

Teaching the First World War in “Real Time”

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Abstract

In the fall of 2014, I taught a course titled “World War I in Real Time” that tracked political, military, and diplomatic events in the opening months of the Great War, exactly one hundred years later. Despite an ostensibly narrow focus on events occurring in 1914, I leveraged the sheer scale and complexity of the war—and the puzzles generated by digging deeply into its history—to use the tools of game theory and the logic of inference to learn about politics more generally. This was very much a course on international relations, using game theory and statistical reasoning to understand them, though couched in terms of a major historical event of singular importance. In this paper, I discuss the underlying logic, challenges, and strategy of designing and teaching this particular type of event-specific course. I then closing with some (hopefully) general principles for developing similar courses.

Version 1.5

There's nothing small about The Great War. As easy as it is to see its global political footprint with a century's worth of hindsight, even its participants were under no illusion that their world would again be the same. Soon-to-be British Prime Minister David Lloyd George, addressing the public as Armaments Minister in 1915, said

It is the deluge, it is a convulsion of Nature. . . bringing unheard-of changes in the social and industrial fabric. It is a cyclone which is tearing up by the roots the ornamental plants of modern society. . . It is one of those seismic disturbances in which nations leap forward or fall backward generations in a single bound.
(quoted in Tooze 2014, p. 3)

Modern historians of the war invoke no less drama, calling it “the seminal event of modern times” (Fromkin 2004, p. 8), and even the weeks-long July Crisis that preceded it “the most complex of modern times, perhaps of any time so far” (Clark 2012, p. xxix). The First World War is, indeed, the case over which 20th Century international relations theory exercised itself the most and whose sheer enormity would seem to make an entire undergraduate international relations course devoted to it a fool's errand. What, after all, can we hope to learn from looking up close at one of history's biggest outliers?

I'll admit to having entertained similarly pessimistic thoughts in the early days of my course dedicated to following events in the war in (one hundred years delayed) “real time,” but I didn't do so for long. The narrative of such a massive, singular event turned out to be an excellent source of material for teaching students about thinking analytically, constructing rigorous explanations, and actively doing social science; the Great War worked so well as the subject of this class not despite but *because* of its novelty. Thinking in real time—that is, analyzing events without presupposing their ultimate outcomes—helped me to situate the class in the minds of the relevant decision-makers, to think hard about how political scientists explain things, to identify preferences, incentives, and structures relevant for building explanations (and theories), and to develop practices that are useful for both teaching and my own research. In short, I was able to use the hook of talking about a significant historical

event on its centennial, and the sprawling, dramatic narrative attached to it, to cultivate student interest in what was, at its heart, a simple course about using the logic of strategic interaction and the tools of inference to explain international politics. The course thus surveyed the modern literature on international relations, war, and peace, but it did so by engaging students in the process of generating knowledge.

Week to week, I built the course around the basic idea of identifying puzzles, i.e. events or patterns that cut against the grain of our conventional or intuitive expectations (see Zinnes 1980), then constructing explanations for them interactively in each lecture. This required some unconventional choices in terms of structuring the course—which already had the timeline of events in the summer and fall of 1914 imposed on it—particularly in terms of (a) assigned readings, (b) the pace at which new ideas and concepts were introduced, (c) the relationship between reading and lecture content, and (d) the nature of course assignments. In the following sections, I describe the goals of such a “real time” course, the structure imposed by its unique requirements, the design of lectures around puzzles and their solutions, and my experiences blogging the course and making it useful for my research. I also refer frequently to an annotated version of the syllabus provided in the appendix. Finally, I close by identifying what I think are a few easy rules or principles for teaching courses in “real time” that others may use in the future.

The goals of a “real-time” course

As I prepared and then taught the course, the two most common questions people asked me were quite different, but their answers were related.

Question 1. How can you cover everything?

Question 2. Is this even a political science course?

To the first question, I could confidently say that “coverage” of the big, overwhelming, and often ideologically-charged narrative of the war itself wasn’t really the point. Covering ev-

everything, in the sense of standing up and giving a rote discussion of what happened day-to-day in the war, would indeed be a disaster—and it wouldn't be political science. But if it really wasn't about the narrative of the war itself, then, what was the point of covering it in real time? Was the course just a gimmick?¹ As I saw it, and more confidently so as the weeks passed, the goal was to use the details and the narrative of the outbreak and initial stages of the Great War as a shared vocabulary and base of substantive knowledge. The war itself would provide the class with a common set of facts to be puzzled by and to be explained, a common narrative that would be equally new to virtually every student in the room.² This focus on identifying and resolving puzzles, whether theoretical or empirical, ensured that I also had a good answer to the second question: by focusing on the generation and resolution of puzzles inspired by the facts of the political world, this was very much a political science course, and certainly not a room-filling gimmick.

My primary pedagogical goal was for students to read historical narratives of the war, as well as the wealth of reporting associated with its centennial, in order to (a) generate puzzles that we could solve with the tools of modern political science (very often, since I'm the one teaching, this involved game theory) and (b) keep themselves "in the heads" of the relevant actors and decision-makers without looking too far into the future—without presuming, based on its occurrence, that any part of the war was inevitable (and thus hardly worth explaining). Thinking in this fashion, students are doing the real work of political science, better able to see the interplay of structure and agency and, valuable from this instructor's standpoint, avoid the tendency to judge a particular decision based on its outcome. For example, as I discuss further below, students learned that one can't infer that a state *wanted* an outcome (like war) that it ultimately experienced; it very well may have ended up with a second- or third-best outcome thanks to the actions, preferences, and strategies of other

¹I suspect that this is the question most people *wanted* to ask but didn't. Let's call it politeness-driven strategic censoring.

²At a minimum, I found my undergraduates in roughly the same position I found myself at the age of 21: reasonably familiar with the contours of the Second World War but at a loss for understanding much about the First.

states. In other words, thinking in real time helps reveal the agency and contingency that makes political events large and small seem inevitable only in the hindsight of an “A led to B led to C” narrative, itself made possible by focusing too closely on the outcome *ex post*. Thus, the course was a semester-long exercise in teaching students how to avoid falling into the logical fallacy of affirming the consequent.

This is the type of thinking that we’d all like to engage in as social scientists, whether to make sure that we explain things properly or draw inferences without selecting on the dependent variable. For example, one of our readings asserts that the Austro-Serbian War of 1914 became World War I because Germany “wanted” war (Fromkin 2004, p. 287), and strictly in hindsight, that reading can be attractive: Germany issued the famous “blank check” to Austria, it responded to Russia’s start-stop process of mobilization with a full mobilization of its own, and it ordered its armies through neutral Belgium and Luxembourg on their way to France. But “chose” and “wanted” are not always the same; in the course’s early weeks, we framed the July Crisis in the broader context of prior crises that hadn’t escalated to war, we examined the preferences of the top decisionmakers in Germany and Russia, we worked out the structure of their interactions and available choices, and we showed that neither Germany nor Russia ended up with its preferred, *i.e.* most “wanted,” outcome. The former would have preferred curbing the expansion of Russian power into southeastern Europe by standing aside while Austria crushed Serbia, saving the costs of fighting and achieving a preventive victory on the cheap; the latter would clearly have preferred waiting for its own massive rearmament program to finish before embarking on a joint war with France against Germany. Thinking in real time, placing ourselves in 1914—before the war became the Great War that we know—makes such insights easier to generate, and it also served as one of the earliest in-class exercises in building our own theoretical models of international relations from the ground up. The students specified and solved an informal game-theoretic model in class, largely without realizing it; but more on that later.

The real time format certainly makes it easy to teach theory-building and the logic of inference, but it also satisfies the goal of creating and sustaining student curiosity, because the generation and resolution of puzzles from the narrative very often relies on their contributions in class and in some specific assignments. They read, they search, they uncover, and they pose questions; when they enter class, I guide them through how we might go about answering the questions, where I introduce the tools of political science generally and game theory in particular as ways of developing knowledge. “Why did England and Germany engage in a costly naval arms race that left the military balance unchanged?” “Why was the Western Front the ‘decisive’ one, even as Germany defeated Russia in the East?” “If attrition was so ‘futile,’ why was it so stable?” “Why did otherwise pacifist socialist and labor parties support the war?” Involving students in posing questions, in developing answers, and in bringing to bear (and judging) evidence from their readings involved them in *doing*, not merely consuming, political science.

Structuring the course

In some ways, organizing the course was straightforward; we simply started with some general background information on the international relations of Europe in the early 20th Century, then hit the ground running with the July Crisis until ending the course, unsurprisingly, in December 1914.³ However, choosing course materials, introducing the tools of political science while keeping an eye on the nominal topic of the course, and piecing together lectures required a bit more effort, which I discuss in this section while walking through the logic of two specific lectures as examples.

My choices for readings were a bit unusual for a political science course, in that they drew mostly from popular histories of the war, from Fromkin’s (2004) *Europe’s Last Summer* to Hastings’s (2013) *Catastrophe 1914* to Buttar’s (2014) *Collision of Empires* to Her-

³To be fair, we weren’t working in “real time” until somewhere around late October or early November. But that’s clearly a footnote, as opposed to main body, admission.

wig's (2011)'s *The Marne, 1914*. There was little political science, unless it bore directly on some questions of more general interest, because my goal was to use the narrative of the politics of the war that emerged from the readings to generate puzzles, both for me and for the students. Students would read accounts of what happened, what causes their participants attributed to them, and oftentimes what causes the authors attributed to them, then draw on their own previous coursework and the growing base of in-class knowledge (about strategic behavior and the logic of inference in particular) to ask the questions and pose the puzzles that would animate each lecture. My hope was to use popular histories to cultivate genuine curiosity and to identify questions truly worth answering, because, frankly, "there's nothing like a fallacious argument to stimulate research" (Varian 2009, p. 2).

However, being puzzled by politics is one thing. It is quite another entirely to build answers in rigorous, creative, and useful ways, and the first real obstacle to organizing the course was to find a way to work in the basics of theory-building and the logic of inference (the burden of which I put on myself to teach in the lectures) while maintaining the spirit of the course's novel timeline. I had accepted that much of the course wouldn't be strictly real time—the July Crisis could hardly be ignored, after all—but I wanted to get the students actively doing the everyday *stuff* of social science quickly. After a lecture setting the table for the course, focused heavily on the ultimate consequences of the war, its continuing relevance at its centennial, and no small dose of my own emotional experience visiting the battlefields of Verdun in 2012, I stepped back and used pre-war events to build intuition over two core concepts: theory building and the logic of inference.

In the first instance, I focused on the Anglo-German naval race of the pre-war years, which provided both a puzzle (the occurrence of costly arms races that ultimately fail to alter the distribution of power) and an opportunity to introduce some basic concepts of game theory: players, preferences, strategy, and equilibrium.⁴ The puzzle itself is a common one, and the answer of course comes down to invoking some element of the classic Prisoner's

⁴This lecture corresponds with Session 3 in the annotated syllabus included in the appendix.

Figure 1: The Anglo-German naval race game

		Ger	
		\neg build	build
UK	\neg build	3,3	1,4
	build	4,1	2,2

Dilemma: neither player can afford not to build weapons if the other will, nor can it resist the temptation to build if the other won't. The result, of course, is a costly arms race that appears to do nothing but waste money—just like the dueling pre-war English and German dreadnought programs. To get to that conclusion, though, we walked informally through the steps we'd need to explain such an outcome, which required identifying:

- players (United Kingdom, Germany)
- goals (maximize relative naval strength, avoiding waste if possible)
- actions (build dreadnoughts or not)
- potential outcomes (arms race, no arms race, unilateral buildup for one side)
- strategies (build or not, given other's choice of building or not).

This allowed us to write a stylized game on the board, given in Figure 1, which incorporates each concept above, and where higher numbers represent better outcomes for the player in question.⁵ (In this game, the UK's payoff is listed first, Germany's second.) This was an interactive process; I walked the class through filling in the blanks, explaining how and why each player's evaluation of the outcomes arises and, crucially, how each player's choice affects the other's ability to achieve its preferred outcomes.

⁵The numbers themselves are irrelevant; utility functions only give ordinal information, so what matters is the relative ranking of outcomes, not the cardinal values given by the numbers.

Figure 1 also shows the basics of the next step in the process: after identifying a strategic situation, we had to figure out how each side will play the game. This requires introducing the notion of Nash equilibrium, which gives each player a strategy that it is unwilling to change, given what each other player is doing. To build intuition over an equilibrium, one of the key concepts for the day, we walked through how each player plans to respond to the actions of the other, leading in the end to a prediction that players will settle on the equilibrium highlighted in red: each will build dreadnoughts, creating an arms race, despite the fact that the apparent social optimum of no arms race (highlighted in blue) is fairly obviously known to both players. Through this exercise, I was able to introduce both the notion of equilibrium and the basic idea of inefficiency (or, less formally, of tragic outcomes); neither state can commit not to build if the other won't, leading them into an outcome that each ranks as its third best, despite the logical (and commonly-known) possibility of other outcomes that both can agree would leave them better off.

Therefore, despite a narrow empirical focus on the (admittedly exciting, to this author) politics of naval acquisitions, the lecture introduced students to key concepts of strategy, equilibrium, and tragedy that would define our approach to solving puzzles for the remainder of the course. It also shows quite clearly, and early, that preferences can rarely be inferred from outcomes; each side might have preferred to build new ships while the other chose not to, but the opportunities and incentives of the other side made such an outcome unlikely. Rather, each found itself building new, expensive warships only to prevent relative naval power from shifting against it while the other built dreadnoughts of its own. I also gave the class a homework assignment, where they solved a series of simple normal-form games like the one in Figure 1, including common games like Chicken, the Stag Hunt, Colonel Blotto, etc., which introduced them to some basic strategic problems that we'd continue to encounter throughout the course.⁶

The second big concept, the logic of inference, came immediately on the heels of strategic

⁶As an aside, teaching game theory to undergraduates, most of whom haven't had too many popular misrepresentations of the appropriate concept of rationality thrown at them, is a pure delight.

Figure 2: The pre-war crisis game

		Rus	
		cooperate	defect
Ger	cooperate	5,5	0,3
	defect	3,0	3,3

interaction and equilibrium, in the form of a puzzle built around another series of pre-war events: why, after avoiding war in four major crises before July 1914, were the Great Powers unable to do so when Austria-Hungary and Serbia stood at the brink of war following the assassination of an Archduke that no one, least of all his own family, particularly liked?⁷ Part of the lecture, of course, was focused on why asking this question—and not just why the July Crisis became the Great War—is useful; it avoids the (damning) problem of selecting on the dependent variable (see King, Keohane and Verba 1994), or of attributing explanatory power to factors associated with the July Crisis that were also present in the previous crises. The historical background helped give students a sense of the preferences (that is, goals) of relevant actors like Germany, Russia, and France, that would play a role in the game we would go on to construct for the ultimate outbreak of the war, and it also let us use the idea of a Stag Hunt to explain why Russia in particular could use partial mobilizations to signal peaceful intent before 1914, while the same action (roughly) would signal something else entirely once July turned to August in 1914.⁸

Our story about the pre-war crises was that Germany, fearful of resurgent Russian power as the Tsar embarked on his Grand Programme of military modernization, was willing to opt for peace as long as Russia did. This implied the game characterized in Figure 2, where “cooperate” means pursuing peace and “defect” pursuing war. As long as Russia opted for

⁷This lecture corresponds with Session 4 in the annotated syllabus.

⁸The representation of this interaction as a Stag Hunt is a dramatic simplification of events, to be sure, but the underlying dynamic is also identifiable in more complicated crisis signaling games that one might also write down to illuminate the problem. As this was early in the course, I chose the simpler representation.

peace in the early crises—First and Second Moroccan, Bosnian Annexation, and the Balkan Wars—Germany was happy to do so; preventive war could still be put off. However, once a stronger Russia with its position in the Balkans at stake in 1914 left the blocks, Germany learned that the game in Figure 2 had been replaced with something more akin to a Prisoner’s Dilemma—leading it to opt for a preventive war that, all else equal, it would have liked to avoid. As we discussed in subsequent sessions, Germany’s preferences looked this way because a successfully-localized Austro-Serbian war might have secured a preventive outcome on the cheap. However, the structure of international politics had shifted enough, by edging Russia closer to the level of strength at which preventive war could no longer be avoided, that we were able to use the intuition developed over this and the previous lecture to tell us where to look—or more appropriately where *not* to look—in crafting an explanation for the outbreak of the Great War in the following two sessions. Looking only at the July Crisis, for example, might’ve forced us to a false attribution of factors also present in the peaceful pre-war crises as a major causal factor in the outbreak of war in 1914.

The blog post accompanying the lecture characterized it this way:

[I]n each of these [pre-1914] crises, we saw great powers willing to match each other’s cooperation (that is, avoiding open conflict) with cooperation, and they were able to signal peaceful intent at key points by limiting their military mobilization, in some cases foregoing substantial amounts of combat power by releasing conscript classes they could otherwise have held over (a costly signal of peaceful intent, indeed). Information problems arose over one great power or another’s willingness to fight, and they were able to use costly measures to back up statements of intent; interestingly, though, the challenge for the offensively-minded governments of early 20th Century Europe, wasn’t credibly signaling resolve but a lack of it—it was more difficult to say, “no, we really won’t fight” than to say “yes, we really will fight,” which might go some way to explaining why costly signals of reassurance, not costly signals of resolve, went a long way

to explaining the peaceful resolution of these disputes.⁹

This pattern—puzzlement, identifying first principles, and looking for equilibria—would be repeated each week throughout the course, though with the preliminaries out of the way, each subsequent week would become more and more focused on the historical particulars as tools in solving our puzzles. For example, in explaining why the Austro-Serbian war became a general war involving each of the great powers, we spent one session simply working out German preferences, then another working out Russian preferences and seeing how the two “added up” to produce the outcome that we ultimately observed as the Great War. Student involvement increased over time, as the class became more familiar with the process and as we tackled more complex strategic problems, including bargaining and war, international law, intra-coalitional politics, and war expansion. Identifying puzzles for class was not always easy (and if I hadn’t done months of preparatory reading, prohibitively so), but it became immensely gratifying intellectually, as we touched on what I think are some novel answers to the questions of (a) why attrition, despite the appearance of futility, was so stable; (b) why it took an invasion of tiny Belgium, as opposed to a mortal threat to its ally France, to drag Britain fully into the war; and (b) why the so-called “cult of the offensive” (cf. [Van Evera 1984](#)) is in many ways a misleading characterization of how the Great Powers and their armies went about planning for and fighting the Great War.

Finally, I interspersed the puzzle-solving lectures with writing assignments, two of which fed directly into subsequent class sessions. First, I assigned a reflection piece in which students had to engage in identifying puzzles on their own, writing about one issue in particular that remained puzzling to them from the readings thus far. In class, we discussed their contributions, tried to collectively solve the ones we could with the information to hand, then mark others as potential topics for future sessions. This, hopefully, contributed to a sense of ownership of the course—I ultimately based two subsequent lectures on puzzles from this session—and gave students a sense of what it’s like to actually conduct social-

⁹My blog is <http://scottwolford.wordpress.com/>, and the relevant post is linked here.

scientific research. Second, I assigned a short piece in which the students could engage in some “armchair generalship,” with the following prompt:

[T]his week’s assignment is to put yourself in Moltke’s shoes and come up with an alternative strategy—whether in the initial invasion of France or in managing the offensive once Joffre ordered the Allied retreat—and *then* analyze whether your alternative might’ve made much difference in the outcome of the invasion of France in 1914.¹⁰

In other words, students were asked to engage in some creative thinking, working through what we knew about military strategy, prevailing technology and terrain, the politics of the home front, and the intra-allied politics of both sides in the war. Then, new plans in place, they had to use that same knowledge to engage in some difficult counterfactual reasoning to see whether their own plans would’ve offered a substantial chance of changing the outcome, either in 1914 or for the war as a whole. Answers, of course, were of varying quality, but the very best were striking in both their originality (e.g., a German naval feint towards the Channel designed to pin down the British Expeditionary Force) and their willingness to subject the proposed strategies to serious, disciplined scrutiny. Rarely have my students had so much fun, and rarely have I been so impressed by the result.

From puzzle to solution: the stability of attrition

Session 20 from 4 November 2014, which covered the First Battle of Ypres and one of the earliest examples of the trench warfare that would come to define the rest of the war on the Western Front, is one of my favorite examples of the move from puzzle to theory to resolution. In this section, I use the blog post associated with that lecture to characterize both the generation of the puzzle, which drew on class readings and a wide swath of the conventional wisdom about the war (particularly that provided postwar by British politicians), and the

¹⁰The full blog post discussing the assignment is linked [here](#).

answer developed in class. After quoting the post, I discuss the rationale for maintaining a blog about the course and some of the associated costs and benefits of doing so.

The post, inspired in part by Philpott's (2014) *War of Attrition*, follows:

Eye-catching title of the course aside, today we finally covered a stretch of time that truly is one hundred years ago today: the First Battle of Ypres. Here, we saw some of the first strong hints about what entrenched, attritional warfare would look like once the Western Front stabilized. First Ypres was (for this part of the war) a long, drawn-out struggle that would leave many dead and very little territory in different hands, highlighting what would become for many the war's central tragedy, a major puzzle, and a bone of violent contention in post-war politics in the former belligerents: why engage in such an ostensibly "futile" strategy like attrition, which promised only death, destruction, and disillusionment—certainly not a conventional notion of victory—on a large scale?

Some answers, especially those offered right after the fact involving "unimaginative" generals insensitive to casualties, are probably too easy (that they came from politicians seeking to distance themselves from an unpopular strategy should tell us something here). We argued today that it's worth approaching the puzzle of attrition in a different light—by thinking about the options available to strategists given terrain, the sheer size of the front, and the state of technology and doctrine. Doing so gives us a better sense of why attrition was adopted by both sides, why it was stable, and what it took to induce a change in strategies and a return to maneuver in the last months of the war.

Our argument went something like this. Modern firepower favored the defense when attackers used then-contemporary tactics (that is, no or poor uses of combined-arms tactics), and local successes were virtually impossible to turn into wider breakthroughs, because (a) capturing even a small section of the opponent's trench depleted so much manpower that the attacker was then vulner-

able to counterattack, thanks to (b) the rapid movement of reserves behind the front by rail. With breakthroughs nearly impossible, winning became a matter of wearing the enemy down, of *grignotage*—that is, exhausting the other side’s reserves of manpower by maintaining persistent pressure on the front, or, as General Sir Douglas Haig would say, simply “killing Germans.” To be sure, attrition was ghastly, costly, and damaging to both individuals and the societies supporting them in the field; but disapproving of it doesn’t get us off the hook for explaining it.

In fact, we build a simple theoretical structure today to show that a tragic, costly equilibrium of attritional warfare can set in as the best option in a pack of alternatives that, unfortunately, might all be worse. To be in equilibrium, two strategies must be adopted by players that have no incentive to deviate from them, given what the other side is doing, and attrition looks just like that in many cases. If side A is maintaining pressure on the front—a front that doesn’t allow maneuver and where the defense prevents major breakthroughs—then side B’s alternatives are to fight back and maintain the pressure or to slack off; the latter, of course, makes breakthroughs actually possible by eliminating the advantage of the defense. However, if side A isn’t maintaining pressure, side B can’t afford not to take advantage of it—meaning that both sides, under the technological and, to a lesser extent, doctrinal strictures of 1914, had a dominant strategy of maintaining pressure on the opponents in the other trenches, wearing their reserves down until such time as the defense would no longer be dominant. Therefore, attrition was an equilibrium, one that made sense for both belligerents—if still not one we’re obligated to be comfortable with in a normative sense—but one that we can explain: no side had an incentive to deviate from a strategy of attrition until the offense could regain some kind of advantage, until attacking and gaining territory could result in anything other than

horrendous losses in the face of determined counterattack.

If we can explain what makes attrition an equilibrium, we can also explain its stability (the continual but generally vain searches for alternatives, such as opening additional fronts) and what would ultimately break it: the ability to achieve and sustain a breakthrough, which came as the result of the exhaustion of the German Army's reserves and effective combined-arms tactics developed and honed over the course of the war. The first factor, of course, came about as the result of attrition, of wearing out German reserves faster than they could be replaced (possible due to Allied advantages in demography and aggregate wealth). We can also ask whether attrition was "futile," and seeing it in a strategic light, the question is not so easily answered as common stories have it. Relative to laying down on the Western front, as well as to efforts that would not wear down the opposing side's reserves (say, the Gallipoli offensive), it's hard to say that attrition was the worst possible option. Was it futile in the strategic sense? Probably not; it might just have been merely the least-horrific alternative in a world of even more intolerable ones.¹¹

The lecture followed the logic of this post fairly closely, setting the stage with descriptions of the battle, the on-the-ground logic of trench warfare more generally, and then the outlines of the rancorous debate over the strategy of attrition that emerged both during and after the war. Then, we posed the puzzle of *why* attrition would occur and be so stable if it were so futile, but we did so by following the process of identifying players, their goals, actions, potential outcomes, and strategies, then looking for an equilibrium. What we found in the process, of course, was something that looked again like the Prisoner's Dilemma characterized in Figure 1; given the attritional pressure from the other side, no side wished to alter its own strategy, even if less costly alternatives might have been logically possible (such as the battlefield equivalent of the mutual \neg build option in Figure 1). In fact, we

¹¹The full post is linked [here](#).

showed that many postwar critics were able to bemoan that other outcomes were not in equilibrium only by ignoring the strategic incentives of the other side—which is bad practice analytically, even if it’s good politics, as the course emphasized at every turn.

This example lecture also highlights the role of blogging in the course, something that proved especially beneficial given its “real time” format and increased public and academic interest at the War’s centennial. The post quoted above is fairly representative, in that it followed the logic of the lecture but allowed me the freedom to focus more on specific parts of the story, at times adding context and supplemental information interesting to readers. I wrote a post for (nearly) every session, sometimes right before class and sometimes right after, and it proved immensely useful for collecting my thoughts and forcing some more coherence and structure on the lectures—and the connections to be drawn between them—than otherwise might have existed. Blogging, as a result, became an integral part of preparing, writing, and stringing together the lectures that provided the meat of the course’s political science substance. Pedagogically, the blog also served as a ready source of additional notes and review material for the class, which in this case I was happy to provide, because (a) the majority of the actual political science content came from the lectures that framed the readings and (b) as freely available review material I could avoid wasting class time with review sessions and focus on teaching new material instead.

Conclusion

I hope to have shown here that teaching a course like “World War I in Real Time,” one that spends a semester focused tightly on the narrative of a single historical event, is more than just a gimmick. Catchy concept aside, the course allowed me to cover more theories of politics and more empirical strategies for understanding it than I’ve managed in other courses, precisely because the war is both so rich in scope and complexity and so easily treated as a single narrative from which the class can derive the facts to be explained that sit at the

heart of any empirical science. A single event and unifying theoretical perspective allowed us to generate insights into a range of topics, from the basics of war and diplomacy to cooperation and alliance politics, from arms races to strategy and tactics on the battlefield, from the domestic politics of mobilization to cabinet-level bargaining and government survival, and from the treatment of civilians in war to the international laws of neutrality. I'm not confident that a course organized differently would've allowed so much breadth to make so much sense—and to sustain such a genuinely high level of student engagement.

The course itself was labor-intensive, because much of it was prepared quickly, even more in “real time” than the coverage of events in class. Nonetheless, it was highly rewarding, as it generated two research questions I've begun to pursue as their own projects and whose initial answers I worked out in front of my class. I also left the experience a more comfortable, if not exactly frequent, blogger, which turned out to help me organize the course more soundly from lecture to lecture and to become a more self-aware instructor, both of which I expect can only be good things going forward. Nonetheless, it bears repeating that the level of work required, from the amount of new reading and to a willingness to branch out of one's substantive comfort zone, is not small. As such, I've compiled a list of what I call The Five Rules of Teaching International Relations in Real Time, listed below:

1. **Don't assign too much political science.** Let the puzzles arise organically, and rely on your expertise to solve the puzzles in class.
2. **Teach political science the way you do political science.** Generate your own explanations, then see if they can translate into new research projects.
3. **Blog your experience teaching the course.** It's a great disciplining device, and it may turn up ideas you'd not have otherwise.
4. **Don't underestimate your students.** If you demand a lot when they're excited to learn, they'll give a lot in return.

5. **Take the actors in your drama seriously.** Use their lack of hindsight to understand their choices in a way you hadn't before; and make sure your students learn that.

This list is most certainly incomplete. However, with the small bit of hindsight I've got now, I think they capture the essentials of teaching what proved to be my most enjoyable and rewarding undergraduate course to date. To be sure, the opportunities for teaching a course so closely tied to a specific historic event are limited, but not as much as they might seem at first blush; plenty of historical events played out, in whole or in part, over the course of a semester, from the Cuban Missile Crisis to the fall of Nazi Germany in 1945 to the 1999 air war over Kosovo to the Russo-Japanese War. The possibilities of teaching courses with an ostensibly narrow historical focus but broad substantive relevance are, if not endless, still plentiful, and I hope that this piece can provide a few tips on how others might teach them in the future.

Appendix: Annotated Syllabus

Course Description and Objectives

The First World War has been called “the first calamity of the twentieth century, the calamity from which all other calamities sprang,” and indeed we still live with many of its legacies today, some directly in the current map of the Middle East and others indirectly in the global order created after the end of the Second World War. The war is notable not only for its consequences but also for its towering complexity, leading one historian to call it “the most complex [event] of modern times, perhaps of any time so far.” While its consequences demand that we explain the war, its complexity often stands in the way of doing so.

In this course, we will grapple with that complexity by bringing the tools of political science to bear on the opening months of the war, including such topics as

- the outbreak and subsequent expansion of the war
- the politics of international law and neutrality
- the origins of trench warfare and costly strategies of attrition
- domestic mobilization and the running of the war economy
- the treatment of prisoners and civilians at and behind the front.

We will address these topics, as much as possible, in real time, albeit one hundred years after the fact, and we will do so using the theoretical tools of modern political science. After introducing some of these tools early on, such as game theory and its associated concepts of strategy and equilibrium, we will track the war’s events day-to-day, analyzing the goals, choices, and actions of the relevant players—sometimes countries, sometimes generals, sometimes laborers—and how they added up to produce what we know as the First World War.

Thus, while the course deals with the day-to-day realities of a major historical event, it is not, strictly speaking, a history course. Our goal is to analyze, to explain, and to identify new puzzles—to train you, in other words, to think like a political scientist. You’ll walk away from this course knowing quite a bit more about the first few months of the war than you did before, yes, but you’ll also be able to apply the concepts and theories we use in class, from bargaining and war to principal-agent problems and collective action problems, to a wide range of other phenomenon. Put differently, we’re leveraging a singular event of inherent interest to develop an understanding of politics and political science more generally.

Grading

The following components make up the course grade:

- **20% first exam, 30 September.** Five short answer and two essay questions.
- **25% second exam, 6 November.** Five short answer and two essay questions.

- 35% **third exam, 16 December (9a-12p)**. Five short answer and two essay questions.
- 20% **short assignments and quizzes**. Given randomly, quizzes for readings and short assignments for reaction or analysis.

I assign letter grades on a distribution—that is, a curve—rather than against an absolute numerical scale. Therefore, typical grading scales where a certain score produces a certain letter grade do not apply here. Quizzes are brief and are designed to evaluate whether students are keeping up with the readings and showing up to class on time; I give them at the beginning of class, and if you miss any part of it by being late, *then you forfeit those points*. There are no exceptions. Finally, assignments are typically short (1-2 pages) reaction or analysis pieces.

Readings

Many course readings will be available online through the library's e-journals system or Canvas, unless otherwise noted. There are also two required texts:

- Fromkin, David. 2005. *Europe's Last Summer: Who Started the Great War in 1914?* New York: Vintage Books.
- Hastings, Max. 2013. *Catastrophe 1914: Europe Goes to War* New York: Knopf.

Students are expected to have completed readings by the day for which they are assigned.

Course Outline and Schedule

Session 1 (28 August). *no class*

Session 2 (2 September). *the puzzle of the Great War*

How did we get here, with all the Great Powers (save one) at war, with hundreds of thousands dead and millions more to come? (No answer, just table-setting.)

- Fromkin, Prologue

Session 3 (4 September). *basic concepts: strategy, equilibrium, and tragedy*

Why did the British and the Germans expend so much time, effort, and money in a naval arms race that left the military balance between them unchanged?

- Fromkin, Ch. 1-3

Session 4 (9 September). *Europe before the Great War*

Why were the Great Powers able to avert war in the four major 20th Century crises before the July Crisis?

- Fromkin, Ch. 4-6
- Hastings, Ch. 1.1

Session 5 (11 September). *battle plans, strategy, and equilibrium*

How did the major belligerents end up making war plans that made nearly *all* of them look bad in the opening weeks of the war?

- Hastings, Ch. 1.2
- Selections from Buttar (2014, *Collision of Empires* TBA)

Session 6 (16 September). *outbreak I: German aims in the July Crisis*

Is it fair to say that Germany *wanted* war? How did it rank possible outcomes of the crisis beforehand?

- Fromkin, Ch. 25-28
- Buttar, Ch. 4

Session 7 (18 September). *outbreak II: Russian goals in the July Crisis*

How did Russia rank possible outcomes heading in to the crisis, and how did these collide with German preferences to produce the outcome (a regional Great Power war)?

- Fromkin, Ch. 29-31
- Hastings, Ch. 2.1-2

Session 8 (23 September). *Public opinion and the outbreak of war*

If the Great Powers were gripped by the “cult of the offensive,” why did Germany try to give Russia the jump, and why did France do the same for Germany?

- Hastings, Ch. 2.3

Session 9 (25 September). *the British and the issue of Belgian neutrality*

Why, if war between France and Germany had been imminent for some time, was it a threat to small, neutral Belgium that swung the British public into support for the war?

- Hastings, Ch. 2.4
- Wolford, Scott. 2014. “A Theory of Neutrality Rights in War.” Manuscript, University of Texas.

Session 10 (30 September). *first exam*

Session 11 (2 October). *labor, pacifism, and support for the war*

Why, despite clear antiwar platforms and commitments, did Europe's socialist and labor parties support the war so fully?

- Hastings, Ch. 3

Session 12 (7 October). *fighting "unwinnable" wars*

Why do small countries, like Serbia in 1914, fight wars that they don't seem to have any reasonable chance of winning?

- Hastings, Ch. 4

Session 13 (9 October). *no class*

Writing assignment on identifying other puzzles generated by the war.

Session 14 (14 October). *the opening of the war in the west*

How did the military strategies adopted by the belligerents produce the war we saw on the Western Front? (And where does the "fog of war" come from?)

- Hastings, Ch. 5

Session 15 (16 October). *the laws of war*

Why do some belligerents follow the laws of war while others (or even themselves in different circumstances) don't?

- Morrow, James D. 2007. "When Do States Follow the Laws of War?" *American Political Science Review* 101.3:559-572.

Session 16 (21 October). *strains in the great Allied retreat*

Why was Franco-British cooperation so difficult when the stakes appeared highest? And how did they overcome this problem?

- Hastings, Ch. 9

Session 17 (23 October). *the Battle of the Marne*

Why did Germany order the retreat to the River Aisne after the Battle of the Marne, despite being so close to victory?

- Hastings, Ch. 10
- Herwig, Ch. 9

Session 18 (28 October). *the curiously limited naval war*

Why did neither the British nor the Germans make use of their sizable fleets to pursue mastery of the North Sea—i.e., why no (large) naval war?

- Hastings, Ch. 11

Session 19 (30 October). *an exercise in armchair generalship*

Writing assignment designed to (a) produce an alternative to the Moltke-Schlieffen Plan then (b) assess whether it would've made a difference in the invasion of France.

- Hastings, Ch. 13

Session 20 (4 November). *the horror (and stability) of attrition*

Why engage in an ostensibly “futile” strategy like attrition? Were the generals as “unimaginative” as the politicians called them *ex post*?

- Hastings, Ch. 15

Session 21 (6 November). *second exam*

Session 22 (11 November). *the war in Poland (and why the Eastern Front is so different)*

Why was the Eastern Front more mobile, more fluid, yet no more decisive than the Western Front?

- Hastings, Ch. 12

Session 23 (13 November). *fissures amongst the Central Powers*

- Hastings, Ch. 16

Session 24 (18 November). *war expansion and choosing sides*

Why do wars expand, and how do states choose sides when they join wars?

- Hastings, Ch. 17

Session 25 (20 November). *Germany in the West and the East*

Why did Germany pull so many troops off the “decisive” Western Front in late 1914?

- Buttar, TBA

Session 26 (25 November). *the battle of Łódź*

Review session of major events and outstanding puzzles of the war.

- Buttar, Ch. 13

Session 27 (2 December). *four more years of war*

Why did the Great War last so long?

- Fromkin, Ch. 52,53
- Hastings, Ch. 18

Session 28 (4 December). *counterfactuals: what could've stopped it?*

What might've stopped the war? Could it only have been delayed?

- Fromkin, Ch. 48
- Beatty, Ch. 5

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