitted Athenian citizens to speak intelligently, understand the information environment, listen carefully, and persuade listeners/readers to a certain point of view appropriate to their particular aims. Collaborative effort was at the heart of Ancient Greek public life—back and forth, conversation, argument/persuasion, symposia, dialogue.<sup>2</sup> The *agora* was the center for a lot of public life, a place of assembly, learning, and it was small and manageable.

Today, humans are working with, and living within, a global information environment. Two thousand, three hundred, and forty-two years after Aristotle’s death, everyone has a cell phone; everyone has a voice; Twitter is our *agora*,<sup>3</sup> the Internet, our forum. We can communicate with innumerable others. However, while our vast agora is not dissimilar to public life in ancient Grecian states, we have created a collaborative public forum in which much of our lives and communicative interactions happen asynchronously, through text, images and sound. In such a place, it’s easy to state one’s thoughts and get out. We all have the potential to speak, at any time, without controls or policy constraints. Prevailing information technologies support a “strike and runaway” kind of approach to communication.

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Unfortunately, education in civil discourse, and learning through informed exchange, is insufficient to our current need.<sup>4</sup>

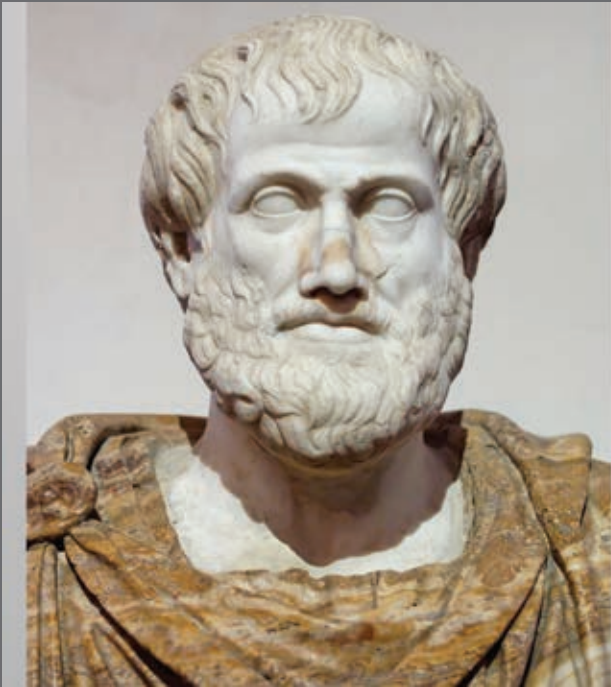
Given that we exist in a blown-up-and-out-of-control-global *agora*, now is the time for rethinking PME, partnerships with public affairs, and collaboration with joint agencies around the world for a classical rhetoric infused strategic communication. We cannot afford more silos that keep one group from effectively connecting with any other group. Our leaders often participate in difficult conversations with audiences across all media and across joint, inter-agency, and multinational domains; they need to understand their own rhetorical stance, and to make arguments founded on verifiable facts or research in order to compete in contentious information environments with sophistication. We also need to be sure PME is equipping our soldiers, sailors, airmen, marines, coast guardsmen and space warfighters to function and succeed in a competitive information environment.

Looking to the past to see if there's some value there for the present *and* the future is what we do as educators. Principles of classical rhetoric can be readily adapted to meet the challenges of the 21st century information

space. We are still humans trying to connect with and understand other humans. We must collaborate, and collaboratively learn, and write and speak together, if we are to overcome whatever the future will throw our way.

Nine concepts at the heart of Aristotelian rhetoric offer a useful framework for a new approach to teaching communication in PME. These concepts can help students see new ways to understand communication, analyze communication, *and* to create communicative acts. PME students should be thinking about the elements of a rhetorical situation, how to appeal to an audience, and the kind of speech they need to make.

The first three of the nine concepts describe the elements of a rhetorical situation including the speaker, the audience, and the text. The speaker or author includes the communicator, the setting, and when and where the communication takes place. The audience or reader applies to who is being communicated with as well as the setting, which can be determined by both speaker and audience. Finally, the text encompasses the actual words, spoken or written. A text's purpose matters, especially given that the author's intent may differ from that of the audience.



### An Aristotelian Rhetorical Hero's Journey Full of Ideas: Really Just Nine Things

Three things to remember about any kind of communication:

- Who is the creator of the text?
- Who is the audience for the text?
- What is the purpose of the text?

Three kinds of speech—what kind of text do you need to create?

- Judicial—past, to get at truth
- Ceremonial—present, to blame or celebrate
- Political—future, to call to action

Three appeals:

- Ethos—credibility of author
- Logos—logic and reason in the argument
- Pathos—emotions of the audience

Communicative acts which don't include an analysis of these three elements may prove ineffective at best, and offensive, at worst. Knowing who the audience is, or might be, is crucial to understanding how to craft text for a particular group for a particular time at a particular place for a particular reason. The writer who dismisses the audience may find beautifully composed writing falls on not just deaf ears but the wrong ears altogether—the risk is not just lack of communication, but miscommunication, which can lead to hostilities. It's not enough to have a compelling or important message, one must also know who needs it, and when.

The next three concepts at the heart of Aristotelian rhetoric are linked to the elements of a rhetorical situation, but focus on how to connect to the audience. Modern rhetoricians often refer to these as the three Aristotelian appeals: *Pathos*, *Ethos*, *Logos*.<sup>5</sup> These appeals are employed by the speaker to influence the audience, to persuade.

*Pathos* refers to the emotions of the audience. Eliciting anger, pity, fear, or sympathy can be used to gain and keep attention. Sometimes it is easy to whip an audience into a furor, but the speaker who ignores how an audience might already feel does a poor job of communicating. *Pathos* can be exploited by using terms that are inflammatory, such as “exploited” and

“inflammatory.” This is a strategy employed by single topic speakers who intend to ignite audience reaction. It requires a good understanding of the intended audiences’ mood and convictions. The use of *pathos* has little to do with logic. While it can lead mobs to violence or football teams to victory, *pathos* alone cannot win an audience to a speaker’s way of seeing.

Communicators also need to be aware of how they project and protect their *ethos*, which is all about the trustworthiness or character of the speaker. This is the appeal speakers use to position themselves to be believed as reliable experts. Most effective argument relies on readers/listeners believing that the author/speaker is trustworthy, smart, and good. Aristotle has a lot to say about the concept of good but for this context, being perceived as “good” is essential to speaker credibility. Someone who has earned advanced military rank automatically inherits some *ethos*, but it can be easily squandered through frivolous actions or speech acts meant to deceive. Subject matter expertise is also a buy-in to effective *ethos*, but like rank earned, it can be lost in one misstep.

*Logos* is all about the strengths and weaknesses of the text—its argument, purpose, or point. Here is where a speaker must employ logic and example to make a case to an audience. For *logos* to be persuasive, communicators must use and cite reliable experts, state facts, and include relevant anecdotes. Speakers must explain what they want the audience to know, why it is important to know it, who says so, and why it will benefit the audience. Speakers have always relied upon story to support the main point or points, but the logical use of that information is necessary to convey the real life application or manifestation of the topic.

The last three rhetorical concepts relate to the modes of communication that a modern warfighter may be required to undertake. Aristotle identifies three kinds of speaking for public discourse: 1) judicial speech—focused on the past; 2) ceremonial speech—focused on the present; and 3) political speech—focused on the future. When developing a text, speakers and authors need to determine how to focus their discourse development: past, present, future, or a combination of all three. Asking these questions can help:

- Am I trying to explain the truth of a situation? Do previous events need illumination to shed light on a current situation? If the answer is yes, then a focus on the past might be required.
- Am I trying to praise someone’s achievement? Am I honoring an event or happening? Do I need to ascribe blame? Yes to these questions means the focus might need to be on the present.
- Am I trying to prepare others for what may come? Will I be asking the audience to take specific action? Obviously, this is focused on the future.

It’s highly likely that any long text, written or spoken, might include all three. In any case, awareness of ingoing objectives is essential to the composition process. The shorter a text, the more precise the writing needs to be. For example, in snippets of communication like Twitter, these three concepts can easily help make your writing eye-catching and heart-thumping for readers. Admittedly, Aristotle probably never dreamt of the myriad ways we communicate today, but the principles are still useful. We can take the term speech and replace it with text, video, tweet, Instagram post, Tik Tok, YouTube or any other current

communication vehicle. The bottom line is that rhetorical situations are fluid and flexible, and communicators need to be able to consistently and continuously adapt.<sup>6</sup>

If I were to create a graphic representation of these nine concepts for this article, you would see they overlap and interweave. They morph and integrate as they bump up against one another. Then they veer off and become distinct again, right before they connect and align in new ways. An animated .gif might be a better way of thinking of these nine concepts: nothing about communication is ever static or dormant for long. Communication is inherently active one way or another--the author implies, the reader infers, the text exists (but texts can change as well, words and concepts change meaning over time); speakers speak, audiences listen, everyone may hear something different, depending on the day and time, or the prevailing mood and context. As Aristotle knew, to see the complexity of communication, one needs more than one lens. A kaleidoscope might be right, or perhaps bi- or tri-focals, telescopes, microscopes, and virtual reality goggles—and even another book on rhetoric and writing and speaking!

We need that multi-lensed multilayer focus, that agility in communication, at PME institutions, especially as writing and speaking have become more important than ever with a 24-hour news cycle and a never-ending internet of ideas, connection, and communication. A good place to begin is with writing instruction. PME institutions are

slowly joining the decades-long Writing Across the Curriculum<sup>7</sup> movement prevalent in civilian educational institutions. In the last twelve years we have also seen the rise of Writing Centers that explicitly support the rhetorical growth of writers, researchers, and speakers at senior professional military institutions across the country. The recently formed Writing Center Consortium for Graduate Level PME now has members from Navy, Army, Air Force, and Marine Corps institutions. But more needs to be done.

Rhetorical education in PME institutions, through collaborative writing, through speaking events and with the explicit and implicit teaching of rhetorical principles, is essential. It's not a new thing; it's not another thing; it's not an extra thing; it is *the* thing. The study of rhetoric will provide the modern warfighter with tools to evaluate, enhance understanding of communication, and create compelling content. Instruction in rhetorical strategies should be at the core of all PME.<sup>8</sup> In a world of nonstop information onslaught, educators in PME should strive to build a shared vocabulary that helps us talk about the ways we communicate and how we evaluate what has been communicated. From Sailor and Coast Guardsman to Admiral, Soldier, Marine or Airman to General, our modern warfighters must remain competitive in the global information space. There's no better place to look for heroic inspiration than the rhetoricians<sup>9</sup> from ancient democracies, like Aristotle, who informed how we shaped our own.



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**Endnotes**

- 1 From William Shakespeare's *Macbeth*, Act 5, Scene 5, Lines 26-28.
- 2 For male citizens, not women or slaves. That's a whole series of issues that aren't possible to tackle here.
- 3 *Agora*: Ancient Greek open spaces for assemblies, meetings, markets.
- 4 This is true not just in PME, but across K-12 and university systems; it's rare to find inherent in a curriculum, explicit principles of classical rhetoric.
- 5 *Logos* was used to refer to the text, *ethos* to the author, and *pathos* to the speaker--so very connected to Aristotle's elements of rhetorical situations. As rhetoricians have adapted ancient rhetoric to modern needs, often the original terms have become morphed to become both more than they were, but still aligned.
- 6 Also, there's way more to each of these concepts, well beyond what I can convey here. For example, ceremonial speech is about blame as much as it is about praise; political speech can be a call to action as well as a call for votes. Investigation and talk of the past is a way to get at some truth--more than the rather narrow title of judicial speech alone indicates. These categories of speech have meaning as they are; however, that's not all there is. The connotations are vast. In fact, over time they have been renamed by rhetoricians for different eras or translated in slightly different ways. But this is all the time we have.
- 7 Such a movement to change curriculum can be called Writing Across the Curriculum, Speaking and Communicating Across the Curriculum, Writing in the Disciplines--whatever--it's all connected to rhetorical principles of learning and communicating.
- 8 One might say I have rhetorical rose-colored glasses, but honestly, can anyone argue that communication in any field isn't worthwhile? Can anyone say that gross misunderstandings that started great battles or wars would have been better stopped with better communication?
- 9 Plenty of important rhetoricians worked and wrote in monarchies or empires with slavery and gender inequality, but at the core of why classical, Greek or Roman, rhetoric is so appealing to include in PME for Americans, is that our democracy is somewhat modeled on these ancient ones. A rhetorically educated citizenry is vital for our, or any democracy's, success--more so now than ever before in human history.



# UNDERSTANDING INFLUENCE STRATEGIES

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# HOW TO TEACH INFLUENCE: THOUGHTS ON A NEW SCHOLARLY DISCIPLINE

To study and teach influence, military education institutions must first wrestle with what is and what is not influence and then develop a roadmap. This article provides just one point of view on what influence is, what it is not, and how it might be taught in the PME context. This article does not pretend to have the answers to everything influence-related. Instead, it is designed for deep thought on the new scholarly discipline of influence in strategic studies.

## Background

Today, those who do bravely attempt to define and explain influence come up short. Across current literature on security and strategy, influence is a commonly used term. But it is too often left undefined or ill-defined.

Strategy scholar Terry Deibel, for instance, suggests that influence is the effect power has on others:

And if power is a characteristic of the initiator of a foreign affairs strategy, influence should be seen as the effect of that power on its intended targets... [influence] always pertains to the recipient in a power relationship, to the actor upon which power is having an effect.<sup>1</sup>



This understanding is commendable for its focus on effects rather than efforts. It also has the virtue of never disassociating power from influence, as if words, deeds, and latent power could ever be separated in strategy. However, Deibel does not use the formal definition of influence. Rather, he uses the word as it appears in some media sources--that is, as a synonym for “to affect.” In Deibel’s writings, influence is a versatile word, employed to encompass all matters of statecraft outside active conflict. His definition is logical and helpful for students, especially in the context of his impactful *Foreign Affairs Strategy*. It does little, however, for the influence professional.

Similarly, economist and professor of foreign policy Thomas Schelling defines influence as the ability to affect behavior through latent force.<sup>2</sup> Schelling notes that the ready ability to kill can sway possible adversaries, singling out the role of coercion, terror, or intimidation by a known entity, which he mistakenly categorizes

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as influence. The issue is that, strictly speaking, when intimidation and coercion are *direct* and pursued by a *known* adversary, they are not influence actions. Influence is not the ability to affect change directly through the threat of violence. Such direct practices pertain to the traditional disciplines of military coercion and diplomatic persuasion.

Like Deibel, Schelling does not meet any legal or formal definition of the term “influence.” Of course, any author is welcome to define words as he or she wishes, providing what philosophers call a “stipulative definition,” which then becomes a functional operator in his or her work. Additionally, many terms in security and strategy disciplines take on definitions that differ from those found in formal and legal dictionaries. But it is crucial that definitions, stipulative or otherwise, accurately single out the phenomenon they aim to describe, and that scholars in a given field understand one another’s terminology.

RAND analysts, meanwhile, provide a definition for influence that is too broad, encompassing statecraft and strategy writ large:

[Influence is] the coordinated, integrated, and synchronized application of national diplomatic, informational, military, economic, and other capabilities in peacetime, crisis, conflict, and post-conflict to foster

attitudes, behaviors, or decisions by foreign target audiences that further [state] interests and objectives.<sup>3</sup>

By encompassing everything, this definition means nothing and is not useful. The goal of direct military actions, economic policies, and diplomacy is, in general, to impact attitudes and behaviors. Even at a tactical level, combined arms aim to change the thoughts and behaviors of an enemy—to force the adversary into the horns of dilemma. Get out of your foxhole, and indirect fire will injure or kill you. Stay in your foxhole and you will be bayoneted, shot at close range, or captured. Combined arms for the corporal and the captain is about causing terror and indecision and forcing the enemy to behave a certain way. If we call this influence, then all warfare, direct and indirect, is influence. If everything is influence, then the term is not useful.

RAND’s definition applies to all statecraft and all strategy. Although some scholars would dub such definition as “combined effect” or effects-based strategy, it is just plain strategy, which assumes the coordinated use of all instruments of power to affect behavior. The RAND definition calls to mind scholars and practitioners who claim that “everything is information,” “everything is influence,” or “everything is narrative.” I have heard countless lecturers and professors make such claims, time and again, over the last couple decades.

They claim that every bullet, every move, every act, everything under the sun can be turned into or defined by information or narrative or influence.

Such wild and unfounded statements may excite an audience of students. They can spark interesting debates and thought experiments. But they are vacuous and devoid of logic. They lack convincing evidence. These statements are self-sealing, in that they offer a sweeping generalization, ignoring or conveniently reinterpreting all evidence that may falsify their hypotheses. If a student denies that something is information, for instance, he or she can always suggest that the denial itself--the fact that it formed a thought in the student's brain--makes that 'something' into information.

There are, of course, many other contemporary characterizations of influence that do not necessarily derive from the legal and formal definitions. For example, King's College London's Lawrence Freedman focuses in general on influence as narrative, script, discourse, messaging, persuasion, and culture. Freedman seems intent on defining the arena of influence, not the sport: he offers no clear playbook for the practice of influence.<sup>4</sup>

Anyone is welcome to try out any definition for any word. Have at it. But if a definition is unhelpful, abrasively vague, or overly general, then I suggest that the reader keep looking.

## What Influence Is

A more useful explanation of influence may be its legal and formal definition:

The act or power of producing an effect without apparent exertion of force or direct exercise of command; the act or power of causing an effect or change without use of direct force or authority.<sup>5</sup>



This definition is helpful for three reasons. First, using the legal and formal definition ensures good communication over a clear meaning. It allows students of strategy, commanders, and staff to be understood clearly without having to use dozens of disparate definitions taught at different defense colleges. If we use Deibel or Schelling's definitions, we end up dealing with information statecraft writ large, to include persuasion, manipulation, and hard-power coercion. We end up in the realm of international politics, far from the battlefield. Similarly, if we use RAND's definition, we find ourselves at the broad intersection of warfare and politics.

Second, this formal definition is useful because it provides a clear delineation between influence and a multitude of other ways to affect outcomes, from diplomatic persuasion to direct economic pressure to coercion to forced cooption. Additionally, in the formal definition itself, we have an actionable and practical outline for how "to do" influence. Specifically, the definition highlights the importance of subtlety and deception as the other side of the influence coin.<sup>6</sup> In other words, one needs to hide agency in order to be effective. When an influence campaign's protagonist is known—especially if the initiating party is distrusted among the target audience—the influence campaign may be less effective or fail.

Third, this definition of influence appears to be the one that current regional and world powers use. Russia, China, and Iran, for example,

seem to understand that indirect approaches and subversive means are preferable to overt shows of force and persuasion, which result in international outcries. When influence is easily deniable, it mitigates the risk of international stigma or punishing economic sanctions.

This is not to say that we should use this definition just because potential adversaries and competitors employ it. The point, rather, is to use whatever definition best helps us to understand enemy strategies so as to conduct effective influence campaigns. First, we must understand our adversaries so that we can collapse their efforts, while protecting and furthering our national interests, through means intangible and unseen. Better still, we must conduct influence operations as part of an integrated plan that may also involve economic, military, and diplomatic actions.

I am not the language police. I take no pleasure in trying to be more correct than other scholars. Folks are welcome to define terms as they wish. Of course, “words don’t always mean their dictionary definition.”<sup>7</sup> “Context matters,”<sup>8</sup> and “words are defined in how they’re used.”<sup>9</sup> But let us use a set of definitions that are helpful, offer a blue print for how “to do” influence, and are clear and structured.

The following formal and legal definitions of influence, drawn from Merriam-Webster and the Oxford English Dictionary, just so happen to fulfil these criteria:

The power or capacity of causing an effect in indirect or intangible ways.<sup>10</sup>

The exertion of action of which the operation is unseen or insensible (or perceptible only in its effects), by one person or thing upon another.<sup>11</sup>

The capacity or faculty of producing effects by insensible or invisible means, without the employment of material

force, or the exercise of formal authority...not formally or overtly expressed.<sup>12</sup>

A thing (or person) that exercises action or power of a non-material or unexpressed kind.<sup>13</sup>

To affect or alter by indirect or intangible means.<sup>14</sup>

Influence involves the use of indirect and seemingly intangible means—that which is invisible and insensible, without force or the exercise of formal power or position. When influence is done well, people do not know the influencer’s identity, nor realize that they have been influenced. When done very well, people may become the unwitting amplifiers or agents of an influence campaign. In the best case, even future historians are unable to detect a cogent, concerted, and purposeful influence campaign.

To understand the importance of the indirect and insensible for our conception of influence, it is helpful to look at early uses of the term, which carry unearthly undertones. For a long time, influence primarily invoked the “divine,” “spiritual,” and “astral” powers at play behind an effect. Even today, influence may feel as if it is not of this world, or at least not easily trackable to human origins. That is, when influence is done well. As we shall see, however, this seemingly otherworldly quality has little to do with magic and more to do with the fact that influence acts upon the *subconscious* of the human mind.

It is vital to stress how much successful influence hinges on this quality of being indirect and unseen. Once an influence strategy is exposed, it loses power. Homo sapiens does not like to be lied to. Although politeness and white lies often help to establish and maintain good relationships, we are a social species and must trust one another to live in effective and

constructive communities. For example, as part of its attack on Ukraine, Russia secretly rented and bought social media accounts of well-followed and trusted Ukrainian talking heads in order to influence Ukrainians against their leadership.<sup>15</sup> But once the United States and Ukraine advertised this subversion, Ukrainian citizens could no longer buy into the messages and suggestions from those accounts. The stories, storytellers, and storytelling platforms, once run by trusted Ukrainian community leaders, became feckless.

## What Influence is Not—Killing a Common Myth

One of the most common misconceptions about influence (and information warfare writ large) is that it is anchored either exclusively or chiefly in messaging. Joint Department of Defense (DOD) doctrine suggests focusing on message “content” first and foremost, while experts like Dan Kuehl treat the communications facet of influence independently of all its other components. Kuehl distinguishes between the physical aspect of communications, which involves technology—“wires, networks, phones, computers;”<sup>16</sup> the information domain, which concerns the substance of the message transmitted by physical means; and the cognitive domain, which deals with the actual results of information warfare on people.<sup>17</sup> The underlying assumption is that influence is mainly messaging—pushing out information through “pipelines” to affect change.

Such view is far too simplistic and describes but a tiny niche area of strategic influence. Primarily, this approach undermines the centrality of *effects*. Impact should be the first thing to consider when one deals with influence strategy. Only when desired effects have been identified should one work backwards to determine ways of attaining

them. There are a number of ways to affect beliefs or behaviors, only one of which is creating messages in a vacuum. Other approaches include identifying and amplifying civil society networks already working towards the desired goal or conducting activities with partner governments that have inherent and unspoken narratives to communicate.

Moreover, narratives cannot be dissociated from networks. Messages do not live in the ether. They may only be communicable through certain social and intra-government movements, leaders, or informal influencer networks. Neither can we sever stories from storytellers. The storytelling craft as well as story structure are as crucial as content in the production of effects. Strong storytelling traditions and savvy storytellers contribute to impact as well.

We must also consider that influence strategies do not prioritize cognitive effects. Instead, they target subconscious mechanisms that determine how people view reality and civilization. Influence strategies also target value-based beliefs that short-circuit the so-called cognitive aspects of the brain. Furthermore, influence often aims to shape behavior—behavior that is more easily observable and measurable than cognitive understanding, which even the best polls and surveys may never uncover.

Finally, messages on their own are unlikely to have much, if any, strategic effect. Even the best, most tailored message content may have no effect or cause a situation to worsen. The idea that great propaganda solely consists of messaging is a media myth that somehow persists even today. Nazi propagandists did not merely shoot idea bullets into the minds of the masses to move them to the will of Hitler. The same can be said of Stalin, Mao, and all others in history who put a premium on influence and information strategies.

The belief in an irresistible Silver Bullet was groundless, and the funeral sermon for Silver Bullets was finally preached in 1964 by Raymond Bauer in an article entitled “The Obstinate Audience,” which demonstrated what had already been concluded several decades earlier: that people were not like targets in a shooting gallery; they did not fall down when hit by the Silver Bullet of propaganda. They could reject the bullets, or resist them, or reinterpret them, or use them for their own purposes.<sup>18</sup>

## Conclusion: Teaching Influence in PME

If influence is to be taught, we must first be able to define the phenomenon. Students do not need to agree with any given definition and should be encouraged to develop definitions

that are helpful. But it is important that students are aware of and intellectually wrestle with disparate explanations of influence just as they are encouraged to do with the idea of strategy and the definition of power.

Although facilitators and teachers of influence should present different points of view, it may be useful to challenge students to limit the definition of influence—to define the parameters of what influence is, and perhaps more importantly, what it is not, so that we avoid ending up with the same definition as statecraft writ large.

Within the context of challenging students to debate different concepts and definitions of influence and encouraging reasonable limits on what influence is and is not, it is important to encourage looking to definitions that are useful. Definitions that are practical and actionable may provide a broad blueprint to analyze and then develop influence campaigns.

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# “WAR OF THE GHOSTS”: HOW WE THINK THROUGH INFORMATION TECHNOLOGY ACROSS CULTURES

## Introduction

Critical reasoning is a core element of what is taught in the joint learning environment. As we focus more on the strategic use of information, we also increase our use of information technologies, the technical nature of the means of delivery, and the amount of information we may use in our assessments. Moreover, the complexity of considering geographic and functional integration over time for our actions demands that our reasoning, judgment, and decision-making processes be supported with several types of information technologies, ranging from intelligence collection to artificial intelligence (AI).

The strategic importance of informational power has increased the reliance on the collection, aggregation, and analysis of information about communication and behavior to support decision-making. We also have become more attuned to how partners, adversaries, and local populations perceive our actions in a complex information environment. As a consequence it is vital that we examine not only our critical reasoning skills, but the tools we employ to aid our reasoning processes. While new technologies offer speed, order, and insight for complex decisions, we must be wary of the potential to reinforce our own biases.

## Cognition and Culture

Historically, the principal designers of information technology, computing, and software systems have been concentrated in what is termed here as “the West/Western” for shorthand. The term has come to mean a culturally aligned, mostly European and American, white, educated, wealthy, primarily Anglophone, and male group. Initially, technological solutions were designed to support or mirror what social scientists of the era considered universally human processes of cognition—memory, categorization, conceptualization of location, time, personhood, linking of cause and effect, agency, and use of language. This logical, relatively disembodied construct has been successful for rules-based problems such as playing chess. However, strategic information operations are distinctly human-centered and include understanding and anticipating behaviors, communication patterns, and perceptions of trust, justice, and strategy.

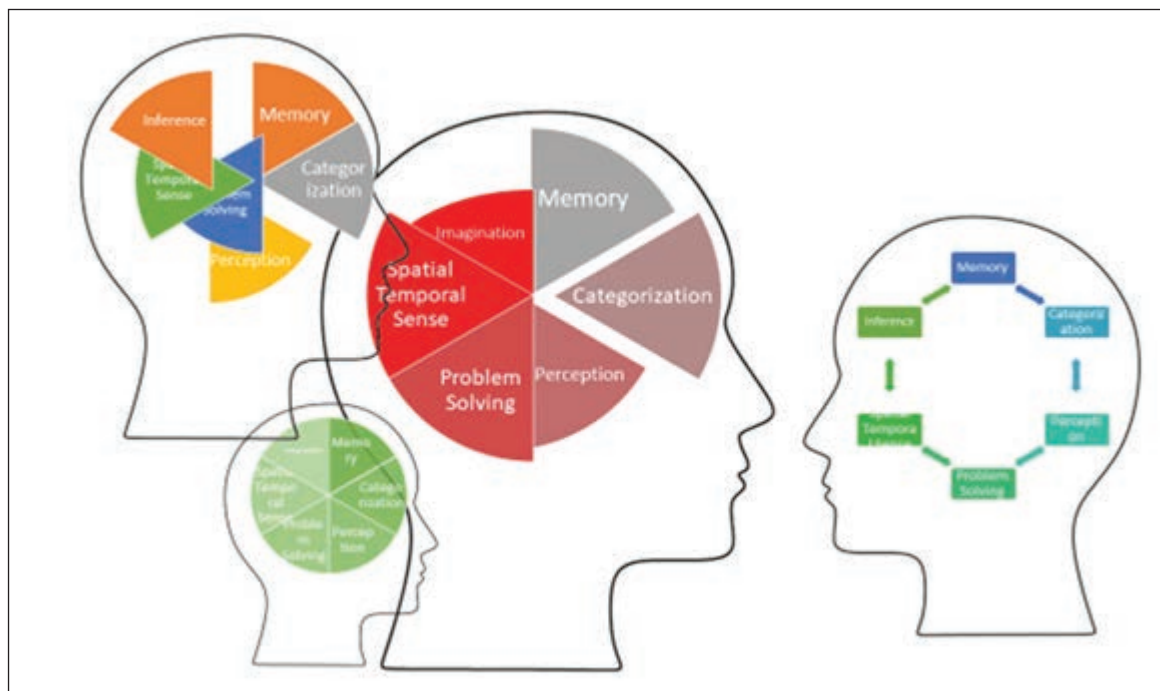
The cognitive science supporting the development of these technologies may have reached the limits of its utility. We are seeing research from multiple continents that questions the conventional technology design paradigm on the grounds that it ignores culture,

proving less useful for populations distant to Western producers. In exploring what we believe we know about short-term memory and its relation to planning and problem-solving, Amici et al.<sup>1</sup> posed the question many researchers have begun to ask: “Are these findings universal and generalizable across cultures?” Their research found high variability and specificity across cultures with respect to processes of cognition.

A number of studies point to significant variance in information processing based on cultural and experiential factors. Bidwell<sup>2</sup> describes implications for technology design in Namibia, noting that “our reflections add to

literature on mismatches between ‘universal’ paradigms and local ways of knowing.” Nisbett<sup>3</sup> charted numerous variations in attention, perception, causal inference, organization of knowledge, and reasoning between Western and East Asian cultures. Boroditsky<sup>4</sup> and Hendricks and Boroditsky<sup>5</sup> compare different perceptions of time across cultures. Kharkhurin and Samadpour Motalleebi<sup>6</sup> demonstrate variability in creative problem-solving between Russian, Iranian, and American students. They assert that the values defining creativity are modeled on Western ideals which may bias observation across cultures when seeking to understand decision-making.

*Illustration: Many Ways of Thinking*<sup>7</sup>



Several studies<sup>8 9 10</sup> combine to paint a picture of just how limited our knowledge of much of the world remains, despite the perceived openness of knowledge sharing via internet connectivity. These studies have looked at formal knowledge from academic journal submissions and acceptance rates to informal platforms including Wikipedia and Github. Each of these are described by the geography of contributors and editors which are starkly concentrated in Europe and the U.S. (the Global North), the regions where technology is produced.

Most significantly, this means that our cognitive processes, to include theories from sociology, anthropology, and psychology, continue to represent but a small fraction of the earth's population. Nevertheless, we persist in extrapolating without sufficient evidence that human behavior is the same across all cultural groups. This is especially true when it comes to knowledge backing the development of the information technologies we rely on today, which is built from limited sampling and untested assumptions. For example, it is widely recognized that

most studies on memory have tested individuals that come from western, educated, industrialized, rich and democratic societies [WEIRD] – all characteristics for population samples which are rather atypical when compared to those of other humans. Moreover, the languages these sample groups speak hardly represent the linguistic diversity found across the world.<sup>11 12</sup>

The prevailing view in cognitive science, which continues to underpin much of the AI research being done today, has defined thought through a narrow lens, creating a singular, universal model of human cognition—one that is culturally agnostic. However, as we leverage the growing suite of technologies in

the information environment to understand decision-making behavior of partners, competitors, and adversaries, we cannot afford to rely on a toolkit that is blind to the very insight we seek. We must incorporate cross-cultural perspectives with the aid of socio-behavioral expertise to improve technology solutions.

Understanding the impact of cultural and linguistic factors in decision-making through information technology requires a creative, non-linear approach. There are many disciplines from which to draw activities that may enrich “thinking about thinking,” reflection, criticality, and cross-cultural perspectives. In addition, the design process of information technologies may benefit from these exercises as a means to challenge assumptions and biases. As end-users of these technologies, students in the Professional Military Education (PME) environment learn criticality about selecting courses of action, including the evaluation of technologies used in this design process.

Understanding how we form and retain our conceptualizations of the world and our experience—through memory and recall—has profound implications for information technology design, which relies on these same boundaries to delineate categories. Crawford and Paglen emphasize the centrality of categorization in machine learning, an example of AI, explaining its roots in cognitive science:

Categorization is not a matter to be taken lightly. There is nothing more basic than categorization to our thought, perception, action, and speech. Every time we see something as a kind of thing, for example, a tree, we are categorizing. Whenever we reason about kinds of things--chairs, nations, illnesses, emotions, any kind of thing at all--we are employing categories.

**We may unconsciously change the information we learn from others as we engage with them. This forces a reevaluation of underlying assumptions about perception, memory, and recall. How does the cultural bias of cognition impact information influence?**

... Without the ability to categorize, we could not function at all, either in the physical world or in our social and intellectual lives.<sup>13</sup>

### The “War of the Ghosts”

An exercise adapted from a thought experiment conducted in 1932 by Sir Fredric Bartlett<sup>14</sup> illustrates the role of categorization and cultural diversity in technology design. In “War of the Ghosts,” an early experiment in cognitive psychology, Bartlett provoked a comparison of constructed memory variation across cultures. Participants are exposed to a novel narrative format—a traditional Chinook legend—and then asked to perform simple reading, listening, and recall activities to assess their recall of the story. The process reveals culturally learned boundaries that shape memory and recall.

For the exercise adaptation of Bartlett’s experiment, we use the same Chinook narrative to facilitate the activity. Participants pair off to read and listen to the story without taking notes. After an interval, the listeners are asked to share their recall of the story. Then, readers are also asked about their impressions. Common recalls re-order the story into a more linear narrative that more closely follows the conventional or familiar norms for students; provide consistent first or third person narrator

structure; omit details that are unfamiliar (seals, canoes, ghosts); and omit or re-frame details and concepts that are unfamiliar or do not fit into the new narrative such as ghosts, “something black,” supernatural elements, and non-linear time. Readers comment that the narrative is difficult to understand and remember because of the unconventional event structure, unclear narrator, and ambiguous events, including the blurred life and death concept.

In fact, the aim of the exercise is to provoke the observation that responses of confusion, inconsistency, and variability are intrinsic to the experience of narrative forms and concepts. As this exercise illustrates, we struggle to remember what does not fit into our culturally constructed memory framework. We reorder what we perceive by fitting it into what we expect—including more familiar categories, relationships, timelines, and agents. As we discard and rearrange elements, we may create omissions or distortions. The things we give weight to as categories, concepts, and structural guideposts within a narrative are translated into software design that identifies, collects, aggregates, and analyzes patterns to support our decision-making. This exercise reveals the degree to which the application of information technologies to cognitive processes is culturally determined.

## Conclusion

The “War of the Ghosts” thought experiment brings into relief the insight that our version of narrative is not universal and that narratives vary by culture. “The War of the Ghosts” also illustrates that we may unconsciously change the information we learn from others as we engage with them. This forces a reevaluation of underlying assumptions about perception, memory, and recall. How does the cultural bias of cognition impact information influence? What other impacts might this interaction have, both positive and negative? How do the culturally constructed boundaries of our thinking inform technology design that we use to support our thinking?

An appreciation of these nuances is vitally important when strategizing about another actor’s actions, yet we apply tools that have not necessarily been adapted to reflect variations in

how different populations process information across cultures. For this reason, we need to sharpen our own critical reasoning skills in order to effectively integrate information technologies as informed end-users. It is especially important to do so in the PME environment in order to enable our students to support the complexity of strategic information operations. Responses to the “War of the Ghosts” thought experiment provide us with a set of important insights that we can apply to improve critical reasoning skills in the PME classroom, especially when it comes to the strategic use of information.

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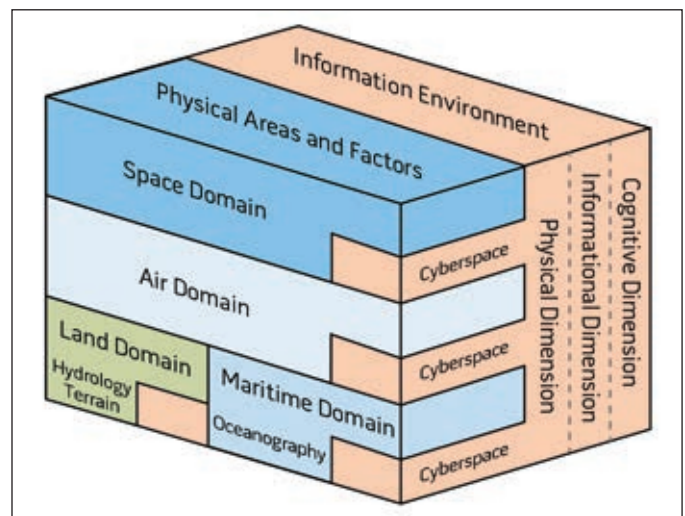
# INTERNATIONAL DIGITAL INFLUENCE AND LEARNING OBJECTIVES: TRANSLATING DISCIPLINARY INSIGHTS FOR POLICY AND PRACTICE

## Introduction

There is broad consensus among policy-makers and experts that digital influence efforts are on the rise. Media coverage, white papers, and research point to the increase of both state and non-state actors using digital platforms to influence audiences.<sup>1</sup> Government publications and official testimony highlight cases of disinformation and influence campaigns that leverage media capabilities, from interference in election campaigns, to the manipulation of social media algorithms to distort strategic policy narratives, to the engineering of social and political conflict.<sup>2</sup> The implications of digital influence efforts for national security are recognized in joint doctrine and in new requirements for learning in professional military education.<sup>3</sup>

Teaching about digital influence efforts is one aspect of a larger effort to educate military and civilian government professionals on the information environment, described in joint doctrine as “the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information.”<sup>4</sup> Developing a curriculum for the information

environment is an immense instructional effort; the learning requirements for comprehension of key elements of the IE as well as *operations* in the information environment (OIE) include a disparate range of practices and tools, from electronic warfare, to public diplomacy and strategic communications, to the growing array of instruments involved in cyber operations.



Operations in the Information Environment

The broad inclusivity of the term “information operations” obscures more than illuminates the learning requirements for different levels of education and training, and how OIE should be integrated into existing approaches to planning, strategy, and organization.<sup>5</sup> Terminological confusion between information operations, warfare, propaganda, and other terms for international influence present challenges for policy-makers and necessitate clarity in learning requirements.<sup>6</sup>

Teaching digital influence can illustrate the challenges of designing instruction on the information environment for PME. While there may be widespread acknowledgement that the information environment is contested, where foreign actors use media platforms to achieve influence objectives, it may be equally important for instruction to elaborate why these platforms and methods work. As PME institutions rightly realign their curriculum to address OIE, they also need to evaluate learning objectives. What should students be able to demonstrate as a result of their PME instruction?

The role of education, rather than assignment or job-specific training, should be to enable a critical understanding of how these instruments work, how they facilitate policy or operational objectives, and how to assess their strengths and limits. Instruction on the range of influence operations and strategic communication should enable PME students to be conversant in the major concepts, theories and arguments that explain why media influence campaigns function in different contexts--beyond hypodermic assumptions of effect and exposure that often characterize popular discourse about digital influence campaigns.

This essay describes an approach to developing learning objectives that addresses the goals outlined in joint PME guidance for teaching the information environment. Put simply,

instructional content needs to translate pertinent research questions and theories that define the cognate fields of academic research into relevant contexts and cases. This essay first identifies needs articulated in Department of Defense educational policy that are related to the information environment. Next, it introduces relevant strands of scholarship and research to augment a case-based curriculum on strategic influence. Finally, this essay makes the case for why this curated approach to interdisciplinary coverage of information operations enables better critical thinking, planning, and foresight with respect to the challenges associated with digital influence efforts.

## Teaching the Information Environment: Institutional Learning Requirements

Operations in the information environment is a broad term that does not fit neatly into any instructional requirements for PME. Yet the information environment is clearly recognized in U.S. strategic documents as both a potential threat as well as opportunity for statecraft.<sup>7</sup> For PME institutions, the information environment offers a new aperture through which to view the domain of conflict. It is an increasingly contested terrain defined by a diffusion of technologies, opening up new methods for adversarial confrontation, presenting new vulnerabilities that create the need for adaptation in the other major warfighting functions. From the expansion of conflict into platforms for disinformation and strategic narratives, to the opportunities and risks offered by technology for the requirements of command and control (C2) and situational awareness, the information environment and information-related capabilities (IRCs) represent inescapable elements of warfighting—as a context for the formulation of strategy as well as critical thinking about national security policy.<sup>8</sup>



PME students, therefore, need instruction that allows them to grasp the potential of information platforms and communication methods to achieve influence objectives and to shape the cognitive dimension of conflict, organizing and synchronizing information and communication with other operational planning efforts, and assessing risks and vulnerabilities to traditional functions. The demand to provide this instruction carries implications for all levels of PME curriculum, from enlisted up through operational and strategic level education for planners, decision-makers, and leaders. The Officer Professional Military Education Policy (OPMEP) guidance for 2020 signals the importance of information across multiple dimensions on instruction. The “Joint Learning Area 1: Strategic Thinking and Communication” and “Joint Learning Area 4: The Security Environment” offer broad mandates to incorporate OIE into program specific curriculum across PME institutions.<sup>9</sup> The Joint Learning Areas allow the different PME teaching units to develop Program Learning Objectives (PLOs), which clarify the knowledge, skills, and other competencies enabled through a PME program of instruction.

Incorporating the breadth of the OIE reflects a daunting task for curriculum and instructional development. Consider the definition of the information environment reflected in Joint Doctrine, which offers that the information environment

comprises and aggregates numerous social, cultural, cognitive, technical, and physical attributes that act upon and impact knowledge, understanding, beliefs, world views, and, ultimately, actions of an individual, group, system, community, or organization.<sup>10</sup>

This kind of definition sets wide parameters for developing a curriculum. Additional guidance is offered in the updated Special

Areas of Emphasis for Joint Professional Military Education for AY 2020-2021, which calls for instruction on the information environment across PME curricula. “Globally Integrated Operations in the Information Environment” highlights the contested nature of the information environment, specifically describing both the use of information technology for military advantage and the “battle of narratives” that define how states seek to influence foreign publics. Yet this depiction of OIE also implicitly assumes the efficacy of practices and technologies within the information environment to shape perceptions, in order to “inform, assure, or deter... attitudes, beliefs, and decision-making.”<sup>11</sup>

The Special Areas of Emphasis guidance articulates the need for professional military education to enable the strategic integration of information operations into other “physical operations.”<sup>12</sup> This helps to define the security environment in a way that includes the crucial dimension of information. But it also reflects certain presumptions about how communication, persuasion, and influence work, especially within and across information technology platforms. Given the call for more instruction on the information environment, instructional development must consider the level of critical competency required.

## Translating Concepts and Research: Focus on Disinformation and Influence

The business of teaching and learning within PME is an inherently interdisciplinary endeavor, given the unique breadth of instructional requirements. Teaching the information environment requires a similar approach to convey effects, processes, and human/cognitive dimensions. The role of disinformation and influence is presented here

to demonstrate how a translational approach to content development involves the selective mining of disparate research communities for relevant theories and concepts.

The term “translational” is deliberate. The Joint Learning Areas and Special Interest areas used to develop Program Learning Objectives for PME do not map neatly onto disciplinary perspectives or research questions that may drive scholarship on influence, propaganda, political warfare, or similar concepts within the OIE ecosystem of terms. The purpose of this approach is to push understanding of OIE beyond recognition of practices towards a functional conversance with the key causal mechanisms and other dynamics that enable influence.

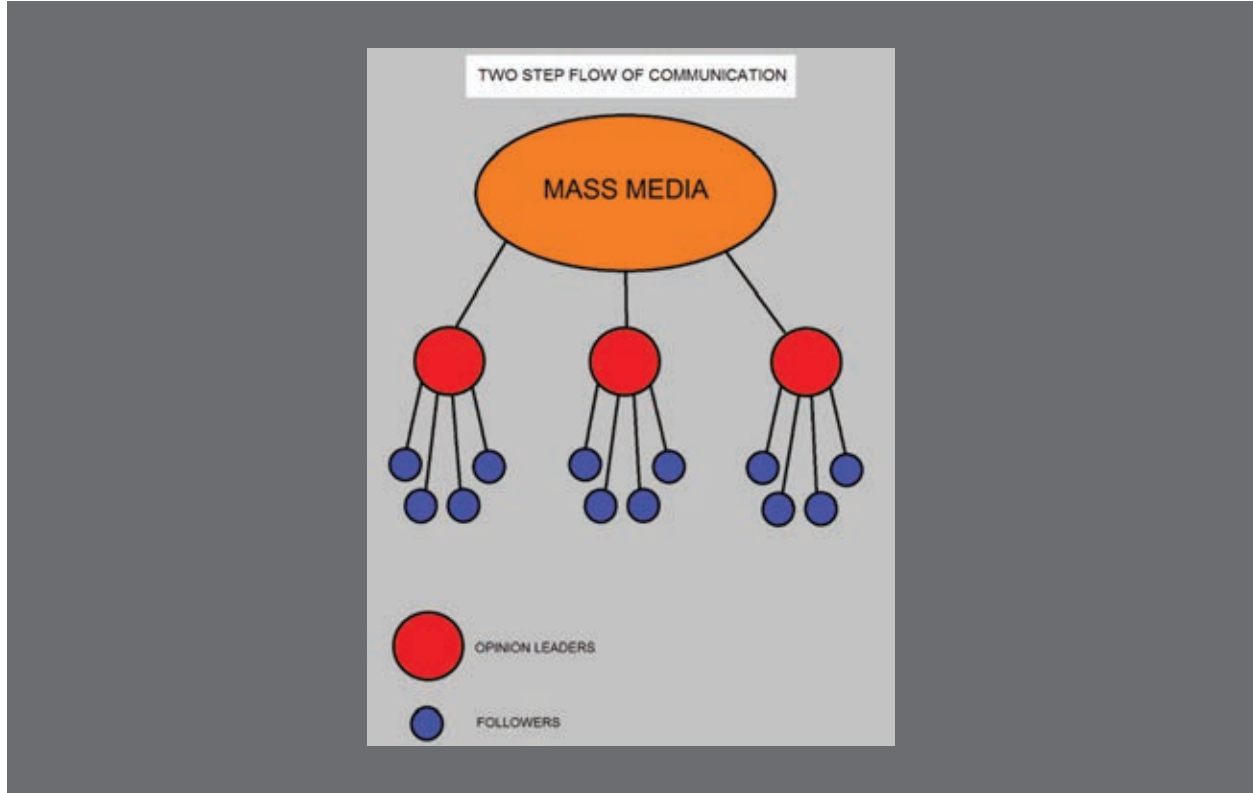
Case studies can and should illuminate practices of influence, such as Russian electoral interference, the use of botnets and other computational propaganda campaigns to artificially cultivate political mobilization, and other social media-based efforts to create or amplify social divisions to amplify polarization or advance political ends. But they should also unpack how these influence practices may work. This will enable critical assessment, not just of popular terms that define discussion of influence operations, but more informed evaluation of policy options.

For example, the study of disinformation has largely focused on the spread of information to distort public discussion of key issues in order to achieve the ends of strategic actors.<sup>13</sup> But such campaigns are not simply a measure of information campaign output from transmission to receiver. Rather, influence campaigns of disinformation reflect a host of factors that condition effectiveness. Digital influence campaigns cannot be reduced to a question of message construction or quantity of messages transmitted.

Political communication research has long focused on the question of how media messages influence audiences. This research provides a ready vocabulary of terms to condition understanding of how particular information campaigns may, or may not, achieve an effect. Long-standing research programs in agenda-setting, priming, and framing offer a tested set of concepts to describe how media messages may increase the visibility and salience of particular topics, and how media coverage provide interpretations of events that dispose audiences toward particular evaluations of policy, value judgements, or perceptions of responsibility.<sup>14</sup>

From a teaching perspective, traditional political communication concepts could be paired with emergent observations of influence attempts to trace the potential impacts of influence operations. For example, a 2019 report by the Stanford Internet Observatory on how the Russian GRU online operations have laundered disinformation through fake intermediary news sources provides a demonstrative link between media effects research and how influence might manifest or be conditioned.<sup>15</sup> Media effects research offers a fundamental check on assumptions of strong impacts by exposure to messages, as well as a set of conditions in which stronger effects might occur.

The impacts of disinformation messages are facilitated by exposure, and how disinformation messages designed to influence can propagate across networks. Selective exposure theories offer insight into how media influence effects might be limited.<sup>16</sup> The so-called “echo chamber” phenomenon offers an intuitive depiction of how audiences encounter particular kinds of information, where users self-segregate to consume information, news, and social contacts from sources or outlets that



align with their political beliefs or identity. Yet, the cumulation of research on actual usage of social media suggest limits to the presence and impact of echo chambers. While popular discourse highlights increasing divisions among social media consumers, evidence suggests far more exposure to views and opinions from multiple perspectives.<sup>17</sup>

Likewise, how individuals affiliate offline rather than through media consumption may be a greater determinant of message effect – an insight that can be traced to early political communication research on the “two-step flow” hypothesis of message influence. We may be more likely to be swayed by the indirect effect of disinformation through discussion with opinion leaders and figures that represent our own identity positions. This suggests a more nuanced approach to explaining how messages propagate to key nodes in

relationship networks. Instructional content should enable students to develop accounts of the conditions or circumstances under which media-based influence can occur.

Disinformation invites questions on multiple dimensions of analysis: attention to the composition of the message, the predispositions and context of the audience, and the structure of the social network that can shape the flow and impact of information. For example, the impact of disinformation on audiences may be magnified by who shares it online. Political cues from elites may drive the increased distribution of potential disinformation messages, especially those that highlight differences between political affiliation and identity.<sup>18</sup> Likewise, the emotional or moral dimension of an online message may provoke a greater likelihood to engage or share such information.<sup>19</sup> Audience attention to (and willingness to share)

**A conceptual foundation in influence, persuasion, and media-based effects could also enable a more productive use of instructional exercises, planning efforts, and games-based learning – that does not take for granted that information operations, propaganda, or other strategic communications efforts work through simplified notions of message transmission and scale of effort.**

disinformation may depend on well-established biases related to motivated reasoning or to how the message activates an affective response.

The increased spread of disinformation as a tactic brings the question of influence back to what it can accomplish. What does the spread of information do for strategic actors? The social terrain of influence invites perspectives from other disciplinary approaches, to describe how strategic actors leverage the power of contested narratives as a “political opportunity structure” by manipulating or promoting collective action frames to mobilize and organize political movements.<sup>20</sup> Sociologically-informed research on the way in which digital influence is enabled or constrained by the media platform can offer insight into how strategic actors cultivate the willingness of political action, or, how authoritarian manipulation of the information environment can close off opportunities for social change.<sup>21</sup>

The theoretical and conceptual frameworks introduced here provide a sampling of how research-derived perspectives can facilitate a more informed and critical educational program on the information environment. Any such effort to curate a relevant, cognate

body of scholarly perspectives would need to pair such content with demonstrative case studies, histories, and examples. However, a conceptual foundation in influence, persuasion, and media-based effects could also enable a more productive use of instructional exercises, planning efforts, and games-based learning – that does not take for granted that information operations, propaganda, or other strategic communications efforts work through simplified notions of message transmission and scale of effort.

## Conclusion

Understanding the OIE is crucial for future leaders working to develop U.S. government responses to information threats and to recognize opportunities to engage key audiences abroad to advance U.S. policies and interests. This requires a degree of literacy in the concepts and terms that define the field. At the very least, understanding how terms are used can enable more situational awareness, the possibilities for influence, and how potential antagonistic actors see information as an instrument.<sup>22</sup> A working knowledge of how the information environment is available

as a tool to advance U.S. interests is important, not just for information operations, but for developing a shared vocabulary for strategy.

While the phrase “operations in the information environment” captures a broad range of activities and context for global engagement, it carries forward the same conceptual ambiguity that accompanied previous terms, such as “strategic communication,” that obscured how the interagency can work together along different lines of effort to achieve objectives or defend against foreign influence.<sup>23</sup> Teaching the OIE can help to break down institutional silos, as well as demonstrate real-world examples from different interagency perspectives. Such a shared vocabulary of influence can also help to build a collective understanding of how the U.S. government communicates with foreign publics.

Specifically, students can learn how military information operations may complement efforts by the State Department to inform and educate foreign audiences, as well as to build long-term relations to cultivate mutual understanding through exchange programs. Students also gain an appreciation for the different dimensions of outreach offered through public diplomacy, international broadcasting, and other established means of U.S. engagement with foreign publics that provide ready cases for demonstrating the practice of influence. Likewise, interagency practitioners from these professions who attend PME can benefit from further educational dives into the concepts that underscore their responsibilities and work, as well as illuminate the diversity of approaches to strategic communication employed by their military colleagues.

The emphasis suggested here has been to develop instructional content that includes conceptual frameworks and causal mechanisms drawn from largely social scientific studies in order to enable students to be critical consumers of current national security challenges in the information environment. The widespread use of computational propaganda and the insidious infiltration of identity groups on social media capture attention, but also require sober assessment of how they may work within the bounds of what we already know from interdisciplinary communities of research. But there are also opportunities to expand case-based and historical lessons that draw on the experiences of previous efforts to deal with a contested information environment in order to demonstrate the potential for strategic influence and operations in the information environment.<sup>24</sup>

In the field of disinformation, other governments have engaged in translational efforts to curate relevant academic knowledge into actionable documentation and guidance.<sup>25</sup> Similar efforts could be applied to the development of PME curriculum, through initiatives to track ongoing research of policy-oriented research organizations to catalog and analyze information operations.<sup>26</sup> The objective of instruction on the information environment is not necessarily to cultivate a student program of research or demonstrate recall of key theories, but to enable informed, critical, and sustained engagement with the knowledge required to make decisions and implement strategies within the information environment. This means that a broad program of instruction in the OIE may require a curated approach to relevant conceptual instruction that can be combined with and applied through case-based and collaborative learning activities that PME institutions can provide.

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PUBLIC DIPLOMACY,  
INFORMATION,  
AND INTELLIGENCE  
OPERATIONS IN  
THE PRACTITIONER  
CLASSROOM

**JEFF ANDERSON**

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# TUNING THE INFORMATION INSTRUMENT OF POWER: TRAINING PUBLIC DIPLOMACY PRACTITIONERS AT THE DEPARTMENT OF STATE'S FOREIGN SERVICE INSTITUTE

In Clausewitzian military parlance, the nature of war—the use of violence to achieve political aims—does not change, but its character—the way militaries wage war—alters over time as technology and social and cultural mores evolve. Public diplomacy (PD) is similar. For centuries, governments have worked to influence, inform, and engage with foreign publics to advance national interests. However, the way governments conduct public diplomacy has changed dramatically, particularly as the communications and information space has become more crowded and complex. Training and professional development are critically important for public diplomacy practitioners to be successful in today's environment, just as Professional Military Education (PME) is essential for military personnel.

The Public Diplomacy Training Division (PD training) at the State Department's Foreign Service Institute (FSI) leads the department's efforts to equip personnel with the core skills necessary to effectively advance U.S. interests. Given public diplomacy's changing character, PD training has adopted several approaches to ensure that U.S. public diplomacy remains agile,

strategic, and effective. To this end, courses have an increased focus on strategic planning, audience analysis, technology, and leadership and management—all while trying to build a stronger culture of training within the public diplomacy corps.

## Policy Before Programs: Prioritizing Strategic Planning

In the past, many public diplomacy practitioners, as well as their State and interagency colleagues, viewed public diplomacy as a collection of discrete exchange, cultural, and information programs. With building mutual understanding between the United States and people of other countries as a central goal, PD sections at U.S. embassies abroad organized a variety of concerts, exhibitions, exchanges, press conferences, and other activities. Under this rubric, PD training focused primarily on the mechanics of administering individual activities, with courses featuring a parade of public servants who explained the intricacies of each program.





Crisis Management Training--FSI's Immersive Learning Environment

Today, the State Department places policy promotion at the heart of its public diplomacy activities. Around the world, particularly with the proliferation of communications technologies, publics play an increasingly central role influencing the policy-making process. Correspondingly, well-targeted, strategic public diplomacy initiatives are critical for the United States to achieve national interests. PD training has adapted its curriculum to reflect this reality. Broadly speaking, all PD training courses at FSI aim to provide students with the skills to identify policy objectives and develop and implement strategic campaigns to achieve those goals.

Rather than merely lecturing to students, course instructors facilitate interactive exercises that guide students through strategic planning models to ensure engagement is targeted, achievable, and measurable. Students learn to define critical audiences, identify the behaviors initiatives aim to affect, and develop core messages and themes—all before practitioners choose a specific program, approach, or mechanism. Students also learn how to measure and evaluate program

success and determine appropriate follow-on engagement. Equally important, courses stress the importance of collaborating closely with other State Department and interagency colleagues in public diplomacy planning and implementation.

## The New Audience-based Approach

For decades, public diplomacy sections at embassies overseas consisted of a team focused on cultural and educational programs (cultural sections) and another centered on engagement with media (information sections). PD training included separate courses for practitioners working on each team. In recent years, moving away from this programmatic, functional dichotomy, the State Department has launched a worldwide initiative to restructure all PD sections into an audience-centered function. Under this approach, teams work in audience-defined clusters to identify and engage the actors and entities critical to achieving mission goals and then work collaboratively to develop and execute campaigns.



News Technologies for Classroom Use--FSI's Educational Technology Innovation Lab

PD training at FSI plays a central role in helping practitioners develop the core skills to fully realize this new approach, which is intended to reduce the programmatic stove piping that was often a byproduct of the previous structure. To that end, most cultural and information-specific courses have been eliminated, to be replaced by a curriculum where all PD practitioners learn and exercise core skills together.

Additionally, the focus of PD training is shifting to modules on data literacy, audience segmentation, landscape analysis, strategic narrative development, measurement and evaluation, and program management. As this transformation moves forward, the PD training division is working closely with State and interagency colleagues, as well as academic and private sector communications specialists, to ensure the curriculum remains current and relevant to prevailing issues and trends.

## Evolving Outreach and Assessment Technologies

Historically the most significant driver behind the evolving character of public diplomacy has been technological change. Technology

enables public diplomacy practitioners to communicate directly with foreign publics and better understand audience attitudes and perceptions. Accordingly, PD training programs must provide employees with the skills to use emerging communications technologies and design campaigns within a broader strategic framework. PD training in this area is constantly evolving. Several years ago, courses focused on the nuts and bolts of establishing and managing social media accounts. Today, classes help practitioners develop strategies to integrate social media within broader public diplomacy campaigns.

PD training also works closely with private sector entities to inject fresh ideas and approaches into the classroom. For example, one course combines classroom instruction with participation in leading social media and marketing conferences. Another course provides participants with skills to film and edit strategic videos and create other content on their smart phones. To support the new audience-driven approach to programs and outreach, the State Department is also working with private sector partners to develop several planning and reporting tools that will better track resources,

report outcomes, and monitor progress. Training in the use and broad application of these tools will be incorporated into PD training programs as well.

## Updating Human Capital Management

With relatively small discretionary budgets (some posts have less than \$20,000 in annual programming funds), human capital is a public diplomacy section's most valuable resource. Public diplomacy sections worldwide rely heavily on teams of local employees to connect with key audiences, understand local issues and context, design programs, and conduct a range of administrative and outreach tasks necessary to a program's success. As a result, across the PD curriculum, courses for both local employees and American officers focus heavily on developing leadership and management skills. Given the Department of State's initiative to restructure overseas PD sections, new training courses also include modules on change management.

## Generating a Culture of Learning

One of the U.S. military's strengths is its heavy focus on career-long learning and professional development. Its robust PME continuum allows personnel to regularly refresh and refine the core skills necessary to be successful on the battlefield. The State Department is working to build a similar continuum for PD practitioners

to achieve success in the information space. This fresh look at the professionalization of the PD corps will include a variety of in-person and distance-learning courses and offer incentives to practitioners and their supervisors to invest in these learning opportunities. This approach will also underscore the importance of PD training in building and supporting a public diplomacy corps that can adapt to the rapidly changing information environment in order to continue its efforts to advance U.S. national interests.

## Conclusion

As the information and communications context changes, so too does the art of instructing public diplomacy practitioners. PD training at the Foreign Service Institute is constantly evolving to ensure that personnel possess the knowledge, skills, and abilities to effectively advance U.S. policy interests. Courses for overseas and U.S.-based public diplomacy professionals, including the scores of foreign nationals who work at U.S. diplomatic missions abroad, include new approaches and modules that help practitioners develop and execute audience-focused initiatives that have a measurable impact on achieving U.S. policy goals. PD training--like America's public diplomacy professionals--will continue to be cutting edge and agile in order to reflect the changing character of public diplomacy.

**The focus of PD training is shifting to modules on data literacy, audience segmentation, landscape analysis, strategic narrative development, measurement and evaluation, and program management.**

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# WARGAMING INFLUENCE AND INFORMATION OPERATIONS

## Introduction

Developing wargames to effectively model the information environment (IE), and information/influence operations (IO) therein, is challenging for two primary factors. First, conceptualizing the IE is typically difficult due to its complexity. Second, as a rule wargames must necessarily sacrifice some detail for the sake of economy and clarity so as not to overburden participants. This is problematic given that most military professionals have very little ingoing experience with and corresponding understanding of operations in the information environment. The IE wargame participant learning curve is steep.

Overcoming these hurdles and designing practical simulations is critical to improving familiarity of IO for policymakers and maneuver commanders alike. This paper summarizes the U.S. Army War College's approach to wargaming and modeling information warfare (IW), which has been under my direction since 2018.<sup>1</sup> I describe our efforts to effectively model the IE, briefly summarize the relevant scientific literatures underpinning our methods, and then provide the major findings of our wargames within the Joint, Army, and Marine Corps communities.

## Insights and Context for Information Operations Wargames

Currently, joint doctrine does not acknowledge an information or human domain, but instead conceives of IO and IW taking place within the information environment.<sup>2</sup> Under this paradigm, the IE consists of separate, but entwined, physical, informational, and cognitive dimensions.<sup>3</sup> Beyond the need to define jargon for the reader, I include this point because the implication inherent within joint doctrine is that the IE is affected by operations in any and all domains. Correspondingly, the IE itself also has an effect on non-information operations.<sup>4</sup> In other words, *all military operations have informational effects*.

While joint doctrine establishes the conceptual boundaries of the information environment, it fails to appreciate three key dynamics of the environment itself. First, as described by joint doctrine, the IE transcends the current warfighting domains by existing in each of them. At the same time, the IE also includes the electromagnetic spectrum, elite cognitive and evaluative spaces, mass publics, and narrow, hard artificial intelligence (AI) systems.<sup>5 6</sup>

Second, because the IE is composed of the sum of the number of processors, senders, and receivers of information in addition to the information flowing within the environment itself, the shape and size of the

IE are constantly changing. Likewise, the informational content is itself dynamic in the context of emergent or unanticipated events.<sup>7</sup>

Finally, the objectives of IO/IW are broadly defined and extend beyond merely winning over the proverbial “hearts and minds” of a population. IO/IW objectives can also include information acquisition and/or denial; information creation, deception, or corruption; attempts to disrupt, destroy, corrupt, and usurp adversarial information transmissions and infrastructure; the protection of friendly information flows against adversarial actions; and counter-deception operations.<sup>8</sup> Alternatively, IO/IW objectives can be as narrow as altering the decision calculus of the adversary.

In sum, the IE represents a massively complex and fluid system in which the boundaries, key elements, and objectives change from mission to mission (and oftentimes from moment to moment). Yet instructing participants in IW/IO wargames to analogize the operating environment as an ever changing soap bubble is unlikely to produce any meaningful understanding or appreciation of its challenges.

## Developing a Wargame Model of the Information Environment

Our role as wargamers is to craft simplified parameters and scenarios to improve our participants’ understanding of complex and nuanced subjects. The limits of human cognition and attention mean that our simulations must be properly focused on a particular set of learning objectives.<sup>9</sup> Thus, in designing a game to impart strategic insight, we must often sacrifice or deemphasize tactical nuance.<sup>10</sup> In the absence of appropriate focus and simplification, we risk overloading participants’ cognitive capacity, which will cause players to revert to habitual patterns of processing rather than those intended to be highlighted in the simulation.<sup>11</sup>

The IO/IW wargame models we have developed at the U.S. Army War College are guided by theories of cognitive, behavioral, and political psychology, along with recent innovations in social network research. We have identified a number of guiding principles for producing effective IO/IW wargames with the minimal necessary degrees of complexity.

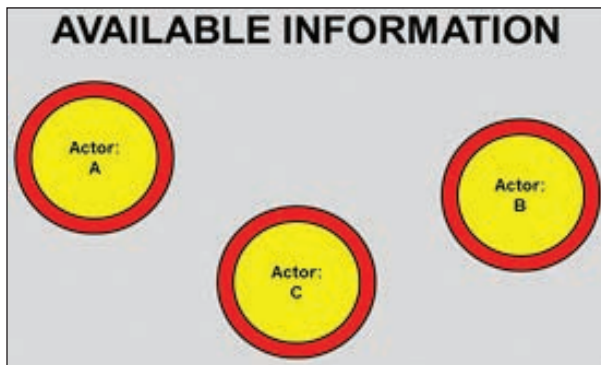
First, we limit the focus of our wargames to informational effects within the IE. This approach orients players toward thinking about operating within an informational rather than physical space. Moreover, we deemphasize specifics on how physical military capabilities are traditionally employed (e.g. sustainment, access, protection), instead highlighting how these capabilities might be deployed to achieve informational effects.

Second, we confine our wargames to the *relevant* information environment instead of forcing players to grapple with the IE in its entirety. This focus is achieved by limiting the scope of exercises to a pre-determined number of “key” decision-makers within a well-defined community. As such, we do not aim to illustrate the full complexity of the IE in the context of a single wargame.

Following social network theory, we simplify the relevant IE as comprising the information flow between key nodes, and the potential flows of information propagation between them.<sup>12</sup> By limiting our scope to the “relevant information” that key decision-makers are likely to encounter, we enhance participant understanding of the environment, and more accurately reflect psychological theories underpinning how information is acquired, evaluated, and acted upon.<sup>13</sup>

Third, while information preferences and evaluative biases are essential elements for inclusion into models of IO/IW, we exclude them to improve the executability of our wargames. Earlier playtests of our first

**FIGURE 1.1: REAL-WORLD INFORMATION ACQUISITION PROCESS**

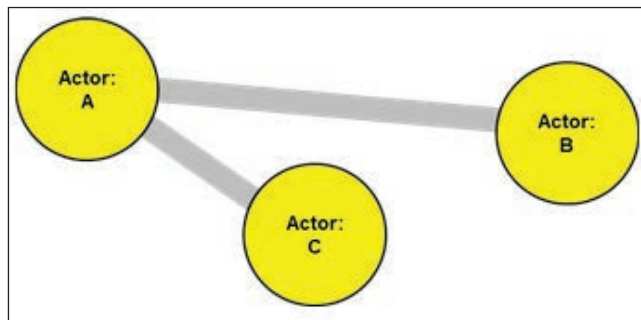


**Note:** In the real world, actors are completely surrounded by essential and non-essential information about their world as evidenced by the gray box surrounding the actors. Further, individuals do not acquire all information around them, but just the information that bypasses their cognitive biases and preference filters depicted by the red halos around the actors.

model included a very simple mechanism to accommodate individual-level preferences and biases in cognitive evaluation, but this proved to be overwhelming for play-testers and adjudicators.<sup>14</sup> Figures 1.1 and 1.2 illustrate the differences in information acquisition between our wargame model and individuals within the real-world. Without considering underlying actor preferences, information acquisition and transmission is a much more predictable process.<sup>15</sup>

Fourth, based upon the needs of our sponsor (the Department of the Army), the military capabilities and doctrinal perspectives of players within our wargames reflect the perspective of U.S. Army operations. Further, our wargames occur within the competition phase, and do not escalate into armed conflict.<sup>16</sup> Finally, only one of our two models encompass battlefield intelligence and informational preparation. The process of conducting and representing a well-researched information and intelligence preparation of the battlefield

**FIGURE 1.2: U.S. ARMY WAR COLLEGE INFORMATION ACQUISITION PROCESS**



**Note:** In our model, the only information available to actors is that derived from the linkages or “ties” between actors. This also represents the only possible flow of information between them. Further, our model does not take into account the cognitive bias and preference filters of the real world.

for IO/IW is critical to the success of IO and should itself be the focus of further wargames and exercises.

### Findings from Wargames: Pitfalls and Challenges of Execution

We have observed four primary challenges affecting participants in our IO/IW wargames. First, participants are uncomfortable with uncertainty and abstraction when forced to take specific actions within wargames. We found that when placed in operational or theater specific contexts and roles – albeit in unfamiliar circumstances – players begin to default to using analogies they are comfortable with.<sup>17</sup> For instance, non-IO professionals begin defaulting to conversations about contemporary tactical level military assets and effects. Conversely, senior military leaders begin focusing on strategic level political-military considerations which would be out of their lane.

Further, we observed that participants will apply preexisting schema from traditional maneuver warfare to make sense of the IE. For example, players often begin to attribute physical or political geographic constructs to the virtual network. Oftentimes, these schema are maladapted to the environment, and influence the players to operate in counterproductive or inefficient ways. The most prominent example of schema maladaptation is the players' tendency to equate the exertion of cognitive influence with holding physical territory. In traditional military operations, consolidating territorial gains is important for numerous reasons, but cognitive influence over actors is not something which can be easily consolidated or fortified. Players often got stuck in a mentality of establishing battle-lines in the cognitive space instead of looking for and exploiting vulnerable or "backdoor" paths within the network.

Second, the high level of confusion about or unfamiliarity with IO/IW doctrine within the participants' own functional communities is, unfortunately, exacerbated by interaction with joint or sister service doctrines. We have had the opportunity to evaluate players of our wargames within several distinct but overlapping Department of Defense (DoD) communities, to include Joint Staff planners, Department of the Army G 3/5/7 Staff, Army Major Command Staff, information operations, cyber, space, and public affairs, as well as our peers at Marine Corps University.

In each event, the same patterns emerge. Initially participants speak knowledgeably about the general applications of IO/IW doctrine, but struggle to apply or articulate that knowledge to resolve a novel information-centric problem once the game begins. Often, participants begin disagreeing with game design over nomenclature issues despite

lacking any substantive points of disagreement. Some participants remain unable to execute IO within the game, even when nomenclature is adjusted to conform their communities' specific terminologies. Further, even within competition settings, thought is rarely given towards collaboration with non-DoD actors or organizations. IO professionals often describe IO/IW as whole of government and even whole of nation endeavors, but in our wargames they make no effort towards leveraging other private or public sector organizations to achieve their objectives.

Third, participants judge their difficulties overcoming the "fog and friction" of the IE as a function of the stylized/hypothetical wargame rather than a crucial feature of real-world IO. A lack of understanding about the ephemeral nature of the IE leads most participants to believe that preexisting analyses of target environments are reliable and accurate – even, in some cases, with estimates made years ago. Additionally, participants believe that doctrinal techniques to evaluate measures of effectiveness and/or performance will be sufficiently timely and accurate to rely upon.<sup>18</sup> Finally, participants placed an overreliance on sophisticated technological systems or capabilities when more rudimentary techniques would suffice.

Fourth, participants tend to have trouble connecting "ends, ways, and means" with respect to conducting IO, which likely extends to real-world situations. Participants often cannot describe the process of selecting target audiences, crafting tailored narratives and how to disseminate those narratives to achieve the commander's intent within notional exercises. Discouragingly, members within the public affairs community often chose to use the same narratives or influence techniques on all target audiences, even after being cautioned about the use of certain narratives with certain audiences.

**As exercises, wargames, scenarios, and other simulations more readily incorporate and emphasize Information Operations, the gap between our knowledge of doctrine and the application of doctrine to notional and real-world problem sets should diminish.**

### Recommendations and Future Considerations

The DoD has an IO/IW doctrine. But it has failed to teach military professionals how to operationalize it. Indeed, we have a serious training and education challenge with respect to preparing IO planners and maneuver commanders to operate within the IE. As an information operator from the “Five Eyes” community commented during a post-game hot-wash, “you [Joint Force community] have excellent doctrine, better than ours, you just don’t know how to use it.” Specifically, the DoD has not sufficiently committed to developing scenarios with adequate IO/IW background to facilitate useful training and exercises within the IE. Additionally, IO professionals lack sufficient opportunities within current exercises and wargames to hone their craft. Moreover, maneuver commanders are often unable to articulate how kinetic and non-kinetic operations can achieve informational effects – within or outside of conflict. As exercises, wargames, scenarios, and other simulations more readily incorporate and emphasize IO, the gap between our knowledge of doctrine and the application of doctrine to notional and real-world problem sets should diminish. For designers of IO/IW wargames, I suggest three areas to emphasize in order to better prepare military and civilian practitioners to operate within the IE.

First, it is important to design games that require participants to identify relevant target audiences for operations, or even better, to determine who the appropriate audiences would be. Strategic messaging is easiest and most effective when narratives can be carefully crafted to focus upon key actors within the IE. Building upon that platform, challenge players to describe how they will capture the attention of their target audiences to ensure exposure to “Blue Team” IO. Help them to understand that, contrary to common belief, exposure to information is neither automatic nor guaranteed.

Second, IO/IW wargames should challenge participants to explain how they will execute IO and employ capabilities to achieve informational effects. To this end, explore how different mediums of communication might impact IO due to practical considerations. Not all audiences use social media, so do not allow participants to oversimplify communication techniques, especially when operating within remote and isolated areas. Further, compel participants to assess what capabilities at their disposal can be leveraged to achieve desired effects. Within the scope of the exercise, allow participants to request or lean upon outside civilian or private sector capabilities.

Finally, given the complex and nuanced nature of the IE as an operating environment, IO/IW wargames should strongly emphasize analysis of “Blue Team” operations. Evaluating the effectiveness of IO as well as progress towards the commander’s intent is an especially challenging



task for IO planners. Conveying that information to maneuver commanders in an understandable and actionable format is doubly so. Allow participants to work through this process on their own, and try to drive creative thinking forward in this area. Furthermore, challenge commanders to assess risk and determine second and third order effects resulting from proposed IO.

Wargaming is a critically important tool in the formation and development of strategy, plans, and doctrine in any operating environment.

With respect to the IE, wargaming can serve as a cognitive force multiplier owing to its capacity to educate leaders to the challenging dynamics of the operating environment. Wargaming also permits IO professionals to hone their skills in a risk free training environment. Nevertheless, while wargaming can be a useful educational and experiential tool for IO, it cannot and should not take the place of simulations and other analytic studies. Future defense planning scenarios must include a broad range of opportunities to understand, assess and respond to IE and information-centric threats to national security.

#### Endnotes

- 1 All views and opinions expressed within this paper do not represent those of the U.S. Army War College, the Department of the Army, or the Department of Defense in any way, and are solely those of the author.
- 2 JP 3-13: Information Operations; 27 November 2012, incorporating Change 1 20 November 2014; Joint Concept for Operating in the Information Environment (JCOIE); 25 July 2018; Patricia DeGennaro, "Does the Human Domain Matter," *Small Wars Journal*: <https://smallwarsjournal.com/jrnl/art/does-the-human-domain-matter>. Accessed on 11/13/2019.
- 3 JP 3-13: Information Operations, 27 November 2012, incorporating Change 1 20 November 2014; Joint Concept for Operating in the Information Environment (JCOIE), 25 July 2018.
- 4 Examples of this are innumerable, but the easiest to understand touch on the relationship between information and evaluating measures of performance (MOPs) and measures of effectiveness (MOEs).
- 5 John R Searle, "Minds, Brains, and Programs," *Behavioral and Brain Sciences* 3, no. 3 (September 1980): 417-424.
- 6 The electromagnetic spectrum is not a doctrinal domain, but consists of operations within the range of electromagnetic radiation and their respective wavelengths and photon energy.
- 7 Aldo D Abitbol, "Audience Costs and the Domestic Public: The Attenuating Effects of Dispute Contexts," *FSU Digital Repository* (October 2015): 53-54.
- 8 JP 3-13: Information Operations; 27 November 2012, incorporating Change 1 20 November 2014; Edwin L. Armistead, "Information Operations: Warfare and the Hard Reality of Soft Power," *Issues in Twenty-First Century Warfare* (May 1, 2004).
- 9 Psychologists place the limits of human cognition at approximately seven unique items in working memory at a time. See G. A. Miller, "The Magical Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing Information," *Psychological Review* 63, no. 2 (1956): 81-97 .
- 10 Peter P. Perla, "The Art of Wargaming," (Naval Institute Press, 1990), 196
- 11 Anthony Grimes and Phillip J. Kitchen, "Researching Mere Exposure and the Endowment Effect on Consumer Decision Making," *The Journal of Psychology* 141, no. 2 (2007): 117-125.
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- 14 This remains a critically important area of the IE to model and wargame, however, and should be pursued as the focus of studies examining the creation and employment of narratives.
- 15 This implies that IO are significantly easier to carry out within our model than in the real-world, and future wargames may find it useful to focus on this particular aspect of the IE.
- 16 Allowing them to do so is completely feasible but would necessitate a change in wargame focus and design due to the radically different legal authorities and responsibilities of the military during war.
- 17 Prioritizing physical maneuver and achieving operational objectives mostly via kinetic effects is a strong cultural bias within the military. Employing these traditional assets to achieve informational effects, especially within competition or gray-zone conflict settings, is something that military leaders are simply uncomfortable and inexperienced in due to doctrinal and organizational norms.
- 18 Recent history has shown us in the case of 2016 US Presidential Election polling, that traditional measures of public attitude evaluations are neither dependable nor timely. Even polls conducted days in advance failed to accurately forecast public sentiment. See Kennedy, et al., "An Evaluation of 2016 Election Polls in the U.S.," *American Association for Public Opinion Research: Ad Hoc Committee on 2016 Election Polling*: <https://www.aapor.org/Education-Resources/Reports/An-Evaluation-of-2016-Election-Polls-in-the-U-S.aspx#APPENDIX>. Accessed 01/27/2020.

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# UNDERSTANDING AND CHANGING HEARTS AND MINDS: TEACHING THE ROLE OF INTELLIGENCE IN THE INFORMATION DOMAIN

## Introduction

One of the texts used in a core security course taught at the National Defense University (NDU) asserts that “[a] state’s grand strategy is reliant primarily on military, economic, and diplomatic power—at least that is what history teaches, as there has yet to be a great power whose grand strategy was based primarily on soft power, cyber power, or informational power.”<sup>1</sup> While the information lever is included as part of the “DIME” moniker, as the quotation suggests, it has nearly always been given less attention than the other elements of national power.

That is changing. As noted in the most recent National Defense Strategy (NDS), the Department of Defense (DoD) is focusing more on great power competition in the “grey zone”—including hybrid warfare. This requires a shift in Professional Military Education (PME), making it vital to educate future senior military and civilian officials on the range of authorities and capabilities that help defend U.S. national interests in the information domain. Focusing on the intelligence element of national power, this paper highlights ways to teach PME students how to harness the intelligence community’s important authorities and capabilities.

What follows is a discussion on what students in PME institutions learn about intelligence support and partnerships to USG public diplomacy (PD) and information operations (IO) efforts. In addition, it examines how faculty from the Intelligence Community (IC) instruct PME students on this topic—including what materials and cases are used—so other instructors can leverage this information to sprinkle the key points in the relevant core and elective PME courses.

## Understanding the Global Information Environment

Substantively, teaching about intelligence support to USG PD and IO in PME focuses on two areas: 1) the role of the IC in helping U.S. government (USG) counterparts understand the foreign open source environment and the overt and covert information activities of foreign governments and business; and 2) the role of the CIA in executing Presidentially-directed covert action (CA) that may involve covert influence (CI) activities.

To operate effectively in the information domain, PME students should have familiarity with the authorities and capabilities of the IC's open source intelligence (usually labelled "OSINT") collectors and analysts. A focal point for this work is the CIA's Open Source Enterprise (OSE), part of the CIA's new Directorate of Digital Innovation since 2005. However OSE has had many homes and names within CIA—and in fact predates the CIA's formation—so students focusing on PD and IO should be aware that OSE was known as both the Foreign Broadcast Information Service (FBIS) until 2005 and the DNI Open Source Center (OSC) until 2015.

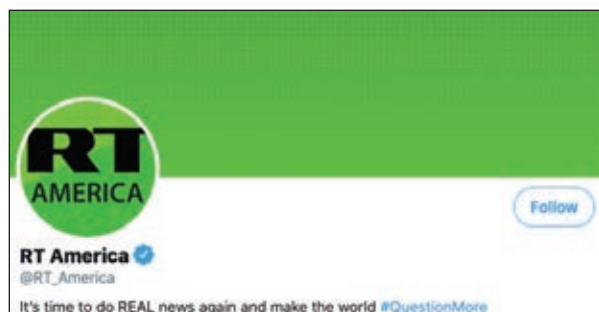
Students should be introduced to the range of products and services that can directly support PD/IO work and how the IC works with PD and IO professionals. In addition to daily translations, transcriptions, and data, the IC produces analytic and summary products on particular media sources: a publicly released example is Annex A of the 2017 Intelligence Community Assessment (ICA) on Russian interference in the 2016 election.<sup>2</sup>

While particular OSE products and services relevant to PD and IO professionals vary over time, part of the OSE's mission is to help the IC and USG understand the foreign information environment. More precisely the OSE looks to understand the bias, reach, expertise, authoritativeness, control, and style of foreign open source platforms and media sources. For example, by using OSE products and services on the pan-Arab media environment, U.S. State Department officials appearing on Arab television would be better prepared to anticipate the questions and concerns of Arab journalists.

Another key element that intelligence educators add to a more sophisticated understanding of the information environment is a focus on how the IC can help USG officials better appreciate

the overt information activities of other nations. The 2017 ICA's Annex A provides an excellent example of an OSE assessment of foreign influence activities and helps IO and PD professionals to better understand their competitors:

RT America TV, a Kremlin-financed channel operated from within the United States, has substantially expanded its repertoire of programming that highlights criticism of alleged US shortcomings in democracy and civil liberties. The rapid expansion of RT's operations and budget and recent candid statements by RT's leadership point to the channel's importance to the Kremlin as a messaging tool and indicate a Kremlin-directed campaign to undermine faith in the US Government and fuel political protest. The Kremlin has committed significant resources to expanding the channel's reach, particularly its social media footprint. A reliable UK report states that RT recently was the most-watched foreign news channel in the UK. RT America has positioned itself as a domestic US channel and has deliberately sought to obscure any legal ties to the Russian Government.<sup>3</sup>



## The Role of Covert Influence

IC faculty at PME schools also help IO and PD practitioners understand the large and sometimes powerful role of covert information operations by foreign actors. For example, during the Cold War, the Russian security and intelligence service (KGB) claimed to have planted over 5,000 articles in Indian newspapers in 1975.<sup>4</sup> In addition, the KGB’s covert influence programs (called “active measures” by the Soviets) also included fabrications that gained traction in the broader media. Perhaps the best-known example is the KGB role in spreading the story that the U.S. military was responsible for AIDS:

[O]ne of the most successful active measures ...was the attempts to blame Aids [sic] on American biological warfare. The story originated...in an article published by the Indian newspaper Patriot, alleging that the Aids virus had been ‘manufactured’ during genetic engineering experiments at Fort Detrick, Maryland. In the first six months of 1987 alone the story received major media coverage in over forty Third World countries.<sup>5</sup>

Intelligence educators at PME institutions play a key role in helping future USG flag-rank officers and their civilian counterparts

understand the role and limits of U.S. covert influence (CI) activities. In particular, they emphasize that CI should be executed in concert with the other tools of national power to be more effective. Students also learn the limits of covert influence. As with any information or even advertising effort, CI typically works best to amplify existing ideas and themes rather than creating totally new and entirely foreign notions. Also, students need to understand the overall legal and policy framework for covert action (CA), including the process of creating a Presidential Finding for covert action, amending an existing CA finding through a Memorandum of Notification (MON), and the central role of congressional oversight of CA through the Gang of Four/Eight, the House Permanent Select Committee on Intelligence (HPSCI), and the Senate Select Committee on Intelligence (SSCI).

Finally, PME students should be educated on how the IC partners work with the rest of the USG in the field at military commands, at embassies, and in Washington D.C. through the inter-agency policy-making process. Giving students an understanding of the touchpoints with the IC will help them partner more effectively and leverage the IC’s authorities and capabilities.

**As PME increasingly focuses on great power competition in the “grey zone”—including hybrid warfare—IC faculty must play a more critical role in helping PD/IO professionals understand the IC’s authorities, capabilities, and partnerships with the rest of the USG in the information domain.**

## Teaching Materials Illustrating the IC's Role in PD and IO

The role of intelligence in supporting and partnering with PD and IO is addressed in the PME context in two ways: integration into the core national security curriculum and through elective courses on intelligence. IC faculty representatives to PME offer instruction that helps students understand how to collaborate and leverage the IC to support PD and IO.

IC faculty members often provide useful case studies on the IC's role in PD and IO to their colleagues in faculty preparation sessions for core national security courses and then use these materials to supplement their own individual instruction. For example, NDU's Eisenhower School's core strategy course includes a lesson on hybrid warfare in which all students read the 2017 ICA on "Assessing Russian Activities and Intentions in Recent U.S. Elections," including the appendix from the CIA on RT America.<sup>6</sup> IC faculty also use material from the U.S. Department of Justice's Indictment of Russia's Internet Research Agency to illustrate the contemporary influence activities of a U.S. rival.<sup>7</sup> These documents detail the Russian information campaign to influence the 2016 election and exacerbate rifts in the US population.

To explore the use of soft power, an IC faculty member teaching in the Air War College's national security core course used the example of the "Zhivago Affair" in which the USG enabled the publication and distribution of Boris Pasternak's anti-regime novel *Dr. Zhivago* in the USSR.<sup>8</sup> Another IC faculty member at National Defense University noted the role of CIA in the production of an animated version of George Orwell's *Animal Farm*.<sup>9</sup> This movie—available on YouTube—tells the story as an allegory of the Stalinist takeover of the Russian Revolution but changes the novel's ending to permit the downtrodden animals to overthrow the regime at the movie's conclusion.<sup>10</sup>

Core course materials can be found in a number of excellent publications. Frances Stonor Saunders' book *The Cultural Cold War: The CIA and the World of Arts and Letters*, discusses multiple instances in which the USG leveraged the CIA's authorities and capabilities to covertly support organizations that promoted anti-Soviet or anti-Communist intellectual, cultural, or artistic efforts.<sup>11</sup> The fullest discussion of the KGB's efforts to blame the US military for the creation of AIDS is Thomas Boghardt's "Operation INFEKTION: Soviet Bloc Intelligence and Its AIDS Disinformation Campaign."<sup>12</sup>

CIA and other IC faculty at the other PME institutions typically teach intelligence electives that includes a section on open source intelligence (OSINT) and covert action/covert influence (CA/CI). Many of the intelligence elective courses use Mark Lowenthal's *Intelligence: From Secrets to Policy* (8th Edition) as the core text which touches on the role of OSINT and CA/CI.<sup>13</sup> Also several IC faculty assign a 2019 article by Charles Pasquale and Laura Johnson, "Covert Action as an Intelligence Subcomponent of the Information Instrument," to introduce the IC's role in understanding foreign OSINT environments and the CIA's role in CA/CI.<sup>14</sup>



Animal Farm Movie, 1954

In addition to intelligence electives and sections in the core curriculum, IC faculty members also provide guest speakers on information operations and public diplomacy. For instance, the IC provides guest speakers for the Air University's Joint Information Operations course (at the GO/FO level). A few PME institutions offer more in-depth instruction. Notably, the CIA faculty representatives at the Air War College and Naval Postgraduate School teach classified electives on covert action which include readings and discussions on historical CA programs that include covert influence elements.

## Conclusion: PME's Critical Role in Achieving Supremacy in the Information Domain

In sum, as PME increasingly focuses on great power competition in the "grey zone"—including hybrid warfare—IC faculty must play a more critical role in helping PD/IO professionals understand the IC's authorities, capabilities, and partnerships with the rest of the USG in the information domain. Moreover, all PME faculty should become more fluent in how the intelligence world can understand and change hearts and minds. Only by mainstreaming these insights across the curriculum will we prepare all our senior military and civilians to compete and triumph in this new strategic environment.

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### Endnotes

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TEACHING THE  
INFORMATION  
INSTRUMENTS OF POWER:  
CURRENT PROFESSIONAL MILITARY  
EDUCATION APPROACHES

## Overview

In January 2020, the U.S. Advisory Commission on Public Diplomacy sponsored a symposium on “Educating Leaders for a Competitive Information Environment: Closing the Gap between Theory and Practice in Professional Military Education.” Concurrently, symposium organizers solicited active examples of PME courses that address the information instruments of power. These academic program and curriculum descriptions provide a broad overview of priority areas of concentration. At the same time they serve as a useful indicator of existing trends in preparing national security practitioners to engage effectively in today’s competitive information environment.

## PME Institutions Represented

### Joint War Colleges / Schools

- National War College, National Defense University, Washington, D.C.
- The Eisenhower School, National Defense University, Washington, D.C.
- The Joint Forces Staff College, National Defense University, Norfolk, Virginia
- The College of Information and Cyberspace (CIC), National Defense University, Washington, D.C.
- The Defense Information School (DINFOS), Fort Meade, Maryland

### Service War Colleges / Schools / Organizations

- The U.S. Army War College (USAWC), Carlisle, Pennsylvania
- The Naval War College, Newport, Rhode Island
- The Naval Post Graduate School, Monterey, California
- The Marine War College (MCWAR), Marine Corps University, Quantico, Virginia
- Center for Advanced Operational Culture Learning (CAOCL), Marine Corps University, Quantico, Virginia

### Department of Defense Contracted Educational Courses

- Information Environment Advanced Analysis Course (IEAA), Sponsored by the Office of the Under Secretary of Defense for Intelligence (OUSD(I))





## NATIONAL WAR COLLEGE, NATIONAL DEFENSE UNIVERSITY, FORT MCNAIR, WASHINGTON, D.C.

### Overview

Established in 1946, the National War College is located in Theodore Roosevelt Hall on Fort Lesley J. McNair in Washington DC. According to Lieutenant General Leonard T. Gerow, President of the board that recommended its formation,

the College is concerned with grand strategy and the utilization of the national resources necessary to implement that strategy... Its graduates will exercise a great influence on the formulation of national and foreign policy in both peace and war.

The National War College is jointly sponsored by the Chairman of the Joint Chiefs of Staff and the U.S. Department of State with a military officer serving as Commandant and a Foreign Service officer with Ambassadorial rank serving as the Commandant's Deputy and International Affairs Adviser. The diplomat-scholar George F. Kennan inaugurated this position in 1946. While at NWC, Kennan developed the intellectual underpinnings of the Containment Doctrine of the Cold War and delivered thirteen lectures that addressed the emerging competitive information environment and great power competition. Those lectures are now chronicled in *Measures Short of War: The George F. Kennan Lectures at the National War College, 1946-47*.

Today, the National War College offers a degree of Master of Science in National Security Strategy through a rigorous one year, senior-level course of study that incorporates guidance from the Joint Professional Military Education Officer Professional Military Education Policy; Title 10 of the U.S. Code § 668, § 2151, and § 2155; Desired Leader Attributes (DLAs) for Joint Force 2020; and annual or biennial Special Areas of Emphasis generated by the Joint Staff. Students are generally lieutenant colonels to colonels and equivalent civilians from across the national security establishment.

The NWC program expands and enhances students' ability to analyze national security issues and where challenges to security exist, develop appropriate national security strategies – strategies that integrate all the elements of national power, including information. The curriculum addresses the fundamentals of thinking strategically, elements and instruments of national power, theory and practice of war, domestic and international context of national security strategy, and contemporary military strategy. A fundamental strength of NWC is its thoroughly joint, interagency, and multinational environment and its approach to study. By design, students and faculty come from all U.S. armed forces evenly, from U.S. civilian departments and agencies concerned with national security policy, and from a broad coalition of foreign militaries. The NWC program stresses the interrelationship of domestic, foreign, and defense policies, and the necessity of inclusion and coordination of Service, interagency, and multinational capabilities, perspectives, and other factors in national security strategy planning and execution. Understanding the international context and culture have taken on a new emphasis.

## Information Elements in the Core Curriculum

The National War College curriculum begins by introducing students to the art of strategic leadership, specifically focusing on developing critical thinking skills and the ability to apply strategic logic when considering strategic challenges. Strategic logic entails applying five fundamental elements of strategy: analyzing the strategic situation, including identifying security challenges; defining the ends, or outcomes sought, including overarching political aims and any subordinate objectives required to achieve those aims; identifying and/or developing the means required, including capabilities and resources; designing the ways to use the means; and assessing the costs and risks associated with the strategy. The information environment and capabilities are woven organically throughout the core curriculum.

## Information Environment as an Element of the Strategic Environment

Every security challenge occurs within a broader strategic context shaped by both the domestic and the global environments. Analyzing the global context is a crucial step in applying strategic logic to address a strategic challenge. The NWC core curriculum includes an international context course that provides students with a set of analytical tools for examining key regional and global trends, dynamics, and conditions that define the relevant international context for a national security strategist. This core course implicitly addresses cognitive elements of the information environment by highlighting competing beliefs about how the world works and their effects on foreign policy and strategy debates and decision-making. The core curriculum stresses that strategists' ability to analyze the global strategic environment should not be limited to the knowledge

of "facts" about the world, but must also encompass their ability to assess and reassess their own and others' ideas and assumptions about the global context.

The core curriculum also includes regional and functional courses that provide the foundation for student masters' theses in which students identify contemporary strategic challenges within a selected region or function and craft national security strategies using multiple instruments of power, including information tools, to address the security challenge. Within these courses, students apply analytical tools to examine political and economic, socio-cultural and historical, bureaucratic and technological factors, conditions and dynamics that influence public opinion and ultimately shape state and non-state policy decisions and behaviors. Field practicum studies allow students to travel to specific regions to gain first-hand understanding and perspectives of actors engaging in the contemporary information environment and employing information instruments of power.

While all regional courses incorporate frameworks to understand the specific information environment, one of the year-long functional courses focuses specifically on cyberspace at the classified level. This in-depth examination covers the theory and nature of cyber technology, cyber power, and cyberspace as a battlespace. The course addresses how the U.S. and other competing powers approach cyberspace, including cyber security and military and civilian exploitation of cyber technology and capabilities as tools of national policy.

## Information as an Instrument of Power

Developing and implementing national security strategies is inherently a multi-institutional endeavor that incorporates multiple instruments of power. The NWC

core curriculum addresses the attributes and logic underpinning the employment of various instruments of power, the relationships between instruments, and their orchestration in support of political aims. Students begin with overviews of the roles of information and cyber as instruments of national power and the ways great powers use information either by itself or in conjunction with other instruments, including “gray zone” activities.

Within the core curriculum students analyze historical and contemporary cases that illustrate successful and unsuccessful efforts to design and implement national security strategies. In each case, students dissect the capabilities and limitations of instruments, including the information instrument in its various manifestations from intelligence and information collection and analysis, to public diplomacy and information operations including overt and covert activities intended to influence others’ attitudes and behaviors. Cases also may address how other powers may assess the strategic situation and employ the information instruments, including the use of the information instrument to reinforce or discredit others. Students learn to appreciate that the utility of the information instrument, like other instruments, may be situation-dependent. Within contemporary cases, students also consider information as a joint function supporting military operational planning.

### Media Engagement Exercise

The core curriculum dedicates a full day to the role of the domestic media in national security, including bringing in senior print and/or TV media professionals to relay a first-hand understanding of the role of the media in public discourse, and the advantages and limitations of the news as an instrument of national power. NWC also offers a voluntary media engagement exercise conducted with

the Medill School of Journalism’s Washington Program. The media engagement exercise goals are two-fold: to enhance civilian journalism students’ understanding and reporting of the national security enterprise including the complexity of civilian-military relations within a democratic republic in implementing strategy and responding to crises; and to enhance national security practitioners’ (NWC students) appreciation for and ability to interact and build relationships with media professionals which will enable them to more effectively leverage tools of the information instrument.

NWC students receive media engagement training prior to the exercise that addresses the following topics: today’s information environment and media ecology; audience psychological factors (cognitive and emotional) that impact understanding and decision-making; and the process involved in communicating strategically. In other words, the training encompasses connectivity, content, and cognition. During the media engagement exercise, NWC students determine their short-term responses to an evolving crisis scenario, develop communications plans, and communicate via engagements with journalism students. Students analyze audiences and develop messaging for simulated social media outlets using an online chatroom system in which they release written statements, press releases, announcements, and responses to news updates. Other students engage in media “gaggles” or impromptu press engagements in which they provide informal updates and address media questions in front of fix camera positions. Other students practice short-form interviews in sit-down, on the record or background engagements with journalism students. And finally, toward the end of the exercise, students conduct a formal press conference with opening statements followed by moderated questions from a press pool in front of cameras and videos. During the

exercise, professional journalists and public affairs professionals mentor both the NWC and journalism students. They offer advice regarding how to understand the situation and problem, assess audiences, develop themes and messages, and deliver content via multiple media modes.

### Information Environment Electives

NWC offers an array of electives that address understanding and engaging in the information environment. This section highlights two specific long-standing electives. Taught in a classified setting, *Cyber Operations and National Security Strategy* examines the threat posed by the use of cyberspace in geopolitical competition. It seeks to explain how cyber conflict works and how it relates to traditional forms of military conflict by examining the emerging character of cyber conflict and the logic and incentives behind such activities, in addition to specific cases.

*Public Diplomacy and National Security* examines the role of public diplomacy and strategic communication as an instrument of state power designed to understand, inform, and influence external audiences in the service of national security/foreign policy objectives. Students conceptualize how public opinion is formed within an evolving information environment shaped by global trends and technological advances. Students also learn social network theory and other conceptual frameworks that provide the logic for how people-to-people and electronic networks affect human attitudes and behaviors. The course introduces public diplomacy toolkits comprising of daily communications, international broadcasting and digital media, educational exchanges and cultural diplomacy, and nation branding. Students create public diplomacy strategies in support of foreign policy and defense objectives, and consider ways to measure progress and impact.



## THE EISENHOWER SCHOOL, NATIONAL DEFENSE UNIVERSITY, FORT MCNAIR, WASHINGTON, D.C.

### Overview

The Dwight D. Eisenhower School for National Security and Resource Strategy, originally established in 1924 as the Army Industrial College, was the first school of its kind and was focused on issues of industrial mobilization for military purposes. Under the guidance of the Chairman, Joint Chiefs of Staff, The Eisenhower School prepares senior military officers, government civilians, and selected representatives from the private sector and international officers for the national security challenges of the 21st century. The goal is to leverage technological advances, integrate new strategic and operational concepts, identify and adapt to evolving global developments, and channel the vitality and innovation of the Services, the interagency, and allies to achieve a more seamless, coherent effect when confronting new national security challenges and the battlefields of the future.

The Eisenhower School accomplishes its mission with a curriculum designed to promote the development of students as strategic thinkers and national security policymakers. The academic program includes courses in strategy, economics, acquisition and innovation, industry analysis, industry study and strategic leadership. The core courses are supplemented by a variety of elective courses and an individual student research

program. Additionally, the school also offers concentration options, including the Senior Acquisition Course, as directed by the Defense Acquisition Workforce Improvement Act of 1990, Long-Term Strategy, and Supply Chain Management. The curriculum concludes with in depth, one-of-a-kind study of a choice of critical industries that requires the development of a strategic perspective on the U.S. and global industrial base and its role in supporting the resource requirements of national security.

### Information Environment Elements in the Strategy Curriculum

The Eisenhower School's Department of National Security and Economic Policy is primarily responsible for educating students in operations in the information environment. The department's main focus is developing the ability to analyze the national security environment from a political and economic lens, using theory, reality, trend analysis, and strategic forecasting to develop long term strategies that manage risk and mitigate the impacts of surprise. The Strategy Course incorporates operations in the information environment throughout the curriculum with approximately twelve of over fifty-five hours of instruction dedicated to the subject. Intelligence Community faculty members, both current and previously served, contribute liberally to the curriculum adding readings, scenarios, and relevant real world experience. Operations in the information environment are deeply interwoven into country analysis as part of the diplomatic and information instruments of national power.

Students are introduced to all instruments of power and contemporary strategic challenges. They then analyze the strategic environment through country analyses focusing on geostrategic, cultural, historical, and national perspectives of other countries. The focus is on understanding how nations perceive their

strategic environment, and their own strengths and weaknesses across all instruments of national power in that environment. Students learn how some nations use information operations as an asymmetric lever against the leverage of the United States and the west.

Students are then introduced to different tools including the Three Horizons model and the Shell Two Axis Scenario Development method for foresight into the strategic environment, and the Ascher-Overholt model to develop long term strategies capable of managing change in a manner that benefits the U.S. Students also conduct a simulation involving an international nuclear crisis and receive lectures that focus on operations in the information environment: the diplomatic instrument of power and its interaction with the other elements of national power; the nature of hybrid warfare and potential strategies can be employed to counter its effects; and, contemporary deterrence and warfighting challenges in space, cyberspace, and the electromagnetic spectrum.

Students also examine how potential adversaries are leveraging innovation and emerging information communications technology. Students apply forecasting and analysis skills to historical examples using the information available to the players at that time, and evaluate the effectiveness of actual strategies used. Students then look at the current strategic environment and a potential future crisis.

### Information Environment Elements in the Industry Study Curriculum

The Eisenhower School's National Security Industrial Base Department is primarily responsible for producing strategic leaders who understand how to analyze and diagnose industry capabilities and health, understand how business people think, and are able to effectively navigate the political economy in

the space between government and industry in order to create politically feasible and resource-informed strategies for implementing more effective government policy related to national security resourcing. Field studies are an integral part of each industry study.

### Specific Industry Studies and the Information Environment

The Eisenhower School currently has eighteen Industry Study Seminars which are regularly reassessed for relevance. While operations in the Information Domain touch each Industry Study, four have a focus on operations in the Information Domain: Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR); Cyberspace and Advanced Computing (Cyber); Electronic Warfare; and Emerging Technology (Emerging Tech).

### C4ISR Industry Study

The C4ISR Industry Study focuses on the industries and National Innovation System required to meet the mid to long-term C4ISR needs in support of the National Defense and Security Strategies. Students use several taxonomies to examine the viability of C4ISR industries, academia and government institutions, and also explore the “competitive space” related to C4ISR to assess the strength or fragility of the industry, and what policy options, if any, should be considered.

Because the scope of C4ISR is too large to be considered over the course of a single semester, the focus in 2020 is narrowed down to meet DoD’s C4ISR UAS requirements to operate in contested air and cyberspace in an affordable and resilient manner. For context, students carefully consider the operational threats posed by the Great Power Competition, the Anti-Access and Area Denial capabilities of China and Russia, and the threats they pose through

export of C4ISR technologies. Students then examine how DoD stakeholders think about these challenges in the medium and long-term, and use that knowledge to assess the capability of industry to sustain our C4ISR technology.

### Cyber

The Cyberspace and Advanced Computing Industry Study studies the expanding network of over 20 billion devices, including computers, software, and data, and its impact to national security. The course focuses on industries, innovation, and resourcing related to four main areas in cyberspace and advanced computing; cybersecurity/cyberspace operations, artificial intelligence, advanced computing (quantum and neuromorphic), and telecommunications (primarily 5G). Students start with cyber case studies to establish a baseline of understanding regarding the technologies, risks, and impacts of operations in cyberspace. The students then conduct an analysis of key industry players, technologies, and the competitive environment, including a deep-dive analysis of selected firms. During the analysis students place some emphasis on Chinese initiatives and accomplishments in artificial intelligence. While students are not expected to be experts in cyberspace or computer science, they do learn enough to inoculate themselves from marketing buzzwords and flashy trends to understand the underlying technologies of cyberspace and advanced computing.

Throughout the course students are asked to consider the following policy challenges:

- What additional steps should U.S./allied/partner-nation leaders take to develop and maintain a sustainable competitive advantage in cyberspace?
- What actions should U.S./allied/partner-nation leaders take to develop and maintain a sustainable competitive

advantage in AI, advanced computing, and telecom technologies?

- What additional actions should U.S./allied/partner-nation leaders take to promote innovation and growth in the technology sector?

Students are asked to tackle relevant policy challenges in innovation, resourcing, human capital management, the security of information and information technology resources, and security in the cyber persona/cognitive layer of cyberspace, where attacks in cyberspace lead to changes in perception that lead to impacts on decision making. They present their findings to a panel of distinguished industry and government experts.

### Electronic Warfare (EW)

The Electronic Warfare Industry Study examines EW in a historical context and explores the interaction, challenges, vulnerabilities, and innovative technologies of the U.S., its partners, and its competitors. Some of the areas explored are:

- Cyclic EW funding/resourcing and the direct impact on competitive advantage.
- The EW/Cyber interaction.
- Emerging technology and its influence on EW/Electro-Magnetic Spectrum (EMS) development.
- Drivers pushing EW/EMS policy, strategy, structure to the forefront of current planning and resourcing conversations.
- Unique methodologies and internal interaction that partner countries utilize.
- Innovative R&D technologies/practices utilized by industry, government, and academia.

- Need for U.S. to maintain EMS superiority in a time of rising and resurgent powers.

The goal is for students to graduate with a better understanding of EW/EMS Industry -- both domestically and internationally -- in order to effectively engage its leaders, understand its applications, advise senior decision-makers, and craft well-informed national security policy.

### Emerging Technologies

Emerging technologies have historically been central to U.S. national security and have helped the U.S. maintain technological dominance and military superiority. However, dominance is not assured as the proliferation of knowledge and easier access to the technology has eroded U.S. historic advantages. Near peer competitors are investing in the research and development of similar technologies that are providing potential adversaries with next generation capabilities, greater power projection, and putting U.S. and allies at greater warfighting risk. U.S. investments in emerging technologies are key to developing and sustaining warfighting advantages, creating new operational capabilities and concepts, and guaranteeing technological superiority in the future.

This industry study addresses the strategic importance of emerging technologies to economic prosperity and national security and the interactions between academia, government and industry in fostering the development, growth and diffusion of such technologies.

In the past, many of these technologies were developed inside the broader defense industrial base and then spun out to commercial markets to improve the technology, more broadly commercialize it, and reduce the cost. Today, however, many of these technologies such as blockchain, cloud services, artificial intelligence, extended reality, quantum computing, and

5G infrastructure are being developed and fielded by private industry and many of the advances are being executed with limited DOD involvement or awareness. However, it remains vital that DOD transition innovative emerging technologies from commercial industry into DOD weapons systems and programs and do so quickly, safely, and effectively. Key stakeholders for the Industry Study are the National Science and Technology Council's Select Committee on Artificial Intelligence (NSCAI), the Joint AI Center and the Defense Innovation Board. Individual research paper topics will be sponsored by the NSCAI and students will be expected to address specific issues supporting the Committee's mandate to coordinate the American AI Initiative.



## THE JOINT FORCES STAFF COLLEGE (JFSC), NATIONAL DEFENSE UNIVERSITY, NORFOLK, VIRGINIA

### Overview

The Joint Forces Staff College (JFSC), located in Norfolk, Virginia, educates national security professionals to plan and execute operational-level joint, multinational, and interagency operations and instills in them a primary commitment to joint, multinational, and interagency teamwork, attitudes, and perspectives. Three JFSC schools that engage the information environment across a range of modalities include the Joint Advanced

Warfighting School (JAWS), the Joint and Combined Warfighting School (JCWS), and the Joint Command Control and Information Operations School (JC2IOS).

### Joint Advanced Warfighting School (JAWS)

The Joint Advanced Warfighting School (JAWS) at the Joint Forces Staff College delivers a Joint War College curriculum over 10.5 months to senior lieutenant colonels/commanders and colonels/captains (O5s and O6s). JAWS graduates are required to fill one of 62 unique Joint Duty Assignment Lists (JDAL), Joint Planner billets in the various Combatant Commands, Sub-unified Commands, and the Joint Staff. JAWS produces historically informed, strategically minded Operational Artists with the necessary critical thinking skills to address the most complex challenges facing the Joint Force and our nation. JAWS confers a Master of Science in Joint Campaign Planning and Strategy and Joint Professional Military Education (JPME) II credit.

Courses consider the information environment from a philosophical, policy, and strategy context while engaging in operational design, joint contingency and planning in crisis. The JAWS elective on Cyber, Intelligence and Information Considerations allows students to conduct research and collaboration up to the Top Secret/Sensitive Compartmented Information (TS/SCI) (NOFORN) level for operations and planning. Analysis of the complex information environment is also included in a student thesis and an oral comprehensive examination which combines theory, history, strategy, and research fields of study to evaluate critical analytical skills graduates need to excel in their future JDAL billets.



## Joint and Combined Warfighting School (JCWS)

The Joint and Combined Warfighting School (JCWS) at the Joint Forces Staff College educates national security professionals at the rank of Majors/Lieutenant Commanders (O4s) and above to plan and execute joint, multinational and interagency operations to instill a primary commitment to joint attitudes and perspectives at the nexus of the strategic – operational levels of war. The course grants Joint Professional Military Education (JPME) II credit and hosts four 10-week classes per year with one or two concurrent satellite classes.

The JCWS approach to the information environment is imbedded across the curriculum, beginning with the Joint Force Fundamentals course where students develop an understanding of the strategic challenges and gain an initial appreciation for foundational key considerations and related functions in the joint cyber and information lessons. In the Strategy and Campaign Design course, students understand the integrating function of information operations and utilize that understanding to contribute to the development of a combatant commander's campaign planning guidance. At the operational level of war, students analyze the operational/information environment through operational design. The Joint Planning Process is the vehicle used during the Integrated Contingency Planning course from plan initiation to order development, allowing the practical reinforcement of understanding in connectivity, content, and cognition. During the Planning in Crisis course, the exercises Purple SIROCCO/SOLACE enable students to compete in the information environment as they are introduced to multiple operational challenges in a time-constrained environment.

## Joint Command Control and Information Operations School (JC2IOS)

The Joint Command Control and Information Operations School (JC2IOS) at the Joint Forces Staff College uniquely trains in the information space, providing the Joint Staff and DoD an education and training platform for operational level planners and staff focused on Joint Information Operations, Defense Operations Security, Joint Military Deception and Joint Command, Control, Communications, Computers, Intelligence/Cyber (C4IC). The purpose is to educate, train and empower defense department personnel to specifically integrate and synchronize information-related capabilities, operations security, military deception and effectively apply Joint C4IC capabilities in support of a Combatant Command or Joint Task Force. The instruction incorporates the Joint Planning Process as the vehicle to drive scenario analysis and decision making through development of key staff products. JC2IOS delivers education and training over four main courses with specific completion timelines. Courses include the: Joint Information Operations Orientation Course (JIOOC), Joint Information Operations Planner's Course (JIOPC), Joint Military Deception Training Course (JMTC) and Joint Command, Control, Communications, Computers, and Intelligence (C4I)/Cyber Staff and Operations Course (JC4ICSOC).

### The Joint Information Operations Orientation Course (JIOOC)

JIOOC is a distance learning course delivered over four weeks. The course is taught at the unclassified level and provides military members and DoD civilians a basic understanding of the Joint Information Operations Environment. The course consists of several modules and assignments designed to orient students to Information Operations planning and Information Related Capabilities

(IRCs). The lessons provide a brief introduction to: Information Operations, Strategic Communication, Information Operations Theory and the Information Environment, Legality (as it relates to Information Operations), Information Related Capabilities (IRCs), Joint Planning and Joint Targeting. The JIOOC can be taken as a single course and is a prerequisite to the Joint Information Operations Planner's Course (JIOPC).

### **The Joint Information Operations Planner's Course (JIOPC)**

JIOPC is an in-residence course delivered over four weeks. Students must possess a Top Secret/Special Compartmented Information clearance (TS/SCI). The JIOPC mission is to establish a common level of understanding for Information Operations planners and IO capability specialists who will serve in joint operational-level IO billets. The primary objective of the JIOPC is to educate and train military students between the ranks of captain/lieutenant (O3) through colonel/captain (O6) and DoD Civilian equivalents, to plan, integrate and synchronize IO into joint operational-level plans and orders. The school accomplishes this through a combination of in-residence class presentations, guest lectures, case studies and practical exercises in a joint seminar environment. Specifically, the course focuses on six learning areas enabling students to appreciate the: Joint Planning Process, Joint Intelligence Preparation of the Operational Environment (JIPOE), IO Planning, Interagency Planning & Coordination, Military Deception (MILDEC) and Operations Security (OPSEC).

### **The Joint Military Deception Training Course (JMTC)**

JMTC is an in-residence or mobile training course delivered over two weeks. All students in the JMTC must possess a final U.S. Top Secret/Special Compartmented Information (TS/SCI)

clearance and the course is restricted to U.S. students. The JMTC mission is to establish a common level of understanding for Joint Military Deception planners who are or will serve in joint operational-level MILDEC billets. The course educates students between the ranks of captain/lieutenant (O3) through colonel/captain (O6) and DoD civilian equivalents to plan, integrate and synchronize MILDEC into joint operational-level plans and orders.

### **The Joint Command, Control, Communications, Computers, and Intelligence (C4I)/Cyber Staff and Operations Course (JC4ICSOC)**

JC4ICSOC is an in-residence course delivered over three weeks. All students in the JC4ICSOC must possess a Top Secret/Special Compartmented Information (TS/SCI) clearance. The JC4ICSOC mission is to provide a graduate-level command and control, information operations and cyberspace education on the current aspects of strategic C4I/Cyber organizations, systems and procedures to enable the staff to serve in joint operational-level billets requiring this expertise. Emphasis is balanced between the operational constructs associated with the Command and Control (C2) process and the management and operation of current joint C4I/Cyber systems. The program covers the wide spectrum of C4I/Cyber that extends from the national and strategic levels to the theater and tactical levels in support of the President, Secretary of Defense, and commanders who control military forces. Specifically, the course focuses on the following seven learning areas: Joint Policy, Doctrine and Strategy; Fundamentals (to include: Legal, Intelligence, Space Operations, Spectrum, Electronic Warfare, Information Operations and Cyberspace Operations); Systems and Networks; C4I/Cyber Initiatives; National, Joint and Service Command and Control; Planning; and Application.

For additional information or application to JFSC courses, go to <https://jfsc.ndu.edu>.



## THE COLLEGE OF INFORMATION AND CYBERSPACE (CIC), NATIONAL DEFENSE UNIVERSITY, WASHINGTON, D.C.

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### Overview

The College of Information and Cyberspace educates joint warfighters and national security professionals to lead and advise national security institutions and advance global security within the cyberspace domain and through the use of the information instrument of power. Originally established in 1964 as the Department of Defense Computer Institute, the school transitioned to the Information Resources Management College (IRMC), informally the “iCollege,” in 1988, known for its robust distance learning programs. In 2016, Congress retitled the school to reflect the prioritization of today’s challenges related to information and cyberspace. Courses have been offered both in-person and online for students from the U.S. military, the interagency, allied and partner nations, and the private sector.

### Graduate-Level Concentrations

Within the National Defense University academic program, CIC faculty offer specialty concentrations with the following student learning outcomes:

- Evaluate the international security environment with an emphasis on the impact of information of adversaries, competitors, and allies.

- Analyze the critical aspects of the human terrain and the information environment to influence strategies.
- Apply trans-regional, multi-domain, multinational, policy, and strategic approaches to strategies to influence populations and governments.
- Apply trans-regional, multi-domain, multinational, policy, and strategic approaches to holistic, joint, combined, and multi-instrumental strategies in disparate information environments.
- Create information, narrative, and influence strategic plans applying principles of strategic thinking and leadership, including creative and critical thinking, decision-making, and ethical conduct.

Such courses of study challenge students to become more effective strategists capable of planning and implementing information-based strategies nested within broader national security and defense strategies.



## DEFENSE INFORMATION SCHOOL (DINFOS), FORT MEADE, MARYLAND

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### Overview

Today’s complex and dynamic information environment requires professionals who can make sense of the chaos and advise commanders on how to employ communication effectively to solve operational problems.

Helping lead the way in this effort is the Defense Information School (DINFOS), located on Fort Meade, Maryland. DINFOS is the Department of Defense's home for Public Affairs and Visual Information Training, and its mission is to train and sustain professional communicators for the Department of Defense (DoD) and its partners.

DINFOS trains more than 2,600 enlisted, officer, DoD civilian and international military students every year in public affairs, strategic communication and visual information disciplines at the basic and intermediate levels. Over the last several years, the school has pursued major transformation in an effort to keep pace with changes in the information environment and deliver communicators to the field who are better equipped to achieve desired effects for commanders. These changes are evident in all facets of the school's curriculum.

### Public Affairs Qualification Course

At the entry-level, Public Affairs and Communication Strategy and Operations (PA/CommStrat) Officers, senior Non-Commissioned Officers and civilians attend the Public Affairs Qualification Course (PAQC). During this three-month course students learn communication theory and planning, research and analysis, and communication integration in military operations. Students role-play a PA/CommStrat professional in a variety of scenarios throughout the duration of course, responding to real-world challenges communication professionals will experience in the field. The course has shifted from a focus on specific communication tactics to an emphasis on honing critical thinking skills, application through realistic scenarios, and fostering an aggressive and adaptable PAO mindset in the students. PAQC graduates now are better prepared to leverage the Information instrument of power and provide sound strategic communication advice and counsel to commanders.

### Mass Communication Foundations Course

DINFOS's entry level enlisted training has undergone an equally significant change. On Oct. 1, 2019, the school launched the new Mass Communication Foundations (MCF) course, a six-month program which consolidates nine different initial entry training courses and brings all the Services back together to receive common core communication training. Graduates of MCF will be proficient in basic public affairs and media relations, communication, writing and journalism, digital still photography and visual information management, basic digital video production, and basic multimedia and graphic design. The new course reflects the numerous career field mergers taking place within the PA and VI communities and the need for versatile enlisted communicators who can deliver a wider range of communication options to PAOs and commanders. These highly trained enlisted professionals will enable public affairs officers to create and lead small, dynamic teams of communicators who will better support the warfighter in the contested information space.

### Joint Intermediate Public Affairs Course and Joint Contingency Public Affairs Course

For mid-career communication professionals, DINFOS offers a variety of technical and communication leadership courses to enhance the skills of officers, enlisted and DoD civilians. In particular, the Joint Intermediate Public Affairs Course (JIPAC) and Joint Contingency Public Affairs Course (JCPAC) focus on developing better communication strategists. These courses offer students the opportunity to develop and apply strategic thinking to research, planning and analysis; communication capabilities; and military operational art and design. Students study information as a joint warfighting function, and research how their organizations can incorporate and leverage future information, communication and technology trends. JIPAC and JCPAC graduates gain a better understanding of the information

environment in the context of great power competition. DINFOS faculty work to instill a bias for action within the students with a focus on proactive coordination with other joint staff functions and other information-related capabilities.

### Public Affairs and Visual Information Learning (PAVILION)

While DINFOS offers a handful of its courses in distance learning format, the school is also evolving to deliver greater reach and value to the field in innovative ways. In spring of 2020, DINFOS launched the Public Affairs and Visual Information Learning in an Online Environment (PAVILION) platform. PAVILION will be an online resource for DoD communicators, focused on best practices, strategies, case studies, and interactive learning resources. Communication professionals from across the fleet and field will be able to visit PAVILION at any time to improve their skills, plan for future innovations or find shared best practices. Additionally, DINFOS is expanding its Mobile Training Team capability in order to provide timely, focused, cost-effective PA and VI training to U.S. military units and partner nation militaries as well as interagency partners when practical.

### Public Affairs Course for International Students

DINFOS is focused on supporting the Allies and Partners pillar of the National Defense Strategy by training international military students. DINFOS hosts the Public Affairs Course For International Students (PACIS) where attendees learn the basics of public affairs, media relations, and communication strategy, drawing from U.S., U.N. and NATO best practices. International partners are also eligible to attend other DINFOS in-residence courses as well as request Mobile Training Team support.

### Future Focus

Looking ahead, DINFOS will continue to train communicators who can leverage public affairs and visual information as a strategic tool for commanders across the joint force. Every student who attends DINFOS -- from the most junior to the most senior, whether in-residence or distance learning -- leaves with an understanding of their place in the complex information environment and proficiency in their particular role. In the years to come, DINFOS could serve as a hub to bring together other information related capabilities (IRCs) in an effort to better synchronize efforts across the Information joint function and break down functional stovepipes. The importance of leveraging information to achieve strategic ends is only going to grow in the future. DINFOS must remain engaged, relevant and ready to contribute to the fight by producing well-trained, critical thinking communicators who are ready to navigate the challenges ahead.

## UNITED STATES ARMY WAR COLLEGE, CARLISLE, PENNSYLVANIA

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### Overview

The U.S. Army War College educates and develops leaders for service at the strategic level while advancing knowledge in the global application of landpower. The college's educational programs develop strategic leaders by providing a strong foundation of wisdom, grounded in mastery of the profession of arms, and by serving as a crucible for educating future leaders in the analysis, evaluation and refinement of professional expertise in war, strategy, operations, national security, resource management, and responsible command. The program educates students on the theory of war and peace; U.S. national security policy,

processes and management; military strategy and unified theater operations; and command and leadership while increasing students ability to think critically, creatively and strategically; frame national security challenges in their historical, social, political and economic contexts; and promote a military culture that reflects the values and ethic of the Profession of Arms.

Following 10 months of rigorous study, the U.S. Army War College confers a Master of Science in National Security Strategy to an average of 300 U.S. students and 75 foreign military officers annually through the resident program. Another 385 students are conferred the same degree annually following a 2-year distance education program. Joint Professional Military Education Officer Professional Military Education Policy and Joint Staff developed Special Areas of Emphasis informs and guides both programs.

### Information in the Curriculum

“Information” is woven throughout the core curriculum in all of its various contexts. DIME (Diplomatic, Information, Military, Economic Instruments of Power) is a recurring and ever-present framework, compelling students to think critically about information’s role in the execution of national power. The Department of Command, Leadership and Management includes information concepts and how leaders leverage information to enhance effectiveness. The Department of Military Strategy, Planning and Operations examines information as one of the seven joint functions, the informational aspect of presence and maneuver, and the role of information in affecting cognition and behavior. The Department of National Security and Strategy looks at information as a component of national policy and adversary’s use of disinformation. Distance Education looks at “Campaigning in the Gray Zone.” Historical examples used throughout the curriculum also

emphasize the use of information, from the speeches in Thucydides to addresses in the United Nations leading up to the Gulf War.

In addition to inclusion in the core curriculum, information is addressed more specifically in many electives offered by the college. As an example, the Cyberspace Fundamentals elective has a lesson on the impact of social engineering and social media.

## UNITED STATES NAVAL WAR COLLEGE, NEWPORT, RHODE ISLAND

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### Overview

Established in 1884 as an advanced course of professional study for naval officers, the U.S. Naval War College educates and develops leaders at specific stages in their careers from all services, U.S. government agencies and departments, and international navies.

### Information Environment (IE) and Operations in the Information Environment (OIE) within Joint Military Operations

The Joint Military Operations Department offers in-depth and interactive courses in operational art, planning, and critical thinking skills to achieve national and military objectives in peace and war. Students examine these subjects from the perspective of a combatant commander and a joint task force commander. In particular, the Senior Level Course approach includes dedicated sessions on the information environment and cyber warfare. Additionally, the students take part in a conceptual planning exercise that highlights, in part, the information environment. Using Design Methodology, students research an assigned region or nation as a complex adaptive system with select students focusing on the

information environment in particular. Having developed an understanding of the operating environment and problems faced, students develop a theory of action that a combatant commander may use to move the region or nation from its existing state to a desired, better state. The information environment and operations in the information environment quite often become key parts of the theory of action.

### Information Environment Session

Students focus on how Information Operations (IO) and Operations in the Information Environment (OIE) are used to inform, persuade, and influence decision-making. Broadly speaking all military operations are “influence” operations in that the U.S. military undertakes actions to influence adversaries to make decisions favorable to larger U.S. objectives. The OIE attempts to assist senior leaders in understanding and applying the power of information in contemporary conflict. The session explores the military doctrinal basis of IO and discusses how information-related capabilities and OIE are used in conflict. Students appreciate that the confluence of information connectivity, content, and cognition combined to form the Information Environment (IE), which is a term of art in U.S. joint doctrine. Decision makers use the IE to collect and prioritize data and create information that is then synthesized into knowledge used to make decisions. Students also review IO successes and failures from the last decade plus of war.

### Cyber Warfare

Students learn how cyber warfare may be used in contemporary conflict to achieve military objectives and political ends. Faculty present a theory of cyber warfare to begin normalizing the many and varied aspects of this new domain and form of warfare, highlighting to students

that many of the actions described as cyber warfare are more accurately acts of cyber-enabled information warfare. Students discuss former National Defense University Director of Information Strategies Concentration Program Daniel T. Kuehl’s definition of cyberspace, specifically how

cyberspace is a global domain within the information environment whose distinctive and unique character is framed by the use of electronics and the electromagnetic spectrum to create, store, modify, exchange and exploit information via interdependent and interconnected networks using information communication technologies.

Students are asked to contemplate the impact of cyberspace on assigned missions and consider how cyberspace operations may affect a joint force commander’s ability to balance the operational factors of time, space, and force. Students learn to standardize warfighting terminology, including cyberspace operations of Offensive Cyberspace Operations (OCO), Defensive Cyberspace Operations (DCO), and Department of Defense Information Network (DODIN) Operations. Students also examine Russian and Chinese use of cyberspace operations in support of their military objectives and political ends.

## THE NAVAL POST GRADUATE SCHOOL, MONTEREY, CALIFORNIA

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### Overview

The Naval Postgraduate School provides relevant and unique advanced education and research programs to increase the combat effectiveness of commissioned officers of the naval service to enhance the security of the

United States. In support of the foregoing and to sustain academic excellence, NPS will foster a program of relevant and meritorious thesis and research experiences for NPS students that informs the curricula, supports the needs of the Navy and Department of Defense, and builds the intellectual capital of NPS faculty. To support the core Navy mission, NPS programs are inherently joint, inter-agency, and international.

### Information Environment in the Curriculum

The Naval Postgraduate School educates graduate students in the information environment (IE) through both theoretical and practical frameworks, with coursework that explores the fundamental aspects of the IE that support actions in the physical and cognitive dimensions – where objectives are met. On the technical side, our Space Operations, Cyberspace Operations, and Electro-Magnetic Spectrum Operations courses cover the collection and transmission aspects of OIE; processing and dissemination are explored in our Defense Analysis, Computer Sciences, and Information Sciences courses; and our Information Operations, Psychological Operations, Deception, Social Network Analysis, Non-Kinetic Targeting, and Cyberspace Attack and Defend courses help the students bring it all together to understand how and why biological and non-biological entities act on information. Some curricula focus on single aspects of the information environment, while others provide a breadth of education across the entire spectrum of OIE as noted above.

### Information as an Instrument of Statecraft

The Defense Analysis Department offers the Special Operations/Irregular Warfare curriculum which focuses on irregular warfare, sub-state conflict, terrorism and counterterrorism, and other “high leverage”

operations in U.S. defense and foreign policy. The Information Strategy and Political Warfare curriculum is focused on the strategic and operational dimensions of information relative to the use of force as an instrument of statecraft.

### Information Systems

The Information Sciences Department delivers programs in Information Warfare Systems Engineering (IWSE) and Joint Command, Control, Communications, and Intelligence Systems (JC4I). The IWSE curriculum produces officers that are well versed in the technical, theoretical, and operational aspects of interdisciplinary IO/IW as they relate to joint mission objectives in modern warfare. The JC4I curriculum enables graduates to develop an understanding of the role C4I systems play in the use of military power and the ability to interpret the impact of C4I on operating philosophy; provide knowledge in technology, human capabilities, and joint military operations and how these factors are exploited in current C4I systems; and provide the framework whereby students can perform requirement and planning studies of new C4I systems and contribute to crisis management.

### Cyber

The Information Sciences Department also hosts two interdisciplinary cyber programs: the Cyber Systems and Operations (CSO) curriculum and the Master of Applied Cyber Operations curriculum (MACO). The CSO program provides a deep understanding of the national and military application of integrated lines of operation including operation of the DOD Information Network (DODIN), Defensive Cyber Operations (DCO), Offensive Cyber Operations (OCO), and the required technical and nontechnical intelligence operations underpinning these. Students learn how to seize and sustain an information



advantage through all stages of operations, from early warning through detection, planning, targeting, cyber fires, assessing effects and resetting for follow-on plans and operations. The MACO program, designed for senior enlisted personnel, addresses a range of operational and technical topics in defensive and offensive cyberspace operations. This includes computer network attack, active and passive defense, exploitation, cyber analysis via automated and manual toolsets, operations, policy, and engineering.

## MARINE CORPS WAR COLLEGE (MCWAR), QUANTICO, VIRGINIA

### Overview

The youngest of the U.S. Armed Forces' war colleges, MCWAR was founded on August 1, 1990, as the Marine Corps "Art of War Studies" program. MCWAR became a separate college in Marine Corps University (MCU) one year later, and it achieved JPME Phase I accreditation in December 1992. In 2001, MCWAR was accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) and authorized to award the Master of Strategic Studies degree. In September 2006, MCWAR was the first senior service school to be JPME Phase II certified, and in January 2009 the College was fully accredited via the Process for Accreditation of Joint Education (PAJE).

MCWAR's student body – 30 students in its 44-week program -- consists of students from the Marine Corps, Navy, Army, Air Force, and Coast Guard, the Department of State, CIA, DIA, FBI, and DHS. Since 2010 the student body has included international military students.

In fulfillment of its role in the JPME and Marine Corps PME policy, MCWAR is dedicated to educating its students for the

challenges of a complex and dynamic security environment and preparing them to assume senior leadership positions within their service or agency. The College's curriculum is crafted to maximize the advantages of small-group seminars, employing the Socratic method and active adult learning techniques to generate debate, challenge student assumptions, and otherwise foster academic excellence.

The diversity of student backgrounds enables the seminar group, under faculty direction, to maximize collaborative learning as members share their knowledge and experience. Study trips, practical application exercises, wargames and writing and speaking opportunities allow the students to hone the skills they will need as strategic leaders by challenging them to think critically about current national security policy and strategy issues, develop viable alternatives, and articulate those alternatives in a clear and meaningful way. Finally, the curriculum exposes students to the foremost experts from national agencies, national military commands and the civilian academic world.

### Informational Dimensions of Diplomacy and Conflict in the Curriculum

In academic year 2019-20, the MCWAR core faculty included two State Department public diplomacy officers, one serving as the MCU State Department Chair and the other retired. They have added discussions of the informational dimensions of diplomacy and conflict to sessions throughout the year. They were joined by The Krulak Center's chair of strategic communications (another retired Foreign Service public diplomacy officer) and State Department officers from the office of R/PPR to introduce the informational elements of U.S. power – public affairs, public diplomacy, USG international broadcasting, and military operations in the information environment (OIE).

In many “country” (regional studies) classes, overall discussions of American policy include discussion of public diplomacy and operations in the information environment (OIE), and students include public diplomacy and strategic communication in their policy proposals. The curriculum includes classes on cyber, and cyber factors are often integrated into treatments of other topics, such as classes on Russia. From the Krulak Center, the Bren Chair of Cyber Conflict and Security and the Bren Chair of Armed Politics have led seminars focused on cyber security, cyber deterrence, and cyber operations. Each student learns the principles of effective public affairs in a three-day media training exercise. The skills are also exercised during large operational exercises and simulations, and each student receives individual coaching. A panel of three journalists meets the class to enlarge their view of the role of the media in American security policy.

For decades, the Marine Corps has concentrated all of its in-residence professional military schools at Marine Corps Base Quantico, unified under Marine Corps University since 1989. The academic synergy of the co-located Marine Corps PME enterprise naturally strengthens MCWAR’s curriculum. MCWAR is able to tap the larger resources of the MCU faculty, its wargaming expertise, its resources focused on operational cultural learning, and leadership. It can also draw on the large faculty of the Command and Staff College and The Brute Krulak Center for Innovation and Creativity – who teach such courses as “Influence” and “Modern Political Warfare: Cyber and Information Operations” -- to lead seminars and join media training sessions as role players. The Marine Corps Information Operations Center is also located at MCB Quantico. MCWAR students join the students of other schools both for large lectures by distinguished leaders and smaller

gatherings focused on specific issues. MCWAR students have attended presentations by both the Marine Corps Deputy Commandant for Information and the President of Radio Free Asia, for instance.

## CENTER FOR ADVANCED OPERATIONAL CULTURE LEARNING (CAOCL), MARINE CORPS UNIVERSITY, QUANTICO, VIRGINIA

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### Overview

CAOCL is the central Marine Corps agency charged with ensuring the Marine Corps is globally prepared, regionally focused, and effective at navigating and influencing the culturally complex 21st century operating environments in support of USMC missions and requirements. To accomplish its mission, CAOCL designs, delivers, and manages programming throughout the education and training continuum, conducts research and assessments, and provides scientific, policy, and subject matter advising. It also serves as one of the three proponents for Language, Regional Expertise, and Culture (LREC)-related doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF) issues throughout the Marine Corps.

### Operationalizing the Cognitive Dimension of Operations in the Information Environment (OIE)

The DoD *Strategy for Operations in the Information Environment* calls the cognitive dimension “the central object of operations in the IE.” The *Marine Air Ground Task Force (MAGTF) Information Environment Operations*

*Concept of Employment* characterizes influence operations as “heavily focused on the cognitive dimension of the information environment,” which includes understanding “the knowledge, attitudes, beliefs, and perceptions of the people.” CAOCL developed a multidimensional framework for the cognitive dimension of the information environment in order to enable Marines to more effectively conduct operations in the information environment. The framework helps Marines exploit the enemy’s cognitive dimension vulnerabilities; defend the friendly cognitive dimension; and inform, influence, and deceive target audiences as appropriate.

The framework consists of six themes:

- a. **Identity:** Macro-level, collective identity(ies) promoted within a state.
- b. **Worldview:** The nature of the international system, and the understanding of conflict and competition as expressed in official documents.
- c. **Education and Socialization:** The process of transferring knowledge and learning, including about proper social roles, status, and values.
- d. **Narratives:** Stories different groups have about what is happening and how things should be, and the friction caused by competing narratives.
- e. **Acquiring and Processing Information:** Formal and informal sources of information and the legitimacy thereof, access to and control of information.
- f. **Ways of Thinking/Perceiving:** What social groups see as important, good and bad, why things happen, and what is legitimate evidence.

CAOCL developed a Russia-centric prototype class using the cognitive dimension framework. Through scholarly research—including, but not limited to, official Russian Federation strategic documents and peer-reviewed, Russian-language academic works—“Russia and the Cognitive Dimension” explores the nuances of Russia’s approach to OIE and how this approach nests within Russia’s military doctrine and National Security Strategy. Additionally, this class provides concrete examples of how the U.S. and Russia view select world events differently. Further, it uses the aforementioned framework to explore the Russian cognitive dimension at the state and sub-state level. It enables Marines to leverage language, regional expertise, and culture (LREC) capabilities to analyze Russian actions and reactions. By enhancing Marines’ cultural understanding, it enables them to conduct OIE more effectively.

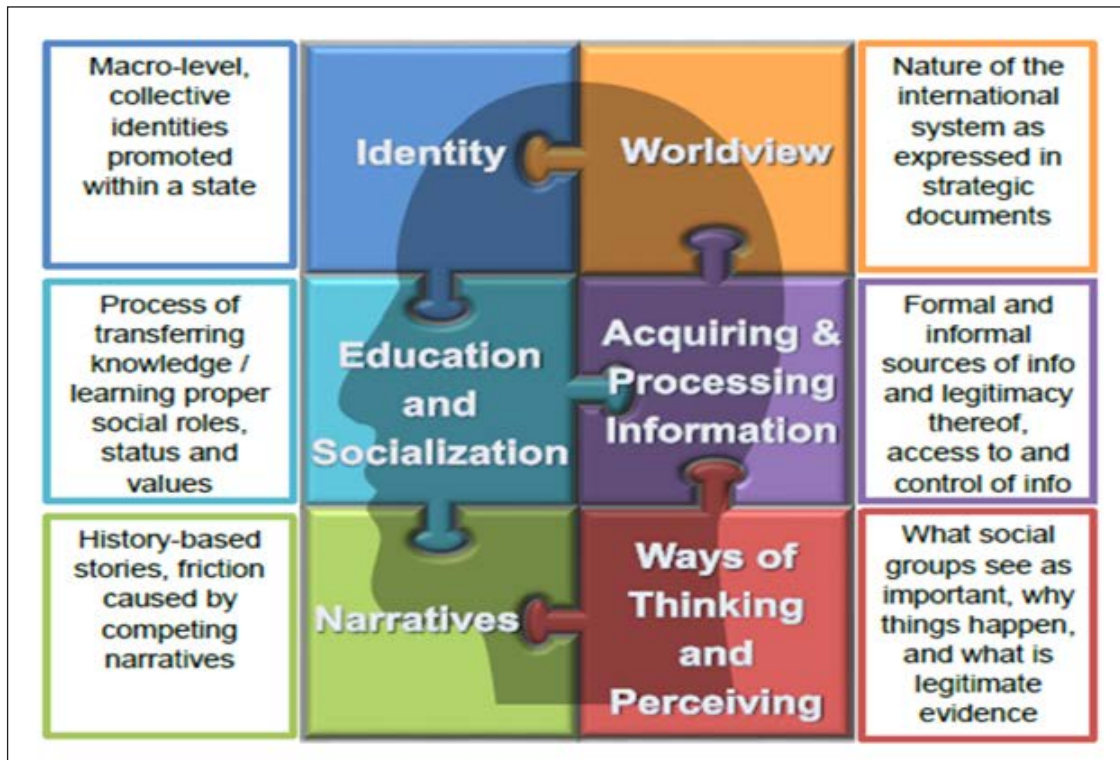
CAOCL developed similar classes on the Cognitive Dimension of China, Iran, North Korea, and VEOs. The primary target audiences are OIE practitioners, the Marine Corps Information Operations Center (MCIOC), the MEF Information Groups (MIG), and intelligence professionals. However, CAOCL believes this can add value to commanders and staffs at more senior levels, sister services, other USG departments, other OIE-related fields (e.g. the Communications Strategy and public diplomacy communities), and to the faculty within our respective educational institutions.

CAOCL believes this framework addresses two specific problems. First, the various definitions of the cognitive dimension are too broad to be actionable by practitioners. The cognitive dimension is described as the most important dimension of the information environment, yet we lack a structured way to go about understanding a foreign group’s cognitive

dimension. Second, it is difficult to cooperate within the joint force (and between DoD and DoS) in the information environment if we do not speak the same language or conceptualize it similarly. Terminology is one thing, but conceptual methodology is another. While the answer may not be a perfect fit for every organization, we have a unique opportunity to foster mutual understanding by adopting a common framework before each organization develops a stove-piped solution.

Access the Russian video and podcast at: <https://www.usmcu.edu/CAOCL/Media>

Access the CogDim concept paper here: <https://www.usmcu.edu/CAOCL/Pubs>



Cognitive Dimension of Operations Framework

## **INFORMATION ENVIRONMENT ADVANCED ANALYSIS COURSE (IEAA), SPONSORED BY THE OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR INTELLIGENCE (OUSDI)**

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### **Overview**

This 80 hour course equips intelligence, operations, and plans personnel with analytic concepts, affiliated techniques and operational constructs that empower its graduates to characterize, forecast, target, wargame and assess the information environment. Ultimately the goal is to enable military commanders' decision-making processes, allowing them to seize and sustain the initiative within their operational environment, thus reducing uncertainty and risk.

The course incorporates modules on critical thinking, deconstructing the information environment, forecasting, sense making, and wargaming before a capstone practical exercise. Students learn techniques to

challenge conventional wisdom and understand the impact of cognitive biases in considering worldviews of other actors. They are introduced to systems theory and systems analysis to analyze relationships between systems. Lessons then provide concepts used to understand the decision making calculus of leaders within the information environment, including human factors, group dynamics, prospect theory, and social identity theory. The course also addresses how culture influences perception.

Ultimately students use affects and activities within the information environment to help achieve commander's objectives. They appreciate how information environment planners must understand and use a whole-of-government approach to achieve information environment effects. Additionally, students develop measures of effectiveness and indicators and measures of performance to assess activities and progress toward desired goals. The course also incorporates modules on deception operations, including how to understand and identify cultural, personal, organizational, and cognitive biases and how to leverage them for deception.



# CONTRIBUTOR BIOGRAPHIES

## CONTRIBUTOR BIOGRAPHIES

**A. DAVID ABITBOL** is currently serving as a research faculty member within the Department of Strategic Wargaming at the U.S. Army War College. He leads the department's research efforts in modeling and wargaming information operations and future defense research and acquisition planning. Prior to joining the U.S. Army War College, Dr. Abitbol served as a senior operations research analyst for the U.S. Secret Service where he worked on creating data-driven staffing models. Dr. Abitbol completed his doctoral work in political science at Florida State University, where he specialized in international relations, quantitative methodology, and experimental research design. He was selected twice for the RAND Research Associate Fellowship at the RAND Corporation, where he completed research and designed wargames for the Army-Arroyo center. Dr. Abitbol's research interests include deterrence theory, public opinion, information processing, East-Asian politics, and experimental research design. He has authored scholarly articles in peer-reviewed journals and presented his research at numerous academic and professional conferences. Dr. Abitbol is from Central Texas and his hobbies include Texas A&M football, reading science fiction, wargaming, and aquaculture.

**JEFF ANDERSON**, a career Foreign Service Officer, is the Director of the Public Diplomacy Training Division at the State Department's Foreign Service Institute. Among his previous assignments, Jeff served as the Public Affairs Officer in Istanbul, Stockholm, Colombo, and Valletta and as the Cultural Affairs Officer in Sarajevo. He hails from Bradford, Pennsylvania and received a BA in International Studies and Economics from American University and an MS in National Security Strategy from the National War College. Jeff was also a Fulbright scholar in Chemnitz, Germany following his undergraduate studies.

**HOWARD GAMBRILL CLARK, PH.D.** has specialized in psychological warfare for 22 years. He is a former Marine (Iraq, Afghanistan, and Philippines); Yale graduate; White House counterterrorism analyst; DHS and SOCOM Senior Counter-Radicalization Intelligence Analyst; the Senior Intelligence Officer for DHS Operations; and senior countering-violent-extremism consultant and faculty member who has taught, operated, or commanded influence and counterterrorism missions on five continents for multiple organizations (Special Forces, USAID, etc.) and allies. Dr. Clark also has served as CEO for Stability Institute (international think/do tank with members on six continents), President of Narrative Strategies (international think/do tank), and Associate Fellow at the International Centre for the Study of Radicalisation He has authored eight books.

## CONTRIBUTOR BIOGRAPHIES

**JAMES (JIM) W. ELLIS** was the Director and Central Intelligence Agency Faculty Representative to the Eisenhower School at National Defense University. Before this position, he served as the Executive Assistant to the Director of National Intelligence. From 2014-2017 he led group and divisions covering nearly every intelligence topic at the Directorate of Digital Innovation's Open Source Enterprise (OSE). Before then, he led OSE bureaus in the Middle East and Asia and worked as the OSE's Director for Analytic Integrity and Advancement. From 2004-2005 he served as the President's Daily Brief (PDB) Briefer for the Chairman of the Joint Chiefs and from 1998-2004 he was an all-source analyst on Southeast Asia, political Islam, and counterterrorism. Before joining the government he taught or lectured at Harvard, Princeton, the Australian National University (Fulbright Scholar), and the Victoria University of Wellington (Knox Scholar). He holds a BA in Economics with High Honors (Phi Beta Kappa) from Swarthmore College and an MA and Ph.D. in Political Science from Harvard University. He speaks Indonesian and Malay.

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## CONTRIBUTOR BIOGRAPHIES

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