

Econ 2340: War, Pillage and Plunder, and Other Economic Conflicts

January 18, 2018

1 Subject matter: the invisible hand versus the visible fist

“Economics is the science which studies human behavior as a relationship between given ends and scarce means which have alternative uses” (Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, p. 16).

A short-hand version of this famous definition is: "Economics is the study of the allocation of scarce resources." As applied to conflict, this covers a broad number of topics. One is the allocation of resources once a conflict has begun. Should resources be devoted to bombers or submarines or land armies? What sorts of resource allocation problems does economic theory predict to arise in large endeavors with hierarchical organizations? That is, part of the economics of conflict is nothing more than bringing economic analysis to bear on the particular problem of prosecuting a war. This is a good part of what we do in this class. Our textbook is organized around this idea. Some of the key economic ideas we will emphasize are: the importance of incentives; opportunity cost; marginal analysis; substitution possibilities; and various problems associated with information problems, e.g., moral hazard, principal-agent problems, and adverse selection. If some of these are new to you, they will be very familiar by the end of our class.

But also consider the following quotes:

The first principle of economics is that every agent is actuated only by self-interest. The workings of this principle may be viewed under two aspects, according as the agent acts without or with, the consent of others affected by his actions. In wide senses, the first species of action may be called war; the second, contract. F. Edgeworth, *Mathematical Psychics*, 1881

"[T]he efforts of men are utilized in two different ways: they are directed to the production or transformation of economic goods, or

else to appropriation of goods produced by others." V. Pareto, in *Manual of Political Economy, 1906*

These quotes emphasize that while much of economics is the study of the allocation of scarce resources when property rights are well-defined and protected, much allocation takes place at the barrel of a gun (or the point of the spear, depending on which historical epoch we are studying). The study of the allocation of resources when property rights are protected occupies the vast majority of the economic analysis taught to undergraduates (and graduate students!). People in this environment act, as noted in the above quote from Edgeworth (a famous economist from the 1800's), "with the consent of others." This is the way of making a living by production and exchange. As the economics profession has often emphasized, this way of making a living, done in an environment of secure property rights, may, in some broad sense, "promote the general welfare" via the workings of Adam Smith's "invisible hand" (The quotation marks around "promote ... " are to alert you that "promoting the general welfare" is a slippery concept).

Thus, the second main emphasis of this course is the study of the choice between what Edgeworth called the "first species of action" –which includes what Pareto, in the second quote, described as "appropriation of goods produced by others"–and the second ("contract"). This choice can be framed by the following set of questions about choices a society makes between "guns," i.e., armaments, versus "butter", i.e., non-fighting goods and services. First, might it not make sense for an economic entity, e.g., an individual, or a nation, to allocate its scarce resources to the production of guns rather than butter, and use the guns to take someone else's butter? Second, even if an entity would prefer to allocate all its resources to butter and none to guns for use in expropriation, might it not fear that another entity wants to take its butter, and thus rationally devote resources to guns to protect its butter? And finally, what are the circumstances under which a group of entities choose "all butter" as opposed to "guns *and* butter? That is, what circumstances give rise to the institutions that protect property rights?

Unlike in a world of secure property rights, in a world in which entities choose guns out of greed–the desire to expropriate other entities' butter–or out of fear–the desire to protect one's butter from the greedy–there are two ways in which the general welfare is diminished. First, if guns are produced, then butter is not, and only butter provides direct satisfaction. Thus, even in a world in which war does not occur but in which countries arm themselves, there is less butter than in a world of contract. Second, if war does break out, this destroys both guns and butter.

Because actual war destroys both guns and butter, economists and political scientists call the outbreak of war a "bargaining failure." The central question here is why supposedly rational parties end up both losing resources through fighting–resources that could have been saved by reaching a settlement. For example, at the end of a labor strike, both parties have obviously come to an agreement. If this same agreement had been implemented earlier, both parties

would have been better off: there would have been no lost production, and no lost wages. Or, for another example, at the end of litigation, both parties have paid lawyers, but they have come to an agreement that, if arrived at before litigation, would have saved them the expenses of their lawyers. And of course, war provides yet another example: if all parties could have foreseen the end result, they could have simply agreed to that outcome and saved themselves the losses and destruction of war.

In short, a major part of this course focuses on the choice between allocating resources to protect one's own or to appropriate another's resources.

1.1 Text

Required:

Castles, Battles, and Bombs: How Economics Explains Military History by Jurgen Brauer and Hubert van Tuyl; University of Chicago Press; ISBN 978-0-226-07163-3, 2008. Hereafter CBB.

Not required but a useful supplement: *Principles of Conflict Economics* by Charles H. Anderton and John. R. Carter. Cambridge University Press; ISBN 978-0-521-69865-8, 2009 (paperback). Hereafter AC.

CBB will be available in the Vanderbilt bookstore before the end of Spring semester. **Make sure you have it with you when you arrive in London!**

1.2 Prerequisites

Econ 1010, 1020, or permission of instructor. For students who have had only one semester of Principles, I am happy to meet with them and explore whether they have the background to succeed in this class.

1.3 Goals

Along with introducing students to a somewhat different set of topics for analysis than usually found in an undergraduate economics course, I plan to introduce and/or deepen students' understanding of key economic ideas such as *principal-agent problems*, *other hidden action problems*, *game theory applications*, and *opportunity cost*. These key ideas are important for understanding many enterprises and organizations, but are especially dramatic in the context of war and armed forces.

I also aim to enhance your critical thinking skills. By critical thinking skills I mean the ability to use "cohesive and logical reasoning patterns" that lead to "careful and deliberate determination of whether to accept, reject, or suspend judgment" about a particular issue (see *Thought and Knowledge* by Diane Halpern; Lawrence Erlbaum Associates, 1996, p.5).

And perhaps this quote from Dr. Martin Luther King Jr. describes what to me is the ultimate goal of teaching:

“The function of education is to teach one to think intensively and to think critically. Intelligence plus character - that is the goal of true education.”

Dr. Martin Luther King

Some of our co-curricular activities are designed to help link learning with character.

2 Course requirements

2.1 Grades

Exam: 30%

Class participation 35%

Journal: 35%

The perhaps unusual feature (for an economics class) is the journal. The journal is where you respond in writing to in-class experiences, reading material, and excursions. By "respond" I mean that you carry on a written conversation with yourself about what in the class you think is confusing, what in the class you think you understand, and what questions you have arising from the class. You are expected to have one response per class.

Your grade will depend on the quality and quantity of your responses. In terms of quantity, not having an entry for a class will reduce your grade. In terms of quality, I ask the following questions: are you attempting to formulate questions about what we do in class, what we read, and what we experience on our excursions; are you reading carefully; are you being "mindful" of how you are learning, that is, are you being introspective about the learning process. The more a journal helps me understand what or what not you understand, the better the journal grade. Here are some sample questions that your journal entries might address:

What is new to you about this material?

What did you know already?

What confused you?

What questions remain in your mind?

Among other things, the journal is a way for you to take control of your own learning. In some entries, you might recreate or replicate material from class or reading, but you should go beyond this along the lines suggested above.

Each class entry should be the result of fifteen minutes up to a half hour (or more) of concentrated thinking and writing. This corresponds to roughly one to two pages of single-spaced prose (normal-sized fonts, double spacing, normal margins). The writing you are doing here is not designed to make you a better formal writer, but to help you learn. That is, I am not grading on grammar and style. I do need to be able to read the entries, though.

Here are sample journal entries from past classes. You can get the idea by reading just a few (but read all if you like!):

Day 1: Maymester Journal

May 16th, 2011

Today was our first day of class. Our class has an interesting array of people: art history majors, engineers, philosophy majors, and a few plain-jane economics majors. We have several juniors and seniors. The diversity is sure to provide an interesting dynamic as the class progresses. The class centered on a discussion of basic economic principles, as well as a comparison of several disciplines, including political science, engineering, and chemistry. I certainly bring a philosophical and theoretical approach to economics, and rarely favor correlative or pragmatic approaches. It will be interesting to see how this approach clashes in such a small class.

In class we mentioned the often-cited assumption in economics of rationality. Essentially economics is founded on the rational human's decision making process. Economists often assume that the individual is rational and makes his or her decisions on their own. I do not fully agree with this premise. My immediate evidence is actually founded on our day's second activity, the Holocaust exhibit at the Imperial War Museum. The exhibit was very daunting and depressing. It ultimately reminds me of how cruel and irrational humans can be at times. Even if we accept Adolf Hitler as a perverted anomaly, how can we possibly consider all of the Nazi concentration camp workers as rational beings? Sure they were under duress and may have been acting out of fear, but were they maximizing their utility? Where does utility fit in with ethics? These are questions that are often tough to answer in economic terms.

The rest of the imperial war museum was interesting. I found it interesting how little emphasis was given to the American involvement in WWI and WWII. I am used to talking about World War II from an entirely different perspective than was displayed in the museum. I think it is interesting how subtle patriotic propaganda can be used.

Day 2: Maymester Journal

May 17th, 2011

Today's classroom discussion focused on the principal-agent problem, a problem that I am very familiar with from classes in Law and Economics and Money and Banking. The principal-agent problem represents an underlying failure of markets when individual choice is limited or enhanced by group choice. Again we find the classical philosophical quandary of Sartre's "Other", the ultimate wrench in the ontological system. The classroom material came fairly easily to me this morning.

The afternoon was spent travelling to Greenwich by boat, which turned out to be a fascinating trip. The boat ride was amazing and gave me a much better geographical hold of the city. I had no idea the city was that large. The countryside-feel at Greenwich is

fantastic; it really takes one back to what feels like the 1700's. The exhibit was interesting, as I was unaware that so much went into the keeping of time. I have taken quartz clocks for granted my entire life, and had truly forgotten how mechanical and rigorous the process once was. I read in the octagon room that men used to sit for ten hours a day for forty years of their life writing down observations to have more precise clocks and astronomical charts. The problem of longitude, one we do not face to the same extent today due to modern technological advances, was a significant and devastating issue at the time of the growth of the British Empire. The crown offered up to one million current USD to any individual who could solve the problem of longitude, a hefty prize.

The ride back took us by the best kebab place I have ever run across. I had an absolutely perfect mixed grill shish. Although the food here has not been amazing, there have been several hidden gems. The service was also excellent.

Day 3: Maymester Journal

Thursday May 18th, 2011

Today's class was focused on a review of Microeconomic principles and game theory. Most of the material was review, but all of it was very refreshing and helpful. It has been nearly two years since I have had microeconomic principles and I needed the review. In Micro, we reexamined the derivation of demand and supply curves by looking at individual and firm preference, respectively. It was helpful to take a look at preferences and indifference curves. The approach to the demand-side material we focused on today in class made more sense than past approaches I have encountered at Vanderbilt, if not because of the teaching method perhaps because I finally have a firm control on the material. We then looked at the derivation of firm supply, which has always come very easily for me.

The second part of the class took an introductory look at game theory. Game theory has always been an intuitive logical exercise for me, and after taking Law and Econ this past semester, today's review definitely solidified my understanding. I think that game theory is one of the most widely applied economic principles and use it quite often in my everyday life. Again the interesting parts of class were focused on anomalies, or times when game theory models break down in real world settings. The prisoner's dilemma and the stag game are two of these breakdowns, each of which are interesting despite seeing them before. Overall, I think the class has a good understanding of the two concepts discussed today, and I am interested to push these topics in conflict applications in the coming weeks.

May 29, 2012

Journal Entry

The Churchill War Rooms Museum was my favorite museum

that we visited on this trip. I found the preservations of the actual war rooms to be fascinating. They did an excellent job recreating the feelings of anxiety and constant fear that Churchill and his team must have felt during the war. Even though the headquarters are underground, the threat of bombs and flooding were ever present. There must had been a strong sense of trust between the people working in the war rooms, since their safety depended on secrecy. The weather sign, changed each day by one brave individual, showcased the extent of their isolation from the outside world. Through these careful touches and reconstructed scenes, the danger and risk of war came to life.

Many aspects of the Churchill exhibits related to topics we covered in class. Gaging from multiple displays, Churchill seemed like an incredibly powerful and influential individual. This fame and widespread respect brings questions of agency problems. When he first entered the position of Prime Minister, Churchill was a political outsider. He rallied support from his former opponents through his rhetoric and their collective objective of winning the war. This political situation makes me wonder if Churchill always had the country's best intentions in mind; he must have had personal incentives to ignite war to unite Great Britain against a common enemy, thereby boosting his popularity and prestige. Churchill also anticipated war with Hitler because of a commitment problem. Before the war, Hitler had invaded various parts of Europe. Hitler reassured the Prime Minister that Germany would stop making territorial demands, but Churchill called his bluff. Churchill was correct; soon after, Germany continued invading European territory. Bargaining failure occurred probably because of preemptive or preventive war situations. Many lives and resources could have been spared if European nations could have produced a self-enforcing agreement at the onset of the problem.

The museum gave many examples of the changing tactics and technologies in World War II. Japan and Germany used psychological tactics to dampen their opponents' morale. Because of his size and personality, Churchill was an easy target for propaganda. I found the examples of this foreign propaganda so interesting, as they reminded me of political comics in American newspapers. On a different note, Churchill recognized the offensive nature of this particular war. He therefore heavily supported investments in research and technology known as "Churchill Toy Shops." Although many of these new inventions failed, some of the innovative technology helped the Allies through this war of mass destruction. Churchill also recognized the importance of allies, which connected nicely with the textbook reading. Allies increased Great Britain's military resources; therefore, the more allies, the better chance of defeating Hitler. The United States sent Great Britain supplies before enter-

ing the war, and Great Britain assured the Soviet Union's alliance by sending them supplies despite its subsequent economic strain. Once the United States entered the war, Churchill was confident in the Allie's victory. With American military resources, the Allied nations probably had more military power than its opponents. The importance of military supplies was shown in the carefully drawn out convoy maps that spanned massive walls. This museum made me think a lot about the concepts and discussion that we have had in class.

I must say that my favorite part of the day was meeting at the pub. As I am sure you have noticed, I like large social activities that involve our entire class. I'm so glad that I got the chance to meet all of these different people since Vanderbilt is so divided by various groups. I know that my drinking was not up to par with the rest of the group, but I blame it on my large lunch. I will try to finish half a pint at Thursday's dinner but no promises. Anyways, I had a really great afternoon. I would love to plan reunions next semester if everybody would enjoy that!

Journal 5/23

Today in class we discussed game theory and the causes for bargaining conflict. Regarding game theory, we looked at more complex situations and consequently more complex solutions. For instance, in the poker game, there were many possible outcomes, none of which created any equilibrium in pure strategies. So, we introduced mixed strategies and found solutions using that method. It's definitely more complex, but it makes sense. It can be concluded that in any game a randomized strategy is the best choice. We went over the different causes of bargaining conflict, including asymmetric information, agency problems, indivisible strategies, and commitment problems.

In the evening we went to Citi Bank. I loved this visit. First of all, the building itself was so impressive—sophisticated and professional on the outside and inside. I could definitely see myself in an office building like that. More importantly, the talk with the Citi Bank faculty was amazing. The first half was educational from an economic and political sense. It was so great to hear from such knowledgeable, qualified men about the current economic crisis happening in Europe. We got to see how the Greece situation is affecting banks from an internal perspective. When one of the speakers (the first one sitting on the far left) was discussing the Greece issue, he touched on that if Greece exits the Euro, it's like they are breaking the informal rules. No one could ever fathom that a country could leave the Eurozone. He said that if Greece leaves, it could cause other countries to say, well now what about us. Can we leave too? I think this can be tied in to a commitment problem perhaps.

Greece made a commitment to the Eurozone, but now they are backing out of it. This is creating commotion and mistrust among the other members of the Eurozone. (Am I right in making that connection?) After that talk I was motivated to read more and learn more about the current state of the Eurozone. I really learned a lot from that though, and took a bunch of notes on it (that I took with me). The second half was extremely beneficial as well, in a different way. This was educational from a life, career perspective. It can never hurt to hear tips regarding resumes and interviews—what employers want to hear and what they are looking for. From such an enormous company, and from such credible people, I absorbed every bit of information that I could. I jotted down pages of notes for my future benefit. Hopefully I'll keep these notes in a safe place and refer back to them before any interviews or job applications that I submit. Overall, I really appreciated this talk. These guys know a lot. They've been through a lot, they've worked a lot, and they know what they want. I was entranced the whole time I was listening to them. The tea and cookies were a nice touch too! It is also so cool that 21 people from Vanderbilt work or have worked for Citi Bank. I would definitely be interested in doing an internship for them someday.

After the Citi Bank, we enjoyed a nice meal in the area before heading back to South Kensington. There was a beautiful area right by all the big banks with restaurants, shops, grassy areas, etc. It was like the social grounds/night life for businessmen/women. It was so cool. Everyone was in suits in this courtyard area. I've been telling myself that I could never live in London, for many reasons. But this was the first time when I thought to myself that I could do this. I could work in one of these banks and have this social atmosphere right outside my office after work. I think the nice day helped pad my positive thoughts, but still. Getting home was a trek, as the Jubilee Line was shut down. We took another form of transportation that I didn't know existed—the DRL. After being stuck on the DRL for over a half an hour we finally made it to the District Line and back to the flats.

Journal 5/14

Today was the first day of class! We went over our first reading assignment, discussed the basic principles of economics, touched on WWI history, and most importantly tied each one of those topics to the course topic: economics of war. We later took a trip to the British Army Museum, and after saw a production of Sweeney Todd.

I really enjoyed the reading. The few expectations I had regarding the material to be covered in this class were reached and discussed in this article. It talked about a typical, rational-thinking (well of course, as that is the assumption of all people from an economist's point of view), soldier and the decisions he has to make when

fighting in a battle. What I found interesting was the concluded paradox of a soldier's decision. His ultimate goal is to do what's best for him and maximize his utility, or preferences, which in this case is survival. In most cases, running would give him higher chances of survival. But, assuming every soldier thinks this way, every soldier is going to run. In that scenario, it is likely that many of them will get killed. So, even though when the whole army runs, getting killed is likely, the soldier will run because he thinks and acts from an individual perspective, not from the groups'. I also found interesting from this article the ways in which sergeants and various army leaders prevent their soldiers from running. One way is to burn the bridges, literally, once the army has crossed them, so there is no way to escape. Another is to have the army wear bright clothing, so it is easy to spot one who tries to escape. It is interesting to think of war from an economical point of view, the decisions soldiers make and why they make them, how they benefit and how they become worse off as a result of certain situations. I look forward to learning more.

The Army Museum I also found very entertaining. I learned most from the War Horse exhibit—how many horses were used in WWI (6,000,000!), how they are taken care of, how strong they are, how useful they are, how brave, etc. I also enjoyed the British timeline that was written along the steps of the museum. Nice to have a little refresher ;)

The play was great too! Entertaining and educational. Mrs. Lovett clearly had some personal gain from lying to Sweeney about his wife being dead. It may have been a lie, but she had reason for doing it. What were her motives exactly? Perhaps to let Sweeney rest on it, as it is a simpler solution than having him search. Also, her love interest for him could have played a role. But thinking economically, she made a rational decision to lie according to her preferences and benefits.

Journal 5/21

Today instead of having class we went to the Tower of London. Another great site! I found most interesting the way that the English kept out their enemies. They built the door to the castle so high that the enemies could not enter. Now it can be accessed by stairs. The large moat surrounding the tower was also interesting and strategic. I had time to go inside the tower with the Crown Jewels as well. This was so neat. All of the crowns, swords, plates, etc. that were used by royalty were on display. I had never been in the presence of so much gold!

In the afternoon we visited the Imperial War Museum. This was my favorite museum, largely due to the Holocaust exhibit. I enjoyed learning about all the tanks and planes and such; I find that informa-

tion interesting, but I am not particularly interested in all the machinery. Being Jewish, I have a special connection to the Holocaust and any time it is spoken about I instantly become passionately involved. I have been to a few Holocaust museums/memorials around the world that are all fantastic, and this one was no exception. I loved the exhibit. The history, personal stories, and mementos do not get any easier to listen to or look at. It is so powerful to learn about such a historically significant event that has so drastically impacted the Jewish people. As Judaism is such a large part of who I am, the Holocaust affects me deeply. I really enjoyed this exhibit.

After the museum I enjoyed some nice shopping in Oxford Circus! What a hot spot. I'm looking forward to seeing and touring Parliament tomorrow and watching Billy Elliot.

As you can see, students have used their jopurnals for wide-ranging observations about both the classroom material and the co-curricular activities. This is appropriate: you are in London (and for three days in Normandy) and we hope that part of your education here comes from the broad array of sights and experiences you have. Note that co-curricular activities (especially plays) change from year-to-year: don't take from these samples the idea that we will do the exact same activities (though there will be a lot of overlap).

3 Course outline

Please note: because of scheduling constraints, co-curricular activities will not always take place at the same time as we treat a topic in class. And all of this is tentative-exactly when and where we do things (and in what order) depends on schedules that are beyond our control and that change.

3.1 Introduction; The paradox of civilization

Class 1

FIE classroom: 9:00-11:00/11:30

Overview; review of basic economics (opportunity cost, incentives, substitutability, informational problems (hidden attributes, hidden actions, marginal thinking)

Reading (to be done before this class):

(1) CBB, Ch. 1;

(2) Failed states and the paradox of civilization (on my website): <https://my.vanderbilt.edu/robertdriskill/ec2340-maymester-in-london/>

Optional: ParadoxCivilizationSSRN-id2708715. This is a more formal (and longer) treatment if you are so inclined.

During this first class, we will review basic concepts and begin to apply them to the prosecution of war. We will use these basic concepts to analyze the "paradox of civilization": when societies produce enough goods and services

that people can live beyond a subsistence level, then marauders are attracted to pillage and plunder. We investigate how early societies appear to have made decisions on how much to invest in producing more "butter" vis a vis how much to invest in guns for defense.

Co-curricular activity: **British Museum;**

Class 2

FIE classroom: 9:00/9:30-11:00/11:30

The economics of castles

Reading (to be read before class): CBB, Ch. 2

The decisions to build castles in the High Middle Ages are analyzed through the lens of economic principles, including opportunity cost and asymmetric information. They also provide an easily-understood example of how battles unfold that leads us to develop Lanchester's analytic model of battle.

Co-curricular activity: **Tower of London.** We start outside the Tower where many beheadings took place—maintaining one's power as a monarch involves *signalling* one's power. We then enter the Tower proper. The White Tower at the center exhibits features that make concrete the ideas about a model of battle. In addition, one of the interesting features of castles connects with bluffing strategies in games with asymmetric information. If we have time, we play a little poker to make this connection clear. The model of battle we will study has applications beyond castles.

Class 3

FIE classroom: 9:00/9:30-11:00/11:30

Bargaining failure. We develop the model of bargaining failure that helps us understand why peace breaks down. We apply the model to international conflict.

Readings (to be read before class): war-overviewMJackson2009, on my website.

Co-curricular activities: **Imperial War Museum.** One reason we visit is to help with an appreciation of how terrible the cost can be when there is a "bargaining failure" and when non-aligned incentives lead to a prolonged war. The IWM in London has impressive displays that help us understand the World Wars. If they have restored it, there may be a fascinating exhibit of war paintings. In the past there has been an impressive Holocaust display. The costs of bargaining failure are well-documented here. There is also an exhibit on trench warfare, which connects with a later topic on the economics of incentives and development of cultures to overcome coordination problems.

Class 4

FIE classroom: 9:00/9:30-12:00

Introduction to game theory and applications.

Reading: (to be read before class): TBD

Class 5

FIE classroom: 9:00/9:30-11:00/11:30

Strategic bombing. This topic is rich with opportunities to apply economic principles: informational problems, e.g., what was the damage on the ground?; non-aligned incentives, diminishing marginal returns, substitutability.

Reading: (to be read before class): CBB Ch. 6

Co-curricular activities: **St. Paul's Cathedral**; A visit to St. Paul's Cathedral. We start at the memorial outside that pays tribute to the firemen who during the WWII bombing of London risked their lives to put out fires atop the cathedral dome. We then tour the inside, stopping at a shrine that pays tribute to U.S. airmen who fought in the Battle of Britain. This connects with our discussions of the costs and benefits of strategic bombing in conflicts, i.e., resource allocation within a war. We end up in the basement where we observe various exhibits that show how entwined church and state are in Great Britain. There is also an exhibit about the Falklands War, which we use as a jumping-off point for "wag the dog" theories of the origins of conflicts. And the view from the top of the dome for those willing to make the climb is impressive.

Class 6

FIE classroom: 9:00/9:30-11:00/11:30

Informational and incentive problems. Politicians, Generals, and individual soldiers all might have different goals and concerns: the politician might want victory, but for her an acceptable cost (especially because she faces little personal danger) might be different from what a soldier facing potential death believes acceptable. Similarly, a General might want a measure of success in battle that increases his chance of advancement (but faces less personal danger than an individual soldier), and an individual soldier might worry most about his own skin, but realizes his own chance of living depends on everyone acting in concert. These are all examples of what economists describe as *non-aligned incentives*. The problem also appears in almost any organization, e.g., a business, or a sports team. Attempts to solve such, problems include, for example, choices of uniforms-bright like those of the guards at Buckingham Palace, which made soldiers easy (and hence easy to monitor for desertion) back during Napoleonic wars—and camouflage like those of modern-day soldiers, which makes soldiers hard to see, which is important given current technology and battlefields. Attempts to solve these problems also includes purposeful developments of *cultures*.

Reading: (to be read before class): "The economics of war" by D. Friedman (on RAD home page); CBB Chapter 3.

Co-curricular activity: **British Army Museum; Changing of the Guard outside of Buckingham Palace (optional on your own)**. Note discussions of how changing technology was unappreciated until a critical battle exposed how warfare had changed. We will be studying models which emphasize how technology that favors defence often creates a "propensity for peace," and vice versa. Note (and contrast with the Friedman article) the discussion of how and why uniforms changed through time. Also note how some exhibits reflect the following quotation from Friedman:

" they [*generals*]generally take it for granted that the playing pieces will go where they are moved. In real battles they frequently do not. The economic problem is why they do not and what can be done about it."

Class 7, 8, and 9: Normandy

During the 9-hour bus ride we watch "Band of Brothers" and "Saving Private Ryan," and talk about them, and our feelings about them, as if we were a humanities class. We apply all of our concepts as we tour the invasion beaches, visit the Museum of Caen, and see the Bayeaux Tapestry.

Class 10,11,12

3.2 Wild Cards: Conscription, an All-Volunteer Force, mercenaries, and economic efficiency; Exam

"There were great numbers of young men who had never been in a war and were consequently far from unwilling to join in this one."
(a quotation found in the Imperial War Museum, attributed to Thucydides in the 5th century BC)

Class 10 (Monday evening): perhaps theater (depends on what's on).

Class 11, 12 (Tuesday, Wednesday). **Exam on Wednesday**

FIE classrooms, 9:00/9:30-11:00/11:30.

Readings (not all, but a selection we will decide upon as the time grows near):

CBB, Chapter 8;

Journal of Economic Perspectives—Volume 15, Number 2—Spring 2001—Pages 169–192, "The Record and Prospects of the All-Volunteer Military in the United States," John T. Warner and Beth J. Asch.

"Who's Paying for Our Patriotism?" by Uwe Reinhardt (blog post);

"When Value Judgments Masquerade as Science," by Uwe Reinhardt (blog post);

"Restore the Draft? What a Bad Idea," by Steven Leavitt (Freakonomics blog post);

"Why No Violent Protests Against the Iraq War?" by Judge Posner (blog post).

Co-curricular activity:

Class 12, Thursday: **Churchill War Rooms and Museum**

3.3 Wrap-up

Class 13, Friday morning, 9:30-10:30/11:00.

We will make sure anyone leaving Friday afternoon has plenty of time to get their plane.

4 Stage and screen

I would plan for two (2) plays and/or movies to be seen in London. Of course, it is not possible to know what opportunities will be available in the future, but in my past visits to London I have seen such plays as "An Inspector Calls,"

"Copenhagen," "Billy Elliot," and "War Horse," all of which deal with the economics of conflict. Shakespeare might provide an opportunity as well. In 2016 and 2017, we saw "Romeo and Juliet." In 2017, we saw Bertold Brecht's "Life of Gallileo." We make sure you are exposed to some culture.