SAASS 643

STRATEGY-TO-PRACTICE

9-13 NOVEMBER 2020

1-5 FEBRUARY 2021

10-14 MAY 2021

Course Director: Lt Col Sarah Bakhtiari

Syllabus Approved: _____

Jeffrey Donnithorne, Col, USAF
Commandant

SAASS Course 643: Strategy-to-Practice

Course Description

Strategy-to-Practice is an interdisciplinary graduate-level course in contemporary security studies intended to provide an improved skill set for strategy development, and offer students an opportunity to practice the art of developing strategy.

The year at SAASS has provided exposure to a range of different theories, concepts, historical contexts, and complex challenges, but has yet to ask students to synthesize that rich knowledge for strategy development, or afforded them the time to practice developing strategy. This course is intended to give students the opportunity to roll up their sleeves and practice the kind of thinking and analysis that should inform strategy development, and to culminate that thinking in a strategy practicum.

The course is organized into three conceptual blocks, each of which focuses on different methods for thinking and making decisions about the future for the purpose of strategy development. In one block, students will practice developing their probabilistic reasoning skills to make judgments about the future over the short-term. Students will survey several methods that can help improve the accuracy of their forecasts, and learn the outside-inside forecasting technique from Good Judgment, Inc. Students will also learn about and practice the art of asking useful questions about the future, and link those questions to potential futures.

In the second block, the time horizon under review will shift outward. Rather than focus on the near-term, the perspective will shift to the mid-to-long-term, or 10 years from the present. Given the difficulties of sufficient accounting for all factors that might influence events over this time horizon, we shift our method to that of developing insights about the future, rather than predictions of it. Using futures and scenario-planning methods based on the identification of critical uncertainties in the environment, students will develop insights about how they might evoke meaningful futures and where they might turn for inspiration about those futures.

The course has a substantial practical, hands-on component that will run throughout the course and focus, in part, on the use of probabilistic reasoning to inform judgements about the future over the near term, or "forecasting." This approach to forecasting reflects the findings of the four-year, $20 million [Aggregative Contingent Estimation](#) research project conducted by the Intelligence Advanced Research Projects Activity (IARPA) of the Office of the Director of National Intelligence (ODNI). Although there are multiple approaches to forecasting, the ODNI found that the Superforecasting approach developed by Dr. Philip Tetlock and his team resulted in predictive accuracy that far exceeded analytic judgments of experienced intelligence analysts.

The course will offer applied skills in developing scenarios about the future, in which critical uncertainties in the present can be identified and aid in the anticipation of high-risk and hard-to-assess future environments. This approach has roots in the Cold War's nuclear conundrum,

during which time analysts felt confounded by the novelty of the nuclear weapon and needed imaginative yet semi-structured means for thinking through nuclear strategy.

In the third and final block of the course, students practice the art of strategy development. The capstone event of the course is a strategy practicum that will blend the practice of forecasting and foresight analysis for the purpose of strategy development. Assuming group work is possible during the practicum, the practicum will call for participation in seminar teams. Seminar teams will be asked to use the future generated during the course as the basis for developing a national-level strategy for a given great power competitor's region.

Course Objectives:

- Improved judgement for developing and executing national and regional security strategy through an understanding of future environments and probabilistic judgments
- Enhanced critical and creative thinking, and objective analysis for the development of military strategy
- Practice in the art of developing military strategy
- Synthesis of concepts, ideas, and lessons of strategic studies and military history

Assignments:

1. Individual forecasting, weekly, online: Each student must participate in forecasting weekly for up to 60 minutes on Good Judgement Open (https://www.gjopen.com). Student seminars will be focused on two geographic areas aligned to the strategy practicum.

2. Future scenario: Student teams will develop their own future scenarios using the critical uncertainties method demonstrated in the class, and will submit the written narrative product for evaluation. Student teams must have finalized their scenarios by February 1, 2021.

2. Practicum, 10-14 May: Students will be given seminar time and any additional time desired to work on a course practicum. Additional guidance will be issued for Days 9 -13 with specific requirements for the strategy practicum, culminating in a strategy presentation on Day 13 by student teams.

Grading: The faculty will determine final course grades based on the following: practicum presentation (40%), forecasting participation (25%), future scenario (25%), and class participation (10%).

Teaching Faculty:

> Lt Col Sarah Bakhtiari (Course Director)
> Dr. Lina Svedin
> Col Nate Huston

Course Overview

Block 1 – Imagining and Forecasting the Future
9 Nov: Course Day 1 Futures Methodology Part I (Zoom)
10 Nov: Course Day 2 Futures Method Part II (Zoom)
12 Nov: Course Day 3 Forecasting Techniques 1 (Zoom)
13 Nov: Course Day 4 Forecasting Techniques 2 (Zoom)

Block 2 – Evaluating Forecasts & Futures
1 Feb: Course Day 5 Appraising Futures
2 Feb: Course Day 6 Crafting Forecasting Questions (Zoom)
4 Feb: Course Day 7 Feedback on Futures (Zoom)
5 Feb: Course Day 8 Futures and Forecasting for Strategy (Zoom)

Block 3 – Practicing Strategy Development
10-13 May: Course Days 9-12 Strategy Practicum (TBD – in person or virtual)
14 May: Course Day 13 Presentations (TBD – in person or virtual)

Course Outline

The final course in the SAASS program is intended to offer students the opportunity to take strategy to practice, building some of the skills needed to improve strategy development capabilities and to leverage the insights of a year of intense study of military and political theory and history. With this course, we turn from our broad examination of the past to specific ways to anticipate the future. The underlying premise of this class is that our strategies will be better to the extent that our forecasts are more accurate, our futures better anticipated, and our indicators that link the two, on point.

First, the course approaches the practice of strategy by making the argument that developing certain skills and familiarization with specific methodologies can lead to more accurate and more fine-tuned appreciations of the future that are advantageous for strategy. Two skills, in particular, are immensely useful for creating these advantages in strategy development: identifying critical uncertainties in the environment and probabilistic reasoning. Identifying critical uncertainties is not a skill often practiced yet one that can be revelatory for anticipating potentially catastrophic events. Our year of study in the social sciences, history, and military theory is predicated on the assumption that by searching and understanding the past, we can better anticipate the future. But how might we do that constructively? One method is to create alternate futures based on the identification of critical uncertainties—those forces or developments in the world that strongly impact the area of investigation but are also extremely difficult to anticipate.

Second, probabilistic reasoning, the kind of reasoning that Daniel Kahneman and Amos Tversky tell us humans are naturally quite poor at performing, and which inclines humans to substitute easier questions for cognitively more complex ones, is a second skill that we will practice extensively in this course. By developing familiarity with the logic used in probabilistic assessments, as well as the techniques used to make them, and strategies for offsetting cognitive biases, we develop better capability to anticipate discreet events in the future and guide strategy accordingly.

In the first week of the course, students will learn how to approach the identification of critical uncertainties in the environment in their strategy area (i.e., Indo-Pacific and Eurasia), and use these critical uncertainties to drive the development of alternative futures in these areas. Students will learn a method for futures generation that relies on variation in critical uncertainties to create futures that are highly divergent. In seminar teams, students will craft their own futures using this method and author narratives that describe these futures.

In this first week, students will also learn to "forecast" the future by making probabilistic assessments (without advanced computation or statistical software) of future events. Students will learn estimation techniques used by the best forecasters in the country, and the "outside-inside" method recommended by a professional forecasting company, Good Judgment, Inc. This method relies on forecasting based on a class of events, which is then adjusted for the unique considerations a specific context demands. Finally, students will learn how to appraise their own knowledge in a subject area and how to effectively offset the cognitive biases to which we all are subject.

Weekly, throughout the course and its intervening weeks, students will forecast the probabilities of both domestic and international events through an online platform. Students will be able to compare their assessments to the assessments of hundreds of others and will receive formal feedback on their forecasting performance. Additionally, seminar teams will be paired with a "Superforecaster" mentor who will offer tips and serve as a resource on best methods of boosting forecast accuracy. (Superforecasters are a group of about 150 men and women who were the most accurate 1-2% of the tens of thousands of forecasters who took part in the IARPA tournament; to qualify, they had to demonstrate sustained performance on 100 or more forecasts over the course of a year.)

The second week of the course will provide instruction on how to ask the "right" questions for probabilistic assessments. At what level of analysis should the question be framed, and how detailed does it need to be? Students will be given the opportunity to practice identifying good questions and framing their own. Students will also learn how to link forecasting questions to their own futures as a means of developing indicators that a particular future is being realized. In seminar teams, students will develop their own forecasting questions linked to their futures, and will forecast on those question through the remainder of the course.

In total, the second week of the course serves to complement the first week by offering techniques that can be used to discover if the strategist's vision of the future is coming to pass. Jointly, the first two weeks of the course offer an applied skill set of probabilistic reasoning, scenario development, and futures signposting that can help students constrain the uncertainty that inevitably surrounds strategy development.

Throughout, the course focuses substantively on Great Power Competition and the key state actors within that framework. In particular, seminar teams will develop futures and forecast for two different geographic areas: the Indo-Pacific and Eurasia. The course uses relevant, recent, and readable academic and policy material to ensure students' orientation to Great Power Competition is thorough and timely. This topical focus will extend to forecasting and futures methods and applications, as well as to the strategy practicum that culminates the course.

The course culminates in a strategy development practicum that enables students to practice the art of strategy development under realistic conditions. The objective of this practicum is to give students the opportunity to use the insights generated from the forecasting and futures work, allow students to practice the art of strategy development, cement their learning, and overcome the challenges of application. Leveraging not only the tools and insights students have garnered in this course, but also the concepts, ideas, and models they've engaged with throughout the year, students will develop input to a national-level strategy for their geographic area. Student teams will use the future they crafted and their understanding of event probabilities as the context for their strategy. Student teams will offer presentations on that future and its associated strategy to a panel.

Day 1 Foresight: Developing "Strategic Foresight" Part I

Although the future cannot be known *ex ante*, we are not without tools and approaches that endeavor to systematically anticipate the trends and forces that shape it. In this class, Peter Scoblic, DBA, and Harvard Kennedy School Fellow, offers the first part of his methodology for developing the "strategic foresight" that enables us to sense, shape, and adapt to the environment more effectively by creating scenarios about the future. By identifying critical uncertainties in the environment and exploring their variation in several dimensions, we can create divergent scenarios of the future that allow us to consider the conditions that gave them rise and create a narrative that explains their generation.

In this class, Dr. Scoblic explains why future scenarios are so useful for bounding the uncertainty we inevitably face in anticipating the future. We also learn a specific method for developing imagined futures based on critical uncertainties. This method hinges on the identification of uncertainties that are extremely difficult to assess but also incredibly influential to the problem area under investigation. By varying the value or extremity of the critical uncertainties, several different potential futures can be created and characterized. From each of these futures, organizations can develop different strategies to help create these futures or avoid their coming to fruition.

During the class, Dr. Scoblic will teach the scenario development method and allow students to practice the method in a 'speed' round in small teams. Students will then work with their small team to replicate the method after class and begin the development of futures that can drive the creation of scenarios the following day.

Reminders*:*
Students should have completed Good Judgment's online Forecasting Aptitude Survey by close-of-business today.

Students should also complete Good Judgment's 60-min Superforecasting Fundamentals online training prior to commencing class on 12 Nov. https://goodjudgment.com/resources/online-training/. Click through "Register Now," and then "Buy," and then click on "Have a Code?" Please enter Coupon Code SAASS and hit "Apply."

Required Reading:
- Fergnani, Alex. "Futures Studies, Foresight, Futurism, Futurology, Futures Thinking…What Name???" *Medium*, April 30, 2020.
- DTRA Global Futures Office, "Scenario Based Planning Workshop," October 17-20, 2017.
- Scoblic, J. Peter. "Learning from the Future: How to Make Robust Strategy in Times of Deep Uncertainty," *Harvard Business Review*, July/August 2020.

- Scoblic, J. Peter. "'Unfathomable Mystery': Frank Knight, Herman Kahn, and the Pursuit of Judgment," (manuscript), April 2020.
- U.S. Coast Guard, Creating and Sustaining Strategic Intent, Report of Evergreen III, September 2013. (PDF)

Recommended Reading:
- Fitzsimmons, Mike. "Scenario Planning and Strategy in the Pentagon," U.S. Army War College Press, (PDF) [pp. 1-23]
- Gavetti, Giovanni, and Jan W. Rivkin. "How Strategists Really Think." *Harvard Business Review* 83, no. 4 (April 2005): 54–63.
- Lovallo, Dan, Carmina Clarke, and Colin Camerer. "Robust Analogizing and the Outside View: Two Empirical Tests of Case-Based Decision Making." *Strategic Management Journal* 33, no. 5 (May 2012): 496–512.
- Ramirez, Rafael et al. "Using Scenario Planning to Reshape Strategy," MIT Sloan Management Review, September 2017.
- Scoblic, J. Peter. "Strategic Foresight as Dynamic Capability: A New Lens on Knightian Uncertainty." Harvard Business School Working Paper, No. 20-093, March 2020. (PDF)
- Wack, Pierre. "Scenarios: Uncharted Waters Ahead." *Harvard Business Review* 63, no. 5 (1985): 73–89.
- Wack, Pierre. "Scenarios: Shooting the Rapids." *Harvard Business Review* 63, no. 6 (1985): 139–50.

Further Reading:
- Knight, Frank. "Chapter VII: The Meaning of Risk and Uncertainty" in *Risk, Uncertainty and Profit*, New York: Riverside Press, 1921.
- Kahn, Herman. "A Methodological Framework: The Alternative World Futures Approach." In P. D. Aligica and K. R. Weinstein (Eds.), *The Essential Herman Kahn: In Defense of Thinking* (pp. 181–197). New York: Lexington Books, 2009.
- Neustadt, Richard E., and Ernest R. May. *Thinking in Time: The Uses of History for Decision-Makers*. New York: Free Press, 1986.
- Schwartz, Peter. *The Art of the Long View: Paths to Strategic Insight for Yourself and Your Company*. 1st Currency Pbk. ed. New York: Currency Doubleday, 1996.
- Scoblic, J. Peter. "Beacon and Warning: Sherman Kent, Scientific Hubris, and the CIA's Office of National Estimates." *Texas National Security Review* 1, no. 4 (2018).

Day 2 Foresight: Developing "Strategic Foresight" Part II

Developing scenarios for the future is helpful for anticipating a wide range of plausible but potentially unlikely events that help challenge our assumptions about the way the future will unfold. In this class, Dr. Scoblic will teach part two of his method for developing potential futures using critical uncertainties. We will review the first part of his methodology and then discuss questions students may have from their practice the first day of the course. During class, we will continue to work through the remaining steps of the scenario development method, again allowing time for small student teams to conduct a 'speed' round of the method. Finally, we will discuss the art of imagining and then drafting narratives that describe the different futures the students create.

Students will practice the second part of the futures method in their small teams following seminar and will author short-form narratives that describe the futures their team develops. Students will have the opportunity to consult with Dr. Scoblic during office hours each week, should they have questions or need additional insight about the scenario development methodology. In the second week of the course (February 1-5, 2021), we will explore how to link detailed forecasting questions to the scenarios students created in the first week of the course. Student teams must have finalized their scenarios by February 1, 2021.

Required Reading
- Edmondson, Amy. "Building a Psychologically Safe Workplace," TEDx Talk, May 4, 2014.
- Monbiot, George. "How Wolves Change Rivers," YouTube video, Feb 13, 2014.
- Senge, Peter. "Chapter 5: A Shift of Mind" in Senge, Peter M. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday/Currency, 1990.

Recommended Reading
- Daniel, III, J Furman and Paul Musgrave, "Synthetic Experiences: How Popular Culture Matters for Images of International Relations," *International Studies Quarterly*, Volume 61, Issue 3, September 2017, 503–516.
- Sterman, John D. "Sustaining sustainability: creating a systems science in a fragmented academy and polarized world." In *Sustainability science*, pp. 21-58. Springer, New York, NY, 2012.
- Johnson, Steven. "Chapter 1: The Adjacent Possible," in Johnson, Steven. *Where Good Ideas Come from: The Natural History of Innovation*. New York: Riverhead Books, 2010.

Further Reading
- Meadows, Donella H., and Diana Wright. *Thinking in Systems: A Primer*. White River Junction, VT: Chelsea Green Publishers, 2008.
- Pressfield, Steven. *The War of Art: Break through the Blocks and Win Your Inner Creative Battles*. New York: Black Irish Entertainment, 2012.

- Lewis, Jeffrey. *The 2020 Commission Report on the North Korean Nuclear Attacks Against the United States*. Boston: Houghton Mifflin Harcourt, 2018.
- Edmondson, Amy C. and Zhike Lei, Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct, Annual Review of Organizational Psychology and Organizational Behavior 2014 1:1, 23-43.
- Singer, P. W, and Cole, August. *Burn-In*. Boston: Houghton Mifflin Harcourt Publishing Company, 2020.

Day 3 Forecasting Skills 1

What does it mean to "forecast" the future? Is it possible to know the future with sufficient certainty to make the attempt worthwhile? How do we make good estimates of the future? Starting with the treatment of cognitive biases in Philip Tetlock's book *Superforecasting*, we examine the four corrective actions that mitigate cognitive biases and improve forecasting accuracy: training, teaming, identification of better forecasters, and algorithms to improve aggregate forecasts.

We will review the four-year, $20 million ACE research project conducted by the Intelligence Advanced Research Projects Activity (IARPA) of the Office of the Director of National Intelligence. IARPA learned that it was possible to nearly double the accuracy of geopolitical forecasting by using the four methods above. IARPA also learned that by using this "Superforecasting" approach, it is possible to generate meaningful forecasts much earlier in the process, allowing for months of additional warning. In fact, it found that well-trained forecasters using only open-source material were about 30% more accurate over the same 135 forecasting questions than US intelligence community professionals forecasting on a classified platform.

During seminar, we will discuss students' aggregate cognitive attributes from Good Judgment's Forecasting Aptitude Survey and identify methods to offset the influence of cognitive biases on forecasting. We will also discuss the problems of vague estimative language when making probabilistic judgments and engage in several group exercises to illustrate biases related to base rate insensitivity, scope insensitivity, overconfidence, conjunction fallacy, and hindsight bias. Instruction will also cover a basic refresher on probabilities and how they can be employed for the purposes of forecasting. Working in seminar sub-teams, we will practice forecasting with "Superforecaster" mentors and then reconvene as a large group to discuss forecasting techniques.

In class, students will be introduced to Good Judgment's forecasting platform, where they will practice forecasting on future events each week. Students will practice forecasting weekly on the gjopen.com platform until the final week of the course. Students will also be assigned a "Superforecaster" as a mentor to help the student team learn and practice the art of forecasting.

Over the subsequent eleven weeks between the first and second weeks of the course, students should spend up to 60 minutes weekly forecasting on the questions assigned to their team. In the second week of the course, students will learn how to best craft forecasting questions, practice crafting them, then devise their own questions linked to their future scenarios as teams.

Reminders:

Practice forecasting weekly for up to 60 minutes on gjpopen.com on the designated questions for your team.

Required Reading:

Tetlock, Philip E. and Dan Gardner, *Superforecasting: The Art and Science of Prediction*, New York: Broadway Books, 2015.

Recommended Reading:

Review Kahneman, Daniel. *Thinking, Fast and Slow*, New York: Farrar, Straus, and Giroux, 2011. Introduction, Chs 4, 5, 7, and 9.

Day 4 Forecasting Techniques 2

In this class, we will continue to examine how cognitive biases degrade forecast accuracy and examine mitigations we can take to limit the impact. We will also look more closely at the way Good Judgment produced superior results in the IARPA tournament using wisdom-of-the-crowd approaches to forecasting. In class, we will discuss how teams should approach forecasting, and the best methods for offsetting the influence of hierarchy, including approaches like the Delphi method, pre-mortems, and how to share data. We will also review how data scientists use algorithms to look for forecasting patterns by "extremizing" data.

Over the subsequent eleven weeks (between the first and second weeks of the course), students should spend up to 60 minutes weekly forecasting on the questions assigned to their team. In the second week of the course, students will learn how to best craft the questions, practice crafting them, then devise their own questions aligned to the future scenario.

Reminders:

Practice forecasting weekly for up to 60 minutes on gjpopen.com on the 12 designated questions for your team until the final week of this course.

Required Reading:

Good Judgment's Explanation of the Ball-and-Urn Game.

Good Judgment's Explanation of Bayesian Updating.

Tetlock, Philip. *Expert Political Judgment: How Good Is It? How Can We Know?* New Haven: Princeton University Press, 2017. Read "Preface to the 2017 Edition" and Chapter 5 "Contemplating Counterfactuals."

Khaneman, Daniel, Andrew Rosenfield, Linnea Ghandi, and Tom Blaser. "Noise: How to Overcome the High, Hidden Cost of Inconsistent Decision-Making," *Harvard Business Review*, October 2016: 36-43.

Davitch, James A. "Open Sources for the Information Age: Or How I Learned to Stop Worrying and Love Unclassified Data," Joint Forces Quarterly 87, 4th Quarter 2017.

Recommended Reading:

Schoemaker, Paul and Philip Tetlock. "Superforecasting: How to Upgrade your Company's Judgment," *Harvard Business Review*, May 2016: 3-8.

Day 5 Appraising Futures

A significant challenge in using futures scenarios to inform decision-making is achieving accurate real-time appraisal of the environment confronting the decision-maker. As a means of overcoming that challenge, we link forecasting and futures, two approaches that have historically been too distinct and too temporally removed to permit interaction. How do we know if one future scenario or another that has been imagined is materializing? By developing forecasting questions aligned to futures in "clusters," we can use forecasting questions as "signposts" that identify whether a particular future is being realized. Then, we'll consider how we might overhaul, update, or revise imagined futures to reflect a more likely scenario, based on the indications observed in the associated forecasts. Finally, we'll discuss how these forecasted futures hybrids can aim to constrain the uncertainty associated with strategy development.

Required Reading
- Scoblic, J. Peter & Philip E. Tetlock, "A Better Crystal Ball: The Right Way to Think About the Future," *Foreign Affairs*, November/December 2020.
- Risi, Joseph, Amit Sharma, Rohan Shah, Matthew Connelly, and Duncan J. Watts. "Predicting History." *Nature Human Behaviour*, June 3, 2019.
- Fergnani, Alex. "Scanning Explained: Environmental Scanning vs. Horizon Scanning" Medium, August 9, 2020.
- Day, G. S., and Paul J.H. Schoemaker. Scanning the Periphery. *Harvard Business Review*, 83(11) 2005: 135–148.
- 9/11 Commission. 9/11 Commission Report, "Chapter 11: Foresight—and Hindsight" (PDF)

Recommended Reading
- Bazerman, Max H., and Michael Watkins. *Predictable Surprises: The Disasters You Should Have Seen Coming, and How to Prevent Them*. Boston: Harvard Business School Press, 2004.

Further Reading
- Kent, Sherman. "A Crucial Estimate Relived," *Studies in Intelligence* 8, no. 2, Spring 1964.
- Day, George S, and Paul J.H. Schoemaker,. *See Sooner, Act Faster. Management on the Cutting Edge*. Cambridge: MIT Press, 2019.
- Webb, Amy. The Signals Are Talking. New York: PublicAffairs, 2016.
- Wohlstetter, Roberta. *Pearl Harbor; Warning and Decision*. Stanford, Calif.: Stanford University Press, 1962.

Day 6 Crafting Forecasting Questions

After forecasting over the past three months, what observations can we make about the way we frame forecasting questions? In this class, we learn more about the art of constructing good forecasting questions. We examine how to ask questions that strike the balance between being relevant to decision makers and being sufficiently rigorous so all parties can agree on what is being asked. During the discussion we will show how asking a big question (e.g., Will China be more aggressive in the South China Sea in the next two years?) can be addressed systematically by breaking the question down into sub-questions that can be forecasted and, cumulatively, offer a more accurate and thoughtful index to inform the broader question.

We will practice formulating questions and forecasting on those questions via the Good Judgment application. Finally, we'll also discuss conditional questions, as well as the "signpost" questions that can be linked to futures scenarios and serve as indicators of a particular future scenario materializing. Student teams will develop questions linked to their futures and select those most useful as indicators of their future scenarios.

Students will begin to forecast on their new questions and continue their forecasting work on gjopen.com until their strategy practicum in the third and final week of the course.

Required Reading
- "Making Conversations Smarter, Faster: An Alternative Framework for Improving Intelligence Analysis." Report prepared for Director, Intelligence Advanced Research Projects Activity (IARPA). 29 September 2017.
- "Forecasting Russian Confrontation towards the United States, Its Allies, and Its Partners in the European Theater in 2023," Good Judgment Inc, 22 February 2019. Pages 2-3, 25-28.

Recommended Reading
- Clarke, Richard A., and R. P. Eddy. *Warnings: Finding Cassandras to Stop Catastrophes*. New York: Ecco, 2017.
- Allen, Charles E. "Warning and Iraq's Invasion of Kuwait: A Retrospective Look," Defense Intelligence Journal; 7-2 (1998), 33-44.

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Day 7 Feedback on Futures with Forecasts

In this class, student teams will present the futures their teams generated during the course and the "clustered" forecasting questions that they have selected to help inform which future is more likely to materialize. Students will use these future scenarios to drive the development of their strategy for the practicum. Students will receive feedback on their future scenarios during class that can inform the evolution of those scenarios for the strategy practicum in the final week of the course.

Required Reading
- Brannen, Sam. "Four Scenarios for Geopolitical Order in 2025-2030: What Will Great Power Competition Look Like?" Center for Strategic and International Studies, September 16, 2020.
- Salesforce/Deloitte, "The World Remade by COVID-19: Scenarios for Resilient Leaders: 3-5 Years," April, 6, 2020.
- Scobell, Andrew et al., China's Grand Strategy: Trends, Trajectories, and Long-Term Competition. Santa Monica, CA: RAND Corporation, 2020. [pp. 101-120]
- Sotiriadis, Jacob et al., Global Futures Report. Air Force Warfighting Integration Capability. June 2020.

Day 8 Futures and Forecasting for Strategy

How might we use futures and forecasts in strategy work? In this class, we will explore how to bring futures and forecasting into your work as strategists, advisors, and leaders. What are the best practices for applying futures development and forecasting to strategy development responsibilities? We will explore EUCOM's use of question clusters to analyze strategic threats, the case of the U.S. Coast Guard and how their use of "robust futures" in Project Evergreen enabled strategies that anticipated catastrophic events like 9/11, and the tactical use of forecasting by the Department of State and the U.S. Army.

Required Reading
- Fuerth, Leon. "Operationalizing anticipatory governance." *Prism* 2, no. 4 (2011): 31-46. ([PDF](#))
- Cochran, Kathryn McNabb and Gregory Tozzi. "[Getting it Righter, Faster: The Role of Prediction in Agile Government Decisionmaking](#)*,"* Center for a New American Security, August 14, 2017.
- Tegtmeier, Brandon R. "[Getting It Right: Commander's Judgment, Decisions, and Accuracy](#)," Strategy Research Project, US Army War College, 2017. (Read 1-7, 13-20, skim all)
- O'Reilly III, Charles A. and Michael L. Tushman, "[The Ambidextrous Organization](#)," *Harvard Business Review*, April 2004.
- Rafael Ramirez, "[Scenario Planning to Drive Innovation](#)." Innovation at the Edge Podcast, July 23, 2020.
- Scoblic, J. Peter. "[Future-Proofing Your Strategy with Scenario Planning](#)," HBR IdeaCast, July 28, 2020.

Further Reading
- Fuerth, Leon. "Anticipatory Governance: Practical Upgrades: Equipping the Executive Branch to Cope with Increasing Speed and Complexity of Major Challenges." Washington, DC: National Defense University and George Washington University, October 2012. ([PDF](#))
- Miller, Kristine A. "Institutionalizing Imagination: National Defense and Defense of the Humanities in the 9/11 Report." *Journal of American Studies* 50, no. 3 (2016): 731.
- Van der Heijden, Kees. Scenarios: The Art of Strategic Conversation. Chichester, England: New York, 1996.

Day 9-13 Strategy Development Practicum

Scenario: Strategy practicum scenario details will be issued in the second week of the course. Select one of the year 2031 future scenarios for the region to which your team has been assigned for forecasting. Based on that future, develop a high-level strategy for competing in the region. Given that the National Security Strategy is undergoing an out-of-cycle re-write, students will not be constrained by current strategy guidance.

Day 9: Provide expert panel with diverse perspectives on great powers to set stage for strategy work. Time permitting, receive group feedback on forecasting performance.

Day 10-12: Students work in small teams to develop national strategies for either the Indo-Pacific region or the Eurasian region.

Day 13: Strategies are briefed to a panel.

Supporting references:

Joint Chiefs of Staff. Joint Doctrine Note 1-19. Competition Continuum. 3 June 2019. https://www.jcs.mil/Portals/36/Documents/Doctrine/jdn_jg/jdn1_19.pdf

Joint Chiefs of Staff. Joint Concept for Integrated Campaigning. 16 March 2018. https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joint_concept_integrated_campaign.pdf?ver=2018-03-28-102833-257

Trump, Donald J. *The National Security Strategy of the United States of America*. Washington DC: The White House, December 2017. https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf

Mattis, James. *Summary of the 2018 National Defense Strategy of the United States of America*. Washington DC: The Office of the Secretary of Defense, January 2018. https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf

Note that the 2018 National Military Strategy is classified. Read the most recent unclassified summary available, the 2015 National Military Strategy: http://www.jcs.mil/Portals/36/Documents/Publications/2015_National_Military_Strategy.pdf

Joint Publication 5-0. The Joint Planning Process 2017, available at: https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5_0_20171606.pdf

Army War College Campaign Planning Handbook 2018, pages 1-11: https://ssi.armywarcollege.edu/PDFfiles/PCorner/CampaignPlanningHandbook.pdf

Department of Defense. *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China*. Washington DC, 2019.
https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019_CHINA_MILITARY_POWER_REPORT.pdf

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