

**THE NATIONAL WAR COLLEGE
WASHINGTON, DC 20319-5078**



**STRATEGY: BRAND X
ELECTIVE COURSE NWC 6089
SYLLABUS**

Fall 2020

This document contains educational material designed to promote discussion by students of the National War College. It does not necessarily reflect the views of the National Defense University or the Department of Defense. The contents of this document are the property of the U.S. Government and are intended for the exclusive use of the faculty and students of the National War College (NWC) or the National Defense University (NDU). No further dissemination is authorized without the express consent of the NWC Commandant.

CAPT DOUG RECKAMP, USN
Course Director
Department of Security Studies

DR. COLTON CAMPBELL
Chairman
Department of Security Studies

Elective Course 6089
Fall 2020

Course Director:	CAPT Doug Reckamp, USN Room 223 Roosevelt Hall (202) 685-4429
Course Designer	Dr. Chris Bassford Room C352C JFK Special Warfare Center Ft Bragg, NC (910) 908-3125
DSS Administrative Specialist:	Ms. Susan Schindler Room 112B Roosevelt Hall (202) 685-4362

CLASS SCHEDULE

15 Sep. **T1. Intro: Strategy & Nature**

22 Sep. **T2. Chaos**

Student Presenters: _____

29 Sep. **T3. Complexity & Complex Adaptive Systems**

Student Presenters: _____

6 Oct. **T4. Chaos, Complexity, & History**

Student Presenters: _____

13 Oct. **T5. Evolution**

Student Presenters: _____

20 Oct. **T6. Evolution, Humans, & Human Superorganisms**

Student Presenters: _____

27 Oct. **T7. Decision-Making Theory**

Student Presenters: _____

3 Nov. **T8. Causation**

Student Presenters: _____

10 Nov. **T9. The Con**

Student Presenters: _____

17 Nov. **T10. Religion as a Strategic Environment**

Student Presenters: _____

Thanksgiving Week: No Electives 23-27 Nov

1 Dec. **T11. Ant Society as a Strategic Environment**

Student Presenters: _____

8 Dec. **T12. Conclusions**

Student Presenters: _____

COURSE OVERVIEW

I. INTRODUCTION

The word "strategy" has explicitly military roots, stemming from the Greek *strategos*, a military leader or general. It literally means "generalship." In higher-level PME, we usually think of strategy in a somewhat larger, *political*-military sense. Strategic curricula normally stress that strategy is hard and attempts to give you tools, templates, and rational-analytical frameworks with which to overcome the difficulties. These tools are useful devices for helping students navigate the complexities of strategy.

However, this course looks at some varied and perhaps unfamiliar ideas about how the world really works. It emphasizes the "hard" parts of strategy—so much so that it may often appear to suggest that our concept of strategy is a meaningless delusion—and asks *Why* is it hard? What is the *nature* of the difficulties? And we mean the word "Nature" quite literally. We see a great deal of pattern, design, and what certainly *looks* like "planning" and "strategy" in nature, including events we instinctively label "success" and "failure." Nature is presumably unconscious and thus cannot be "strategic" in the sense that we usually mean that term. Nonetheless, it seems reasonable to suggest that if something *looks* like strategy, then maybe it can teach us something *about* strategy.

This course originated with a question: Is it possible that there exists some basis for an underlying, *generic* discipline of Strategy, with fundamental elements or concepts applicable to all fields of endeavor, or are the requirements of strategy so context-specific that few if any general rules apply even within a given field, much less across the spectrum?

The answer to both of those questions turned out to be yes. Context is so overwhelmingly important that there are few carryovers from one strategic environment to the next. But all strategic environments share a common context in that all exist in the same physical world and none can escape the logic of nature. Any understanding of strategic decisions and events depends very much on our own internal models of "how the 'real world' really works." Understanding those internal models, therefore, is the driving idea behind the course configuration.

This course will start with three questions:

1. What processes or patterns can we find in nature that offer useful insights, analogies, or metaphors relevant to problems of strategy in the human domain?
2. How does conscious human intentionality *change* the strategic processes that exist in the rest of nature?
3. What are our internal prejudices about those issues (i.e., questions 1 and 2), how are those prejudices shaped, and how can we reshape them into a more realistic and useful form?

To explore those questions, we will cast our nets outside the familiar examples of political-military strategy. Our purpose is to see if there is anything out there that can better inform our own strategic understanding and practices—and our own internal model of "how the world really works."

II. COURSE STRUCTURE

This course consists of twelve two-hour classes. In the first half of the course, we will look first at some broad conceptual areas that might have some fundamental relevance to our questions above. These concepts are mostly from the realms of the physical and biological sciences (*e.g.*, complexity science and evolutionary theory), but some come from theories about human decision-making, and others concern the nature of "History" and of the historian's craft. In the last half of the course we will use these ideas as lenses through which to look at some environments in which the players have to cope with complex, multilevel, multifaceted, interrelated issues, *i.e.*, environments that are reasonably analogous to those of the traditional national strategist. Such environments include big business, the building and maintenance of institutions such as organized religions, major cities, or even ant colonies. In the concluding Topic we will attempt to synthesize our findings.

III. COURSE METHODOLOGY

The reading will be drawn from various disciplines, with selections chosen both for readability and for broad scope. We will stay flexible in order to keep the assignments digestible. Student presenters will control the first hour of class (but their formal presentations will be limited to 30 minutes); the Instructor will facilitate the second hour. Throughout the course, our objective will be to carry on a "strategic conversation" that constantly interrelates the diverse subject matter of this elective with our core interest in national-level political-military issues. Class discussion frequently draws on issues and ideas raised in other NDU courses.

IV. COURSE LEARNING OUTCOME

Successful "Strategy: Brand X" students will be able to grasp and articulate the implications of key modern scientific concepts concerning the dynamics of the natural world for the nature and processes of human strategy.

IX. BOOKS ISSUED IN THIS COURSE

Robert Axelrod (with a new foreword by Richard Dawkins), [*The Evolution of Cooperation*](#), revised edition (New York: Basic Books, 2006; originally published 1984). ISBN 0465005640

Bert Hölldobler and Edward O. Wilson, [*Journey to the Ants: A Story of Scientific Exploration*](#) (Cambridge, MA: Belknap Press, 1994). ISBN 0674485262

John Lewis Gaddis, [*The Landscape of History: How Historians Map the Past*](#)(New York: Oxford University Press, 2004). ISBN 0195171578

James Gleick, [*Chaos: Making a New Science*](#), 20th Anniversary edition (New York: Penguin, 2008; originally published 1987). ISBN 9780143113454

David Sloan Wilson, [*Darwin's Cathedral: Evolution, Religion, and the Nature of Society*](#)(Chicago: University of Chicago Press, 2002). ISBN 0226901351

Nassim Nicholas Taleb, *Antifragile: Things That Gain from Disorder (Incerto)* (Random House, 2012). ISBN 9781400067824

Glen Harlan Reynolds, *The Social Media Upheaval* (Encounter Books, 2019). ISBN 9781641770835

VI. STUDENT ASSIGNMENTS

The Brand-X student is expected to do the assigned reading, to provide a brief written comment via the "Comments" link in each Topic blackboard page before each seminar meeting, to participate energetically in seminar debate, to lead at least one seminar as part of a small student team, and to provide a short paper reviewing his/her own intellectual evolution in the course (based on his/her own pre-seminar comments). Students must demonstrate mastery of the stated course objective to pass this course. The course director will use the following assessments to determine each student's final grade:

Pre-Seminar Written Inputs: 40%

You will be asked to review these in writing (3 pages) by the class meeting for Topic 11 (1 December). The grade will cover the student's daily comments *and* the end-of-course paper.

Class presentations: 30%

Class Contribution: 30%.

Evaluating these inputs is a judgment call on the part of the instructor. However, students will also be asked to rate their colleagues' contributions to the course. These peer ratings are not determinative but do provide important insights to the Instructor.

VII. SCHEDULED TOPIC PRESENTATIONS

In each class, a team of students (the number to be negotiated) will take on the task of *synthesizing* that day's material in a 30-minute (or less) presentation.

- I stress "synthesizing." You absolutely must not attempt to describe, condense, or "present" any or all of the assigned readings, which is impossible in 30 minutes. Teams

will form and all topics will be assigned as soon as possible. Teams will be listed on the course blackboard page.

- This is difficult and often highly abstract/theoretical material. Start discussing this stuff with your team-mates as soon as you have your assignments. Rehearse to get your pitch down to the required time. You will need to present your pitch to the instructor the Monday before your scheduled Brand-X performance. You may also provide guidance to your colleagues in the class regarding which materials you plan to emphasize.
- Assume that all of the students have done all of the assigned reading/viewing. That assumption allows you to suppress any urge to excuse classmates from the reading. Your task is to look for and explore key or overarching ideas, questions or themes in that material that are relevant to our real subject, which is "How do we think about 'strategy' in the human socio-political/military world in which we operate professionally?"
- You cannot cover everything. Thus you will need to make distinct choices about what is important to tie the readings to the course objective.
- **Learn from the mistakes of the first few class presentations. These will often attempt to repeat the reading or to cover too many aspects, to go past the allotted 30-minute time, and/or to be dull and unamusing. This should be fun stuff, but with a serious purpose.**

Following your formal 30-minutes-or-less presentation (time limits will be ruthlessly enforced), you will have another 20 minutes to facilitate group discussion of your presentation.

VIII. INDIVIDUAL PRESENTATIONS (Optional)

If an individual student wishes, it *may* be possible to arrange to do a stand-alone presentation (20 minutes) on some *relevant* subject that has captured that individual's attention. Such a presentation can be done as extra credit or in lieu of participating in one of the regular Topic presentations. If you are interested in doing this, make a proposal to the course instructor.

Topic 1

STRATEGY and NATURE

OVERVIEW

A NOTE ON THE READINGS: Carefully read (meaning conscious and effective data acquisition & appraisal) the Brand-X topic introductions under the “Topics” tab on blackboard, and the 'Issues for Consideration' before you do the assigned reading. They are designed to shape and focus your perceptions of the material and thus save you from trying to explore all of the ways in which this unusual material might be relevant to us. This allows us to avoid a classroom lecture and get right to group discussion. These introductions are long—often the equivalent of an article or book chapter—because they are frequently the only reading that connects "strategy" (our true subject) to the readings, which are generally scientific in nature. As to the assigned readings, the most common mistake students make is to slog through the readings digging for those lessons that will help them at a tactical level. Read the articles with the purpose of understanding what the author is trying to convey about his own subject—e.g., if the writer is talking about evolutionary forces shaping ant colony behavior, think about ant colony behavior. We'll connect it back to our military-political concerns later.

TOPIC LEARNING OBJECTIVES

1. Understand the course structure and grading assessments.
2. Understand the course objective, starting with three questions:
 - A. What processes or patterns can we find in nature that offer useful insights, analogies, or metaphors relevant to problems of strategy in the human domain?
 - B. How does conscious human intentionality *change* the strategic processes that exist in the rest of nature? What is the relationship between our intentions and pure chance in the actual unfolding of events?
 - C. What are our internal prejudices about those issues (i.e., questions 1 and 2), how are those prejudices shaped, and how can we reshape them into a more realistic and useful form?
3. Examine a few basic notions—starting with definitions of strategy, evaluate metaphors, then ask “What's wrong with the strategic ideas and concepts we work off of now?”

ISSUES FOR CONSIDERATION

These are questions we may or may not explore in seminar, but they are designed to help *shape your thinking* as you work through the readings and other course materials for each Topic.

1. Is there an underlying, generic discipline of Strategy, with fundamental elements or concepts applicable to all fields of endeavor? Or is "strategy" so context-dependent that there can be no such generic discipline?
2. To what extent are strategic outcomes determined by chance? What is "chance"? Or, to put it another way, how much of the strategic situation do we actually create, control, or understand? Isn't much of the strategic context itself a matter of chance? Some of the things that appear to us as chance and accident may actually come as the result of the intention of some other person—perhaps an enemy, but just as likely a friend, a subordinate, some clueless bystander, or even your own leader. Does that matter?
3. Would you agree with the statement, "Business is War"? In fact, aren't all human-on-human strategic environments essentially similar?
4. What is a "cognitive metaphor"? As opposed to what?
5. PME courses often raise the questions whether war and strategy belong to the domain or "art" or of "science." Do the two phenomena belong to the same domain? And is art v. science the full range of choices?
6. What are the key differences between "history" and "political science" as disciplines?
7. Is history a science? Is politics? If not, could either usefully be turned into a science?
8. What might we mean by the term "historicity"?
9. What would it mean to say that history becomes strategy the moment you pass the "now" marker? Is it true? After all, strategy becomes history when you move the other way along the time-line.
10. The United States' political culture and world view are very much rooted in the science and philosophy of the 18th-century European Enlightenment. As a state and as a society, it has been stupendously successful. Is there any reason to think that the American approach to grand strategy has become inappropriate or may be breaking down? What is there in modern science that might fruitfully enhance the strategic concepts of the most successful society in world history?
11. What is the strategic value of imagination?

REQUIRED READINGS (~75 pages)

IMPORTANT NOTE!! After you've done the readings for this Topic, please provide some feedback on them via the convenient comment form in the blackboard "Discussions" page. (This process is required for every class). Tell us *in a brief paragraph* about the most interesting, surprising, or useful idea(s) you ran across while preparing for class. You should review the range of your colleagues' comments just before seminar (as your instructor will), as we can't spend our scarce seminar time reviewing them. The purpose of your comments is to give the group's members some idea what is on the group's mind, not to *directly* drive seminar discussion.

BTW: Each Topic on the blackboard Discussion tab has its own, separate "Comments" thread. Don't enter your comments under the thread for another Topic.

***NOTE:** If for some reason you *really* can't make the blackboard form work, you can still [send the comment to your instructor as an e-mail](#). The instructor will then try to get it onto the Discussion thread so that all course participants can see it.

1. Two short articles to get you going. These articles represent the flip-side of the *Master and Commander* film clip on our "[Overview](#)" page. (4 pages)
 - a. Andrew Nikiforuk, "[Death on a Whole New Scale](#)," *Washington Post*, Tuesday 6 DEC 2011, p. E2. This is about a complex struggle between pine beetles, their allies and henchmen, and pine trees—think of it as an introduction to combined-arms warfare. [Original URL](#). (We'll look at ant warfare later.)
 - b. Andrew Adamatsky and Andrew Ilachinski, "[The Wisdom of Slime](#)," *New York Times*, May 12, 2012. [[Original URL](#). See also: [Smithsonian report](#); *Journal of Complex Systems*.]
2. Tiha von Ghyczy, "[The Fruitful Flaws of Strategy Metaphors](#)," *Harvard Business Review*, September 2003, pp. 86-94. [NDU Library Link – click on "HTML full text" or "PDF full text" icon on the left after following link.] (9 pages)
3. John Lewis Gaddis, "[The Cold War's End Dramatizes the Failure of Political Theory](#)," *The Chronicle of Higher Education*, 22 July 1992, p. A44. [This article is from the NDU Library *ProQuest* electronic holdings—do not distribute without permission.] Gaddis, America's most prominent diplomatic historian, famous for his analyses of the strategies of the Cold War, seems to think that "political science" suffers from some pretty fundamental scientific flaws. Why have we put so much stock and effort into it? (2 pages)
4. John Lewis Gaddis, [Preface, Chapter 1, "The Landscape of History," and Chapter 2, "Time and Space](#)," in *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2004), pp. ix-34. **(STUDENT ISSUE)** This is the

introduction to a discussion of the nature of the historian's craft, written by America's foremost diplomatic historian and historian of the Cold War, author of a seminal work on that conflict, *Strategies of Containment*. Gaddis sets the stage for a scientific argument that will be directly relevant to the rest of this course. (38 pages)

5. James Gleick, Chapter 2, "[Revolution](#)," in *Chaos: Making a New Science* (New York: Penguin, 1988; reissued 2008), pp. 35-56. **(STUDENT ISSUE) Key Reading.** This chapter sets the stage for our understanding of the place of 'Chaos theory' in the evolution of scientific thought. (22 pages)

OPTIONAL: Francis J. Gavin, "UN-DISCIPLINE YOURSELF: REFLECTIONS ON IDEAS FOR A DISORDERED WORLD." <https://warontherocks.com/2017/07/un-discipline-yourself-reflections-on-ideas-for-a-disordered-world-2/>

Topic 2

Chaos

TOPIC LEARNING OBJECTIVES

1. Understand the relationship between Chaos and Complexity, and the concepts behind other key terms associated with chaos theory.
2. Differentiate the separate and distinct role of randomness in each.

ISSUES FOR CONSIDERATION

Read these questions before you do the assigned reading. These questions may or may not be explored in seminar, but they are designed to help shape your thinking as you work through the readings and other course materials for each Topic.

1. What do the following concepts refer to? Be on the watch for them while reading. After working through your assigned reading, look through the index of the Gleick book to nail down your understanding of these key terms. The phrase "Butterfly Effect" and its more scientific definition, "sensitive dependence on initial conditions," are especially key.

Chaos (Navigate the blackboard topic or click [HERE](#) to see several chaotic system demonstrators.)

Butterfly Effect ("Sensitive dependence on initial conditions." This is a particularly important concept that we will encounter again and again, in many different guises.)

nonlinearity

fractals (Many of the animated images in the Gleick video at the top of this page are fractals. Several are from the famous [Mandelbrot Set](#).) More info [HERE](#).

self-similarity

self-organization

self-organized criticality (You probably know this concept as "the tipping point.")

phase transitions (e.g., water becoming ice or vapor)

2. Do any of these terms and concepts sound familiar? They should. They are scientific terms for mundane phenomena we witness every day—the messy, real-world stuff that traditional (pre-computer) science ignored because it was "too hard."

REQUIRED READINGS (89 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. ALL OF THIS WEEK'S READINGS are from James Gleick, *Chaos: Making a New Science* (New York: Penguin, 1988; reissued 2008). For illustrations of some of the key concepts, see [Fractals](#) and [Several Chaotic System Demonstrators](#). This can be challenging reading. If you need to triage, read as much as you can, in the order listed. This material (like most Brand-X readings) does not lend itself to skimming, so at an absolute minimum read the blackboard topic 2 intro and the prologue and Chapter 1 of Gleick's book in depth.

2. ALL Brand-X Students: Read:

1. Prologue and Chapter 1, "The Butterfly Effect," pp. 1-32. KEY READING.

2. Chapter 3. "Life's Ups and Downs," pp. 57-80. Broadens the range of chaotic phenomena; introduces the bifurcation diagram/logistic map; demonstrates what it means to talk about "hidden order." Say, doesn't that bifurcation diagram look "fractal"?

3. GROUP A: (Individuals may switch groups if you have powerful motives, but we need to get a mix.)

Chapter 4, "A Geometry of Nature," pp. 81-118. This chapter is about mathematician [Benoit Mandelbrot](#) and *fractal geometry*, one of the key concepts of late 20th-century science. The NOVA video "Hunting the Hidden Dimension," shown below, is an *excellent* companion to this chapter. This is a one-hour video on fractals, divided into five chapters. This documentary highlights a host of computer scientists, filmmakers, fashion designers, physicians, biologists, and other researchers who are using fractal geometry to innovate and inspire. Original PBS Broadcast Date: October 28, 2008.

Then read Chapter 5 if possible. Always feel free to read the whole book.

4. GROUP B:

Chapter 5, "Strange Attractors," pp. 119-153. This chapter is about turbulence in physical systems. At some point, I guess, we'll have to try to apply its ideas to turbulence in human social constructs. I also urge you to get the spouse and kids together for some quality time and watch the 1-hour video on Fractals, "Hunting the Hidden Dimension," which is shown above.

Then read Chapter 4 if possible. Always feel free to read the whole book.

Topic 3

Complexity & Complex Adaptive Systems

TOPIC LEARNING OBJECTIVES

1. Understand the key terms and concepts associated with complexity science, and the fundamental change that is inherent in a complex system that also is capable of adaptiveness.
2. Understand the attributes of a complex adaptive system, and how those attributes affect strategic planning related to the behavior of those systems.

REQUIRED READING/VIEWING (~46 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. Melanie Mitchell, [Preface, Chapter 1, "What is Complexity?," and Chapter 19, The Past and Future of the Sciences of Complexity"](#) from *Complexity: A Guided Tour* (New York: Oxford University Press, 2009), pp. ix-xii, 3-14, 291-303.

2. **The Game of Life.** The two very short, very dated videos on blackboard demonstrate the development of a key idea in Complexity, "Artificial Life." Read about the "Game of Life" in the block immediately below, then watch these two demonstrations of the very primitive 1970s computer game. View them simultaneously if possible. The rules and the playing board are always the same—the game allows you to select only the initial set of squares that will be 'on.' (i.e., the 'initial conditions'), resulting in wildly different outcomes. Ummmm... what do we call that again?

"**The Game of Life**" was invented in 1970 by John Horton Conway, Professor of Finite Mathematics at Princeton University. [This is discussed in Mitchell Waldrop's book, *Complexity: The Emerging Science at the Edge of Order and Chaos* (Touchstone Books, 1992)—check the index for references. See also Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and The Meanings of Life* (New York: Simon & Schuster; Reprint edition, 1996), pp. 166-176.] It proved fascinating to many students. ("Pong" would not be invented 'til 1972.) This simple mathematical exercise led investigators to a great many other ideas, but it also led directly to the entire field of "Artificial Life."

The Game of Life provides examples of "emergent complexity" and "self-organizing systems." It has a simple rule-set: "For each cell in the grid, count how many of its eight neighbors are **ON** at the present instant. If the answer is exactly two, the cell stays in its present state (**ON** or **OFF**) in the next instant. If the answer is precisely three, the cell is **ON** in the next instant whatever its current state. Under all other conditions, the cell is **OFF**." Interestingly, these basic rules were surprisingly hard to discover and seem to be

unalterable or inevitable—that is, any *other* rules produce very uninteresting results: the system rapidly either freezes up solid or evaporates into nothingness.

Given this very simple, solitary rule, the game demonstrates a surprising amount of complexity and creativity, depending on initial conditions. Watch the two computer videos of the game linked to on blackboard to see the very different system behaviors driven purely by the initial configuration of ON cells.

3. **A Complex Adaptive System.** Watch the 6-minute video (also very dated—c.1990), "The Ants Go Marching: Behavioral Dynamics at Three Levels."

4. **A Great Leap Forward.** Then watch the two short but newer videos (below), which discuss the use of cellular automata in the artificial life computer program "*Massive*." This software application was used to provide the vast armies and battle scenes in the *Lord of the Rings* movies (released 2001-3). It's quite a leap from 1991, isn't it? [These videos are from <http://www.lordoftherings.net/effects/>.] See also (purely optional) the article, "[Digital Actors in \[Lord of the\] Rings Can Think](#)" [[local backup copy](#)]. Could you use this stuff to do anything besides make movies? Could the Massive agents be anything other than men or monsters (e.g., ships passing through the Straits of Malacca)?

5. Christopher Bassford, a.) "[The Nature of States and Other War-Making Political Entities](#)," and b.) "[War and the State System](#)," in "Policy, Politics, War, and Military Strategy." This is the original draft of *Marine Corps Doctrinal Publication (MCDP) 1-1, Strategy*, 1997. (These links *should* take you directly to the relevant sections; if not, use the links in that on-line book's table of contents.) These two readings are very short (about 7 pages total if you print them). They may be the course's only assigned reading explicitly about human war and politics, our normal subject matter here at NDU. They reflect a way of looking at those subjects that is shaped by scientific ideas like evolution, nonlinear mathematics, and Complexity theory.

6. John Lewis Gaddis, Chapter 7, "[Molecules with Minds of Their Own](#)," *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2004), pp.111-128. **(STUDENT ISSUE)** After reading this chapter, re-view the video at the top of the Topic 3 blackboard page. Why does the instructor assert that this roadway experience in South Asia is analogous to the Westphalian state system?

Topic 4 Chaos, Complexity, & History

TOPIC LEARNING OBJECTIVES

Recognize the overlap of history with the fields of chaos and complexity when history is viewed as a Science.

ISSUES FOR CONSIDERATION

1. Historians dodge the label of 'science,' but is history a science nonetheless? I guess that means you have to figure out what 'science' means.
2. Science used to sneer at history (i.e., change over time), but now it increasingly embraces it. Why? And what does that mean?
3. Are "social scientists" scientists in a modern sense, or is their concept of 'science' obsolete? If so, does their work have value?
4. What does Gaddis mean by distinguishing the 'reductionist' approach from the 'ecological' approach? I.e., what is an 'independent variable' in human affairs?
5. So, what use is history to a strategist if history refuses to forecast?
6. How does Gaddis apply ideas from the physical sciences of Chaos and Complexity to the understanding of history?
7. How would you translate the "Butterfly Effect" into historical terms? How about fractals? Self-organization? Organized criticality (the 'tipping point')?
8. What disciplines, theories, data, etc., *cannot* be fitted into a historical treatment?
9. Are the historical methods Gaddis describes actually "methods"? Can you describe them and explain why historians approach their problem this way?
10. Ranke's call to relate "history as it actually happened" is pretty challenging, given that most of the necessary evidence is missing and much of what remains is highly suspect. How do we handle that challenge?

REQUIRED READINGS (54 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

Note: You read the introduction and Chapter 2 to Gaddis's book in Topic 1. You might want to briefly review them.

1. John Lewis Gaddis, Chapter 3, "Structure and Process"; Chapter 4, "The Interdependency of Variables"; and Chapter 5, "Chaos and Complexity," in *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2004), pp. 35-89. **(STUDENT ISSUE)**

Topic 5

Evolution

TOPIC LEARNING OBJECTIVES

1. Understand the three central ideas in evolution (the "Darwinian Trinity"):
 - A. variation exists within populations
 - B. these variations are transmitted from one generation to the next
 - C. differential survival (i.e., "natural selection") leads to diversity and to change over time

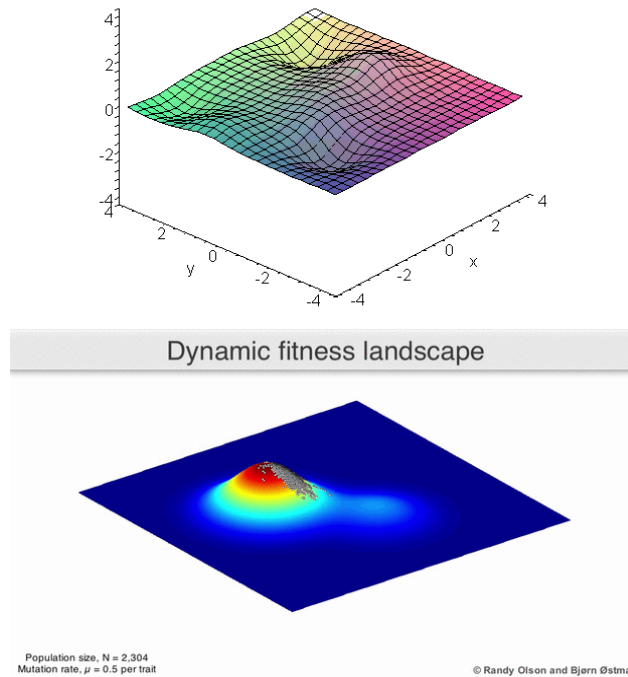
2. Understand the overwhelming role of non-competitive forms of inter-species relationships in driving the behavior of biological populations:

- predation (which is *not* competition)
- parasitoidism
- parasitism
- commensalism
- mutualism
- sociality
- symbiosis
- endosymbiosis*
- symbiogenesis

3. Understand the context of the term and the role of "fitness" from a biological systems perspective.

ISSUES FOR CONSIDERATION

1. What's the difference between a genotype and a phenotype?
2. What is evolution driving *towards*?
3. Speaking of "survival of the fittest," what is "fitness"?
4. How could mere *recombination* of existing traits achieve innovation and diversity?
5. Shown below are two animated "fitness landscapes." Ignore the fact that they repeat themselves (that's simply because of these particular animations loop)—concentrate on the fact that they change over time. What does that mean to you? What might the various axes actually represent?



Two fitness landscapes. (The bottom one is from [Wikipedia](#).)

6. Again keeping this fitness landscape image in mind, remember that in a complex adaptive system (which any local ecology must be), the "environment" faced by any component agent includes not only the physical environment (terrain, climate, etc.), but all the other species in it, other members of your own species, etc. It may even include yourself, since you may play a number of different roles in the system. A bear, for instance, is a fisherman, a honey-gatherer, and a carnivore. If you (as the bear-carnivore) eat up or drive off all the local beavers, what impact is that going to have on you as bear-fisherman and as bear honey-gatherer? Now, extend that thinking to a state. Remember that "the state" is not the amorphous sum of all its people, land, resources, etc.—the state is that organization which maintains a monopoly on legitimate violence within a given population and territory. Imagine a state whose success is based on its warfighting capabilities. What happens to that state once it eliminates all warfighting peer competitors? What will now be the basis for its appeal (or "legitimacy") to its population, its now-under-employed military elites, and the smaller allies once dependent upon it for protection from larger neighbors, etc.? Can you think of real-world examples?

7. Why might it confer an evolutionary advantage on a species—or even on life itself—to make aging and death unavoidable for the individual organism? What does that say for permanence in human social organizations? And yet, don't many (or all) such organizations strive to make themselves immortal? What happens when they succeed?

8. Ideas have impact outside their original fields. The political ramifications of evolutionary theory are enormous: Fascism and Communism were both based on different positions in the "nature vs. nurture" debate. Is it likely that scientists who stress

the cooperative aspects of evolution may tend to be Socialists (e.g., [Lynn Margulis](#))? Is Edward O. Wilson's "Sociobiology" simply a stalking horse for Fascism and racism? (Wilson was virulently attacked on that basis.) Are these leaps from Biology to Politics intellectually justifiable, or are nature and human nature essentially unrelated fields?

9. Does the Program for Joint Education (PJE) threaten to create a "strategic monoculture" in United States military and strategic thinking? What is the drive behind this process, what are the benefits and dangers, and what are the alternatives? How many other such efforts are you aware of?

REQUIRED READINGS (43 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. Melanie Mitchell, Chapter 5, "[Evolution](#)," from *Complexity: A Guided Tour* (New York: Oxford University Press, 2009), pp. 71-87. This a good, short overview of the history of evolutionary theory.
2. Scan this *PowerPoint* slideshow, "[Evolutionary Trees](#)." It shows essentially identical branching evolutionary trees in very different domains (e.g., biology, software, linguistics, religion). We could draw similar trees for businesses and political organizations. If such similar patterns are useful in describing change over time in such diverse phenomena, doesn't that mean that they have something in common? It also introduces the powerful concept of *anastomosis* (the rejoining of branches).
3. David Sloan Wilson, [Chapters 1-4](#), *Evolution for Everyone: How Darwin's Theory Can Change the Way We Think About Our Lives* (New York: Delacorte Press, 2007), pp. 1-27. **Key Reading.** We'll be reading more from D.S. Wilson later. Wilson is a biologist, but he calls himself simply an "evolutionist" because his goal is to apply evolutionary ideas to many processes beyond pure biology. This book is an effort to popularize some basic ideas. Wilson's *Darwin's Cathedral*, which we'll look at later, is a much more challenging book.
4. View the video clip, "The Evolutionary Arms Race," from the [PBS "Evolution" series](#), episode "Darwin's Dangerous Idea," 2001. (10 minutes) (If this embedded MP4 video fails, try this [Flash](#) version or this [.wmv version](#) — 58mb.)
5. **FULL-SHOW VIDEOS:** Watch **ONE** of the following:

VIDEO OPTION A. "Nice Guys Finish First," video (1987, 46 minutes) by Richard Dawkins. Good for the whole family, but not great video quality. Watch the MP4 video embedded on blackboard or go to [Bing](#)

OR

VIDEO OPTION B. Watch the Cannabis and Potato segments of the "Botany of Desire" video (2009, 1hr 55 minutes), <http://video.pbs.org/video/1283872815/> There are segments on the tulip, apple, potato, and marijuana—each explaining how these organisms exploit humans to achieve evolutionary success. All are useful and insightful, but the potato and cannabis pieces are especially cool and relevant. Good for the whole family. (See more info on this video below.) Alternate link to video on [Bing](#).

The section on Cannabis starts at about **55:52**. You can jump to it using the slider bar. (12 minutes)

BACKGROUND INFO: This video is based on Michael Pollan's best-selling book, [*The Botany of Desire: A Plant's-Eye View of the World*](#) (Random House, 2002). This special takes viewers on an eye-opening exploration of the human relationship with the plant world, seen from the plants' point of view. What do we get out of understanding a plant's viewpoint, and why is it so difficult to get our minds around that approach? BTW, how good are you at understand ISIS's way of seeing the world? (Or your Instructor's?)

The program as a whole shows how four familiar species—the apple, the tulip, *Cannabis* and the potato—evolved to satisfy our yearnings for sweetness, beauty, intoxication and control. If you're running out of time, watch the intro, then focus on one section: the apple (which starts at **04:49** in the full video—you can jump to it using the slider bar), *Cannabis* (starts at **55:52**), or the potato (starts at **1:23:30**). I'm struck by how many strategic arenas this series touches on, from business to religion and war. (Here's the [Amazon.com](#) listing for [Pollan's book](#).)

Topic 6

Evolution, Humans, & Human Superorganisms

TOPIC LEARNING OBJECTIVES

1. Understand the background of the conflict regarding the comparative effect of evolutionary selection on individuals vs groups.
2. Recognize the impact of the conflicting incentives on biological fitness that is inherent in that conflict.
3. Understand the evolutionary implications of viewing different levels of biological populations as superorganisms.

ISSUES FOR CONSIDERATION

1. *Cui Bono?* (Latin for "To whose benefit?") In biology, does a gene spread because it benefits its owner-species, or simply because it can? A growing tumor represents great success for cancer cells, until they kill their host and thus themselves. Do some CEOs today earn enormously disproportionate pay because that's necessary for the effective functioning of the capitalism that has made America so successful, or simply because as a class they are gaming the system in new ways (and possibly destroying it in the process)? Does a nation go to war to serve its own collective interests or to serve the personal interests of its rulers—and are democracies any different in this respect than dictatorships, monarchies, oligarchies, etc.? Does a cultural idea like a religion or other ideology spread because it serves the interests of man or of God, or simply because it has a capacity to harness human energies for its own reproduction?

2. Do you think that natural selection operates on multiple levels—*e.g.*, the gene, the individual, the local herd or tribe, the species, even an ecology as a collective system—or on ['Gaian'](#) Earth as a whole? Or does it happen only at the level of the individual gene, or the reproductive individual, as 'commonsense' demands? Only the individual organism actually reproduces, but among social animals, at least, individual survival may depend on the character of the group—ergo, "group selection." But only the gene actually transmits evolutionary information—the individual organism can be seen as merely the "vehicle" in which genes travel through time and space (in Dawkins' words, a 'survival machine for genes').

3. Is there a cultural equivalent to the gene—a unit of cultural information transmission? Need such a unit have some physical reality—embedded, say, in some particular pattern of neurons? What *is* "culture," anyway? And how can it be an "evolutionary environment" or even a "substitute" for evolution?

4. If 'strategy' is a conscious process (and that is very debatable), who consciously controls America's "strategic culture"?

5. Any discrete 'strategic' idea, concept, innovation, etc., must survive a highly political—and therefore at best "semi-rational"—process. This political process normally imposes some tests that are entirely unrelated to the putative objects of the idea itself, even before it is placed into actual execution. In the vast majority of cases, such processes change the original concept, often beyond recognition and not *necessarily* to any benefit for the originator, the idea itself, or the collective actor the strategy is supposed to benefit. Do you accept that description? If so, how does this process differ from "natural" selection?

6. The early evolutionist Jean-Baptiste Lamarck (1744-1829) talked about what is now called "soft inheritance," i.e., the "inheritance of acquired characteristics." We 'know' today that changes in the non-reproducing cells of the body cannot be transmitted to the next generation. But does Lamarck's idea regain force if we're talking about culture as an evolutionary mode?

7. "Free riders" are characters who try to gain the benefits of cooperative groups without making the sacrifices. How do strategies like "[tit for tat](#)" handle that problem? How do real human societies handle it?

8. A famous question: If a Congress of gorillas gathered together to design a supergorilla, would they design a human? Similarly, would a new Constitutional Convention be able to improve on the work of 1789? Would a super-strong, super-smart chief executive—an American "Emperor"—be able to improve on the meandering stream of compromises that normally make up "American national strategy"? Or is the conflict inherent in those compromises actually the *reason* for "The Great Republic's" success?

9. It seems that we can think dispassionately about the evolution of social interaction among guppies, spiders, or beetles. It seems to be a little more difficult to be dispassionate about the social interaction of chimpanzees—or even of ants, because the comparisons to human social behavior are so stark. Can we truly be dispassionate in discussing the evolution of human social interaction? Should we be?

10. Evolutionary biology defines "success" in reproductive terms—i.e., a genome is more "successful" if it spreads over a greater area and increases its numbers or bio-mass, etc. While the Mongols or Nazi Germany (not to mention most other human communities throughout history) might have defined success along similar lines, is that an appropriate standard for today's United States of America? Do we engage in *metaphorical* conquests? If so, are these driven by the same instincts?

11. How would you define strategic success specifically for the United States of America (as a state or society) over, say, the next century? Would you call the USA a success if it achieved great wisdom, equality, beauty, or complexity but shrank markedly in relative size, wealth, numbers, and power? Would it be a "success" if it simply managed to sustain its own existence in an increasingly narrow and hostile environment, like, for example, some successful species of Alpine shrub?

12. Which Pizza restaurant has been more “successful,” Papa John’s, which did not exist when some of us started High School, Sbarro’s, which was ranked by Yahoo! Food as the second best pizza chain in America in May 2015 (one year after exiting a three year period under Chapter 11 bankruptcy protection) or Regina’s Pizza, a small family Pizzeria that has persisted in Cambridge, Massachusetts for over a century?

13. So, would it be realistic to define American strategic "success" in some manner not similar to success as defined in evolutionary biology—in other words, to defy the message of the last 4 billion years of the history of the world and of human political organisms? Or would you prefer not to define it at all?

REQUIRED READINGS (79 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. *Wikipedia* article on [Cui Bono](#). In whose interest is evolutionary change?
2. David Sloan Wilson, *Darwin’s Cathedral: Evolution, Religion, and the Nature of Society* (Chicago: University of Chicago Press, 2002), "[Introduction: Church as Organism,](#)" and [Chapter 1, "The View from Evolutionary Biology,"](#) pp.1-46. **(Student Issue)(Key reading!)** This book overall is an attempt to look at human religions as organisms. We will politely ignore the religious issues and focus instead on the notions of "group selection," "superorganisms," and the idea that any human organization (SOCOM?) can be viewed in that light. (See [Amazon listing](#) for this book.) This is a dense, complex, and extremely rich reading. You may have a tough time with it. (I did/do.) But close reading may have a powerful payoff. If any one section gets overwhelming, skim it and move to the next. Save this reading and drill into it again later when you're in a serious, patient frame of mind. :-)
3. Matt Ridley, [Chapter 1, "Human Nature,"](#) *The Red Queen: Sex and the Evolution of Human Nature* (Penguin, 1993), pp. 1-21.
4. Video, Daniel Dennett on "[Dangerous Memes.](#)" (About 15 minutes.) Dennett and Dawkins have been pushing atheism via evolutionary theory, vice D.S. Wilson's approach. You need not get distracted by the atheism argument, which is utterly outside the scope of evolutionary science. What we're interested in here is the notion of "memes." If this catches your attention, this idea was first proposed in Richard Dawkins, Chapter 11, "[Memes: The New Replicators,](#)" *The Selfish Gene* (Oxford University Press, 1976/1989), pp.189-201. (See [Wikipedia entry.](#)) Once you are familiar with the word "memes," you will probably start seeing/hearing it everywhere.

OPTIONAL

Glen Harlan Reynolds, *The Social Media Upheaval* (Encounter Books, 2019). Pp. 1-5. **(Student Issue).**

Nassim Nicholas Taleb, Prologue, “Antifragile: Things That Gain from Disorder.” (Random House, 2012), pp. 1-13. **(Student Issue)**.

These are optional reading, appropriately placed at the end of the last topic of the first half of the course – the broad “conceptual” area block. It makes a good transition between “concepts” and “environments.” We can now start to consider how elements of chaos, complexity, non-linearity, evolution, and levels of competition might be fit together in a manner to benefit a humble strategist.

Topic 7

Decision-Making Theory

TOPIC LEARNING OBJECTIVES

1. Understand a range of different decision-making theories and approaches, and the ramifications of biases based on experience that shape the instinct associated with which one a strategic leader chooses to employ.

ISSUES FOR CONSIDERATION

1. Once, when the course designer was in the doctrine-writing business, there was a major argument over the term "improvisation." One camp thought that the ability to "improvise" was a good thing, and the other thought that anybody who had to "improvise" must be, by definition, a bad strategist. They settled on "adapt." What was that all about?
2. If "improvise" is a controversial word, what about "pattern recognition" or "intuition"?
3. What are the key differences between studying *how* people make decisions, explaining how they "must be making" decisions, and describing how they "should" make decisions? How does Klein approach those issues?
4. Klein gives examples from many different fields (e.g., firefighting, nursing, air defense), but aren't most of these tactical-level decisions? Why might we expect things to work differently at the strategic level? Or is the "strategic level" just a place where tactics cost more and involve more people?
5. How do you define the "tactical" or "strategic" levels in these non-military fields? What is the tactical level of the baseball business? What is the strategic level of firefighting? Is that thought-structure even applicable?
6. Many of Klein's subjects have enormous experience in their fields—they have been in similar or analogous situations many, many times. They have personally witnessed the processes leading up to the kinds of problems on which they focus and the real-world consequences of many previous decisions they had made at the same level of organization and events. Is that true of most strategic-level decision-makers?
7. What would strategic-level political-military decision-making look like if it matched Klein's observations at the tactical level? How does this differ from what you've observed in strategic leaders?
8. If Klein's approach is relevant at the strategic level, how *should* we prepare leaders for strategic-level decision-making? Does your prescription match actual practice?

9. If there were no significant uncertainties, no missing information, would the conscious, rational decision-making model be the best practical approach? Could we in fact handle the necessary amount of information even if it was all complete and accurate?

REQUIRED READINGS (44 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. Gary Klein, [Chapters 1-4](#), *Sources of Power: How People Make Decisions* (MIT Press; Reprint edition, 1999), pp. 1-44.

<https://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=3&sid=c2fbb72a-02ac-462a-8f68-7d52fcd985a9%40sessionmgr4006>

2. Video (45 min.), Gary Klein on experience and intuition vice systematic rational decision processes. Original URL: <http://player.vimeo.com/video/83528479> — 2 July 2011.

Topic 8

Causation

TOPIC LEARNING OBJECTIVES

1. Understand the challenge in identifying causation within any complex adaptive system.
2. Recognize the tendency to conflate correlation with causation, the effects of multi-causality, and the pitfalls of assumptions regarding sequence in time as an appropriate factor to derive causation.

ISSUES FOR CONSIDERATION

1. How do we sort out immediate and more distant causes? If *every* cause plays a role in the outcome, how do we rate their relative importance? How do we know when to stop adding to the pile?
2. Historians play with things like causation, contingency, and counterfactual 'what-ifs?' What are the roles of these factors in strategy?
3. Why do we have an assigned reading on schizophrenia?
4. It is easy to be overwhelmed by complexity when we embrace multicausality. That's OK: clearly, most strategists get overwhelmed by it too. Napoleon, for example, has often been described as "the most competent human being who ever lived." He ended up imprisoned on the island of Saint Helena. So, how do *we* cope with it?
5. What is "Physics envy"? How might it distort our thinking about causation in human events?
6. The message seems to be that there are causes you can control (or, at least, possibly affect) and those you can't; those you can understand and those you can't; those you can know about and those you can't even be aware of. The magnitude of some causes appears obvious, others are inscrutable. And there are causes you might be able to move from one column to the other (for yourself or for your opponents). How much of the web of causation can you take into your calculations (or ignore) before life becomes essentially random?
7. If you can't explain the causes of your coming victory, should you be in the game?

REQUIRED READINGS (97 pages or 44 pages plus video)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. John Lewis Gaddis, Chapter 6, "Causation, Contingency, and Counterfactuals," *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2004), pp. 91-109. **(STUDENT ISSUE)**
2. Matt Ridley, "[Chapter 4, "The Madness of Causes,"](#)" in *The Agile Gene: How Nature Turns on Nurture* (HarperCollins, 2003), pp. 98-124. In this book, Ridley (a science journalist who specializes in genetics) is addressing a long-running battle over the cause of human behavior: Is it driven by nature or by nurture (i.e., by genes or by environment and upbringing)? Chapter 4 concerns the causes of schizophrenia. BTW, what are the various meaning of this book's sub-title? And what does "*non sequitur*" mean?
3. Leonard M. Mlodinow, video, "[Prologue, "Ch. 9, "Illusions of Patterns and Patterns of Illusion," and Ch.10, "The Drunkard's Walk,"](#)" *The Drunkard's Walk: How Randomness Rules Our Lives* (New York: Vintage Books, 2008), pp. ix-xi, 169-219. And/or see the [YouTube video of Mlodinow](#) (51:34).
4. Joanna Klein, "[Lacking Brains, Plants Can Still Make Good Judgments About Risks,](#)" *New York Times*, 30 June 2016.
5. Andrew Bennett and Alexander L. George, "[Process Tracing in Case Study Research,](#)" conference paper, MacArthur Foundation Workshop on Case Study Methods October 17-19, 1997. I've included this as an example of a social-science approach to causation.

DESSERT. Nessa Carey, "[Introduction,](#)" *The Epigenetics Revolution* (Columbia University Press, 2012), pp. 1-9. This piece on the new science of epigenetics discusses a process of causation that, according to our previous understanding of genetics, simply cannot occur. What deeply ingrained belief does it violate? If the epigeneticists are right that this kind of causation can exist, might this have any implications for social policies in the USA?

Topic 9

The Con

TOPIC LEARNING OBJECTIVES

1. Consider the extent to which evolved cooperative behavior relies on maintaining a certain level of vulnerability to deception.
2. Appreciate the dynamics of different possible fitness environments at different levels of analysis on a biological population - individual, family/local group, species-wide, or cross-species ecosystem, and the evolutionary pressures those environments might have to favor or disfavor selection deception as a trait.

You can't cheat an honest man....

*W.C. Fields
comedian*

Never give a sucker an even break or smarten up a chump.

*The second half of the quotation.
W.C. Fields
comedian and successful businessman*

[T]he weaker the forces that are at the disposal of the supreme commander, the more appealing the use of cunning becomes. In a state of weakness and insignificance, when prudence, judgment, and ability no longer suffice, cunning [i.e., deception] may well appear the only hope. The bleaker the situation, with everything concentrating on a single desperate attempt, the more readily cunning is joined to daring. **Released from all future considerations, and liberated from thoughts of later retribution**, boldness and cunning will be free to augment each other to the point of concentrating a faint glimmer of hope into a single beam of light which may yet kindle a flame.
[Emphasis added.]

Carl von Clausewitz

Ants are easily fooled.... Human beings are extremely difficult to deceive in face-to-face encounters.

E.O. Wilson, myrmecologist

ISSUES FOR CONSIDERATION

1. Are people essentially honest or dishonest? How about you?
2. How do you feel when you are beaten in an "honest competition/fight"?
3. How do you feel when you are beaten through trickery or treachery?
4. What is the human world's "carrying capacity" for liars and cheats?

5. Can you lie to others without also lying to yourself? Can the state lie on the Nation's behalf without lying to the Nation?
6. Why do you claim to be lying to someone "for their own good"?
7. Politicians who fail to "shade the truth," "spin," etc., are not likely to last long. Is that their fault or ours? At what point do these "shadings" become lies?
8. How central is lying to the success of laws and other government policies that you genuinely believe are best for America? Or does the latter phrase just mean "best for you"?
9. Is "marketing" intrinsically dishonest?
10. It is often said that you can't legislate morality. However, at some point dishonesty becomes so pervasive that it becomes dangerous (like how?) and has to be suppressed. How do you enforce your demands for honesty from others?

REQUIRED READING/VIEWING (78 pages)

1. Bert Hölldobler and Edward O. Wilson, Chapter 10, "Social Parasites: Breaking the Code," pp. 123-141 in *Journey to the Ants: A Story of Scientific Exploration* (Cambridge, MA: Belknap Press, 1994). (**STUDENT ISSUE**). Ants again? Jeez.

2. From the work of psychologist Maria Konnikova. Konnikova graduated magna cum laude from Harvard University, where she studied psychology, creative writing, and government, and received her Ph.D. in Psychology from Columbia University. She is the *New York Times* bestselling author of [The Confidence Game](#) (Viking/Penguin 2016) and [Mastermind: How to Think Like Sherlock Holmes](#) (Viking/Penguin, 2013). She is a [contributing writer](#) for *The New Yorker*, where she writes a [regular column](#) with a focus on psychology and culture, and her writing has appeared in *The Atlantic*, *The New York Times*, *California Sunday*, *Pacific Standard*, *The New Republic*, *WIRED*, and *The Smithsonian*, among numerous other publications. She is a recipient of the 2015 Harvard Medical School Media Fellowship, is a Schachter Writing Fellow at Columbia University's Motivation Science Center, and formerly wrote the "[Literally Psyched](#)" column for *Scientific American* and the popular psychology blog "[Artful Choice](#)" for *Big Think*.

• **Chapter 1. "[The Grifter and the Mark](#),"** *The Confidence Game* (Viking/Penguin 2016), pp. 15-52.

• **VIDEO (4:54 minutes): [Why Our Hearts and Minds Are Easy Targets for Con Artists, Holy Men and Cult Leaders](#).** A look at the mechanisms of human nature that have allowed con artists, religious authorities, and cult leaders to prevail for thousands of years. **Maria**

• **VIDEO (4:07 minutes): [A Con Artist Sold the Eiffel Tower Twice—by Listening, Not Selling](#).** We tend to think con artists are smooth talkers and persuasive sellers, but listening is their most important quality.

• **VIDEO** (3:36 minutes): **What Psychological Traits Does the Con Artist Look for in Victims?** The con artist is more of a psychologist than a thief. In fact, con artists will never actually steal anything from you; they'll convince you to hand it over freely.

3. Military Deception. *Field Manual No. 3-13.4, Army Support to Military Deception* (Headquarters Department of the Army Washington, DC, 26 February 2019). Read Chapter 1, "Fundamentals," pp.1-1 TO 1-13 (stop at "Roles and Responsibilities").

4. Short articles.

Clive Thompson, "[The Eyes of Honesty](#)," *The New York Times*, 10 DEC 2006.

Ligaya Mishan, "[The Distinctly American Ethos of the Grifter](#)," *The New York Times Style Magazine*, 12 SEP 2019.

5. DESSERT, Chapter 1, "[The Problem of Cooperation](#)," in Robert Axelrod, *The Evolution of Cooperation* (Basic Books, 1984), pp.3–24. We all know that being the cooperative type sets you up to be a chump. And we all nevertheless tend to be pretty cooperative with one another. Could it be that we are smarter than we think we are? This is a famous and massively influential book that influenced a vast range of diplomats (especially arms-controllers), military historians, computer scientists, businessmen, economists, etc. It is a magnificent example of the power of cross-disciplinary thinking.

ADDITIONAL MATERIALS

• **From Wikipedia:**

[Confidence Tricks](#), [List of](#).

[Lies](#) (variety of)

[Big Lie](#)

[Bad Faith](#)

[Deception](#)

[Military Deception](#)

"**[Operation Bodyguard](#)**," a D-Day Deception story. According to Sun Tzu-fans, Westerners are, of course, incapable of clever, "Eastern-style" inscrutability.

MORE SCAMS?

Mao Zedong's "100 Flowers Campaign" (1956). An unintended but brilliant example of strategic deception? *Wikipedia*: "It is debated amongst historians as to whether Mao's motivations for launching the campaign were genuine or not. In fact, it is possible that Mao actually originally had pure intentions, but later decided to utilize the opportunity to destroy criticism." Are you willing to credit Mao with "pure intentions"? Why?

Jessica Silver-Greenberg, Emily Steel, Jacob Bernstein and David Enrich, "[Jeffrey Epstein, Blackmail and a Lucrative 'Hot List'](#)," *The New York Times*, 30 NOV 2019. Here's a tale of multiple deceptions within deceptions. But then, it's about lawyers.

Religion as a Strategic Environment

TOPIC LEARNING OBJECTIVES

1. Connect the environment of evolutionary fitness of various religions to the previous topics of complex adaptive systems, cooperative vs competitive incentives towards fitness, and causality.
2. Appreciate necessary elements and characteristics of apparent strategies of historically dominant religions.

ISSUES FOR CONSIDERATION

1. Do you find it odd or awkward to think of religion as a strategic enterprise? Why?
2. One example of a religious strategy is the decision some Christian sects have taken to oppose science's evolutionary theory. Those sects have succeeded, it seems, in creating the impression that Christianity and Evolution are somehow in fundamental opposition. What are the practical benefits to this strategy? What are the costs?
3. Religions often express values of asceticism that appear quite contrary to "survival" in the normal bio-evolutionary sense. How do you explain the persistence of this apparent contradiction?
4. Religious organizations tend to take on many functions beyond their core religious or theological ones. If we were to sort out a purely *religious* function, a purpose that makes religion distinct from all other aspects of human activity, what would that be?
5. Along those same lines, what is distinctive in the strategic ends, ways, and means of a religious organization? I.e., what makes it different from a commercial organization or from the State? What makes it the same?
6. Why and how do additional functions (e.g., Saturday-night Bingo) become part of "religion"? What happens when these "additional functions" become the functional core of the organization?
7. Why is the American value of separating church and state so unique—and so problematic for other societies? What makes it problematic for us?
8. Do we have to distinguish between "legitimate" religions and mere "sects," "cults," or scams run by hucksters and con-men posing as spiritual leaders? Should the latter fall into a different category—say, crime? Or do they still belong in the category of religion?

9. How and why do "legitimate" religious organizations become corrupt, how and why do they recover, and what happens if they don't?

10. What kind of pressures might cause a religion to change over time? Since religious bodies are complex adaptive systems, think about both internal and external forces.

11. Do religions have self-imposed limits on their own strategic flexibility? Where might these come from? Are they sources of weakness or of strength?

12. Whether they are true or false, religious ideas survive and thrive (and mutate) over long periods. Are they memes that survive and spread simply because they can? Are they superorganisms that operate regardless of the interests of their human subcomponents, or do they enhance the survival and reproduction of their human members? If the latter, how?

REQUIRED READINGS (108 pages - triaged below)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. Video, [David Sloan Wilson on Richard Dawkins](#) (4 minutes 46 seconds). This is a clip of a conference given by David Sloan Wilson called "Evolution for Everyone," where he praises and criticizes Richard Dawkins. (Also on [YouTube](#))

2. David Sloan Wilson, *Darwin's Cathedral: Evolution, Religion, and the Nature of Society* (Chicago: University of Chicago Press, 2002). (**STUDENT ISSUE**)

- **You *might* want to review:** Chapter 2, "The View from Evolutionary Biology," pp.1-46. We read this for Topic 6. It's a great introduction to the way biologists think about evolutionary issues.
- **Read** pp. 1-4, 86-160, 189-219 (108 pages):
- (Carefully re-read) the short introduction, "[Church as Organism](#)," pp. 1-4.
- Chapter 3, "[Calvinism: An Argument from Design](#)," pp. 86-124.
- **Chapter 4**, "[The Secular Utility of Religion: Historical Examples](#)," pp. 125-160.
- Chapter 6, "[Forgiveness as a Complex Adaptation](#)," pp. 189-219.

Triage: This is a fair amount of pretty sophisticated reading. Skimming will not be very informative. If you run short of time, read at least Chapter 4 carefully and scan the other two.

Topic 11

Ant Society as a Strategic Environment

TOPIC LEARNING OBJECTIVES

1. Recognize the illustrative case of simple, essentially linear components resulting in non-linear behavior when combined, and appreciate the apparent parallels with other complex environments addressed in the course.
2. Appreciate the apparent emergence of strategic behavior in a complex adaptive system.

ISSUES FOR CONSIDERATION

1. If space aliens in orbit had watched the classical Greek city-states for a hundred years or Europe from 1908 to 1918—without listening in on the intellectual discussions—would they have seen any phenomena greatly different from what myrmecologists see among the ants?
2. Ten thousand years ago, the ants were vastly ahead of humans (then organized exclusively in small hunter-gatherer bands) in terms of exploiting the strategy of "sociality." Over that time we've been exploring a great many strategies the ants mastered 60 million years ago: labor specialization; hierarchical organization; massive communities—sometimes multi-race and/or multi-species; engineering complex artificial environments; cattle herding; farming; slave-raiding; armor, chemical warfare, suicide bombing, and complex offensive and defensive tactics. We know that ancient humans were close observers of nature and well aware of many ant behaviors, and it's more than likely that some human innovations were consciously based on observations of ants. Clearly, human cultural evolution can find and explore new strategies much faster than evolution based only on chance and natural selection can. In terms of actual *results*, however, is there any difference other than speed?
3. Before we ourselves discovered antibiotics, could we have recognized the ants' use of antibiotics? So, is it worthwhile to ask, What *else* are they doing that we still can't recognize because we haven't learned to do it yet?
4. Are the ants really so much easier to fool than we are, as E.O. Wilson suggests? How good are we at recognizing parasites in the forms of, say, con-men, shysters, false messiahs, politicians, beltway bandits? At what points do human social, political, and economic relationships shift between the symbiotic and the parasitic? Which relationship is more 'natural'?
5. Individual ants have tiny, if complex, brains—see the [photo on p.133](#) of *Journey to the Ants*. But the ant colony is really a single organism, with the individuals communicating

with one another through chemical signals very similar to those used by our own nerve cells. How much brain matter is there in an ant colony of 10 million ants?

6. Are human societies more similar to ant colonies or to entire multi-species ecologies? (Not forgetting, of course, that ants also exist in both multi-species colonies and ecologies.) That is, do individual humans play so many different roles and create so many different Complex Adaptive Systems that human society is itself more like an ecology than like a normal social species, or even the typical superorganism?

7. Even the super-organized, super-cooperative ants sometimes cheat on their sisters and the colony when they can, e.g., with workers slipping their own eggs into the brood-pile when the queen isn't looking. For that matter, there is a constant struggle going on among the components of our own bodies, even when it is functioning correctly. Cancer cells may slip the body's internal bonds entirely and kill us—and ultimately themselves—in an orgy of selfish reproduction that looks like massive 'success' until it crashes catastrophically. What does this say for any hopes we might have for "world peace" and/or a "sustainable society"?

REQUIRED READINGS (70 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. Bert Hölldobler and Edward O. Wilson, *Journey to the Ants: A Story of Scientific Exploration* (Cambridge, MA: Belknap Press, 1994). (**STUDENT ISSUE**) As you read, pay attention not only to the strategies of the Ants themselves but to the strategies of the scientists trying to understand them and, occasionally, to learn from them. This is an extremely interesting book that has—rather to my own surprise—often captured the imaginations of NDU students.

- [Preface \(2pp.\) and Chapter 1, "The Dominance of Ants," pp. 1-12](#)
- [Chapter 5, "War and Foreign Policy," pp. 59-74](#)
- [Chapter 9, "The Superorganism," pp. 107-122](#)
- [Chapter 10, "Social Parasites: Breaking the Code," pp. 123-141](#). Particularly cool.

* (purely optional) You cowboy types might also be interested in Chapter 11, on [Trophobionts](#) (cattle-herding Ants).

2. Review the [video excerpt](#) from the PBS "Evolution" series about the "Leafcutter" ants ("Evolutionary Arms Race") (4 mins).

Topic 12

Conclusions

TOPIC LEARNING OBJECTIVES

1. Discuss the central questions:
 - A. Do the workings of nature provide meaningful insights into human-level strategy, and if so how and why?
 - B. Does understanding the roles of chance, historicity, complex interaction, and multicausality in any way improve our capacity to manipulate the strategic environment in our favor?
 - C. Have our internal models of "how the world really works" been modified or enhanced to any detectable degree?
2. Consider the extent to which strategic competition among human superorganisms (e.g., societies, corporations, states, political parties, etc.) is similar to, or differs *fundamentally* from the chaotic, complex, evolutionary processes we see in nature.
3. As a strategic leader, how might you apply these concepts to your own (or your superorganism's) advantage in terms of evolutionary fitness?

ISSUES FOR CONSIDERATION

1. Would it be legitimate to talk about "a strategy" as the way someone or something actually functions, even if that functioning is contrary or seemingly unrelated to any formal plan or stated intention? Even if the someone or something in question has no "intentions" of its own or is unaware of them?
2. Cui Bono?
3. How does conscious human intentionality change the strategic processes that exist in the rest of nature? Is this the same question as asking what is the relationship between our intentions and pure chance in the actual unfolding of events?
4. Your Service training and your NDU education have provided you with a number of formal frameworks for rationally analyzing strategic problems. However, it is easy to suspect that many if not most real-world strategists (by which I mean people who actually make strategic decisions for the political entities they rule or represent, rather than strategic scholars, strategic analysts, or strategic advisors) choose between various conceivable courses of action based, not on formal analyses, but on a highly personalized sense (i.e., an internal model) of "how the world works." Has anything in this course affected your sense of how the world works?

5. Are all human-on-human strategic environments essentially similar? Are the practical boundaries between politics, religion, economics, business, war, etc., in any way fundamental?

6. Should the word 'strategy' be reserved for military decisions (or, perhaps more precisely, for decisions regarding the management of organized violence) rather than being used promiscuously for everything from viral attack mechanisms to budgetary decisions at Coca-Cola, Inc.?

7. What might be the differing strategic implications of a world-view guided by a historical mindset, an evolutionary or 'ecological' mindset (which *might* be the same as a historical mindset), or a 'political science' mindset?

8. What is the strategic value of imagination? What *IS* imagination, anyway?

9. Could there be an underlying, generic discipline of Strategy, with fundamental elements or concepts applicable to all fields of endeavor?

[A FEW ADDITIONAL] ISSUES FOR CONSIDERATION

1 Does it matter whether you know why you want something? Or is simply registering the desire sufficient reason for the rational strategist to act upon it?

2 Brand X talks of "policy" as if it were merely another layer of strategy. But isn't policy really something different and "special"?

3. What is "the strategic level" of Human behavior? How about non-Humans? What about Baseball?

4. Is your internal model of "how the world works" the *source* of pattern recognition or intuition?

5. How does conscious Human intentionality *change* the strategic processes that exist in the rest of nature? Is this the same question as asking what is the relationship between our intentions and pure chance in the actual unfolding of events?

6. What might be the differing strategic implications of a world-view guided by a historical mindset; an evolutionary or 'ecological' mindset (which *might* be the same as a historical mindset); an engineering mindset; a religious, mystical, or magical understanding of causation; or a 'social science' mindset?

7. Could there be an underlying, generic discipline of Strategy, with fundamental elements or concepts applicable to all fields of endeavor, from viral infections to Human warfare and Dentistry?

REQUIRED READINGS (34 pages)

After you've done the readings for this topic, provide feedback on them via blackboard.

1. I've assigned very little reading for this class, so please take the time to read the Topic 12 Overview on blackboard and Issues for Consideration above especially carefully and critically.

2. Philip E. Tetlock and Dan Gardner, Chapter 5, "[Supersmart?](#)" in *Superforecasting: The Art and Science of Prediction* (Crown Publishers, 2015). This course correctly stresses the difficulties of prediction. But that doesn't mean there aren't better ways to make educated guesses. Tetlock's work on forecasting has been very well received—this is just a sample meant to lure you into reading the rest of it. If you feel pressed for time and don't really care about the future anyway, try this [review of the book](#) by Daniel Buncic in *Risks* 2016, 4(3), 24; doi:[10.3390/risks4030024](https://doi.org/10.3390/risks4030024).

3. Choose between the following two readings on "free will."

- Matt Ridley, Chapter 22, "[Free Will](#)," in *Genome: The Autobiography of a Species in 23 Chapters* (Harper Perennial, 2000/2006), pp. 301-313. [This entire book is on-line [HERE](#).]

or

- Christof Koch, Chapter 7, "[Free Will and the Brain](#)" in *Consciousness: Confessions of a Romantic Reductionist* (MIT Press, 2012), pp. 91-112.

4. Video, Gary Klein, "[The Lightbulb Moment](#)" (2015). Klein's argument here moves beyond his earlier work on decisionmaking. He is addressing the questions "How do we gain insights and how can we get better at it?" [Discovered by AY2017 Brand-Xer Dante Gallardo.] This is pretty good. Maybe you shouldn't blow it off.

5. John Lewis Gaddis, Chapter Eight, "Seeing Like a Historian," *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2004), pp. 129-151.

6. John Gray, "[A Point of View: The child-like faith in reason](#)," BBC, 18 July 2014. [[Local backup](#)] This short piece is also available as a [recorded radio broadcast](#). (**KEY READING**)