

**Ancient and Modern World War Simulations as Supplemental Teaching Tool**

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Simulations have a long history in political science, and international relations in particular, but innovations continue to improve their utility for the classroom.<sup>1</sup> While there has been a turn to more technologically sophisticated simulations, in-person, low-tech classroom simulations remain useful. This paper provides an example of a short, easy to prepare, yet sophisticated game design that can be easily incorporated into large introductory courses with multiple teaching assistants (TAs).

The game presented in this paper builds on and advances the literature on simulations in a number of ways. Many existing simulation designs require multiple days and large resource investments by students and instructors.<sup>2</sup> However, the length and complexity of these simulations can be intimidating, and discourage instructors from adopting simulations in their classrooms.<sup>3</sup> This simulation was designed to keep the burden of preparation very low, so that it can be easily incorporated by instructors or used by TAs. The modular design allows the simulation to be adapted for many different classroom environments. Even simple, single-session simulations have been shown to have positive learning outcomes among students, particularly in introductory classes.<sup>4</sup> Designing a simulation that can be easily used by TAs in large lecture classes with many smaller sections also provides opportunities for comparison between the sections that run the simulation and those that do not.

Like many introductory International Relations (IR) courses, the particular class in which we led sections taught theories of international politics through analysis of world historical events.<sup>5</sup> The class focused in particular on Realist theory and Kenneth Waltz's 'three image' framework for analyzing international politics.<sup>6</sup>

There are many existing simulations that attempt to give students a better understanding of Realism. However in all those simulations, the rules of the game are heavily embedded within Realist assumptions about international politics. In all of these, students were told that survival was their first priority, the type of moves that students could take were only or mostly military in nature, intra-polity interactions were absent or uniform, and inter-polity interactions were highly simplified.<sup>7</sup> Consequently, these games may have successfully taught students about Realist

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<sup>1</sup> B. A. Starkey and E. L. Blake, "Simulation in International Relations Education," *Simulation & Gaming* 32, no. 4 (December 1, 2001): 537–51

<sup>2</sup> Michael K. Baranowski and Kimberly A. Weir, "Political Simulations: What We Know, What We Think We Know, and What We Still Need to Know," *Journal of Political Science Education* 11, no. 4 (October 2, 2015): 391–403.

<sup>3</sup> Rebecca A. Glazier, "Running Simulations without Ruining Your Life: Simple Ways to Incorporate Active Learning into Your Teaching," *Journal of Political Science Education* 7, no. 4 (October 2011): 375–93

<sup>4</sup> Michael Baranowski, "Single Session Simulations: The Effectiveness of Short Congressional Simulations in Introductory American Government Classes," *Journal of Political Science Education* 2, no. 1 (January 2006): 33–49; Carolyn Shaw, "Using Role-Play Scenarios in the IR Classroom: An Examination of Exercises on Peacekeeping Operations and Foreign Policy Decision Making," *International Studies Perspectives* 5 (2004): 1–22.

<sup>5</sup> Biersteker, Thomas, "The Parochialism of Hegemony", in *International Relations Scholarship Around the world*, eds, Arlene B. Tickner, Ole Wæver (2009) 315.

<sup>6</sup> The three-image framework for analysis originally was used to explain the outbreak of conflict in international politics. The first image explains conflict at the level of human nature or individual traits; the second image explains conflict at the level of domestic attributes of particular states; the third image explains conflict at the level of the international system. Kenneth N Waltz, *Man, the State, and War a Theoretical Analysis* (New York: Columbia University Press, 2001),

<sup>7</sup> Wesley D. Chapin, "The Balance of Power Game," *Simulation & Gaming* 29, no. 1 (March 1998): 105–12; David A. Reilly, "The Power Politics Game: Offensive Realism in Theory and Practice," *Simulation & Gaming* 34, no. 2 (June 2003): 298–305; Victor Asal, "Playing Games with International Relations," *International Studies*

theory, but they do not offer enough opportunities for seeing Realism's limitations. Teaching students an uncontested version of Realism may lead them to believe that Realism is the only representation of how the world works. There is a substantial literature in IR that argues that Realism as a theory has a negative impact on our understanding of world politics, and on the practice of world politics.<sup>8</sup>

Our simulation was purposefully designed so that no logically necessary outcome was implied through the game design. Game play and game outcomes may conform to Realist expectations, or may confound Realist theory. The game design gave students more opportunities to decide what was important to them, and how to make decisions. The interactive game play prompted them to question both Realist prescriptions for national strategy, and descriptions of the behaviors of other players. For example, students were assigned a more nuanced hierarchy of interests in the first simulation, and allowed to formulate their own motivations for behavior in the second simulation. This encouraged students to question the inevitability of Realist assumptions about actor priorities. No restrictions were placed on the types of moves that teams could make, and an element of contingency was added. Students had to decide whether and how to incorporate Realist practices and strategies, with no guarantee that these moves would lead to success.

Another distinguishing feature of our simulation is the explicit incorporation of Waltz's three-image framework into the game play. The inclusion of first, second, and third image constraints and influences complicates the simulation of international politics. Participants could interact across, within, and between teams. This allowed for a more disaggregated model of international politics, including the possibility of 'two-level' games, transnational identity-based solidarity, and domestic power struggles. In this way, the game play and outcomes could go beyond a simplified Realist schema. Finally, conducting two separate simulations with the same game play mechanics, but radically different historical scenarios, led students to question the sufficiency of universal rules and principles of behavior for explaining outcomes.

This paper describes the process of designing and implementing a theory-driven world politics simulation. We begin by outlining the learning objectives we wanted to achieve, and then move to a discussion of game design and preparation. Next, we provide an account of the implementation of the game in our four TA sections. Then we discuss the differences between simulations, followed by an overview of the debriefing and assessment process. We conclude with an agenda for future simulations.

## Learning Objectives

Instructors who run classroom simulations do so for a variety of reasons.<sup>9</sup> The most successful simulations are tailored to the goals of a particular course, and for this reason we

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*Perspectives* 6 (2005): 359–73; William W. Newmann and Judyth L. Twigg, "Active Engagement of the Intro IR Student: A Simulation Approach," *PS: Political Science and Politics* 33, no. 4 (December 2000): 835–42.

<sup>8</sup> Sjoberg, Laura, "Gender, structure, and war: what Waltz couldn't see." *International Theory*, 4 (2012): 1-38; Sampson, Aaron Beers. "Tropical Anarchy: Waltz, Wendt, and the Way We Imagine International Politics". *Alternatives: Global, Local, Political* 27.4 (2002): 429–457

<sup>9</sup> Timothy Wedig, "Getting the Most from Classroom Simulations: Strategies for Maximizing Learning Outcomes," *PS: Political Science & Politics* 43, no. 03 (July 2010): 547–55; Brent E. Sasley, "Teaching Students How to Fail: Simulations as Tools of Explanation," *International Studies Perspectives* 11 (2010): 61–74; Victor Asal, "Playing Games with International Relations," *International Studies Perspectives* 6 (2005): 359–73; Kent J. Kille, "Simulating the Creation of a New International Human Rights Treaty: Active Learning in the International Studies Classroom," *International Studies Perspectives* 3, no. 3 (August 2002): 271–90; Jeremy Youde, "Crushing Their

sought to design a game that reflected the unique circumstances of an introductory International Relations course focusing on Realism.<sup>10</sup> We focused on three goals in particular: improving retention of the difficult readings, fostering a better understanding of key theoretical concepts, and increasing student engagement through ‘active learning.’ Each of these learning goals and their impact on game design will be described in this section.

The class was mostly composed of first year students, who almost universally reported feeling overwhelmed by the amount of reading assigned every week.<sup>11</sup> The readings for the Peloponnesian War and World War One were particularly dense, because they had to cover the major actors, regional historical context, and interpretations of why the conflicts began. One of our learning objectives was to increase reading retention by giving students a frame through which they could filter the readings. Assigning a ‘role’ for the game gives students two things: a particular perspective to follow as the historical account unfolds in the readings, and an emotional stake in the outcome of the events.<sup>12</sup> We hoped that this device, in addition to the knowledge of impending interaction, would increase attentiveness to, and therefore retention of, what was otherwise a set of difficult readings.

The second and most important learning objective for our simulation was acquisition of a more thorough and nuanced understanding of core theoretical concepts. In particular, we wanted students to understand the difference between Waltz’s three-image framework for analysis and Realism as a theory of International Relations. More specifically, we hoped that the simulation would help students grasp how Realist assumptions shape outcomes, the utility and application of the three-image framework, and the achievements and shortcomings of Realist theory for explaining the simulated conflicts. Existing research suggests that simulations excel at clarifying theoretical concepts and linking them to practice.<sup>13</sup> The challenge for us was to design the rules of the game to make the application of Realism and the three-image framework obvious, which increases student learning, while leaving room for students to understand the shortcomings of the approach and theory.<sup>14</sup>

The third learning objective for our simulation was increasing student engagement via ‘active learning.’<sup>15</sup> This involves the students actively playing the game, interacting with their peers and the instructor, and trying their best to fulfill their role while navigating the rules of the

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Dreams? Simulations and Student Idealism,” *International Studies Perspectives* 9 (2008): 348–56.; Hemda Ben-Yehuda et al., *World Politics Simulations in a Global Information Age* (Ann Arbor: University of Michigan Press, 2015), 6.; Shellman, Stephen M., and Kürşad Turan. “Do Simulations Enhance Student Learning? An Empirical Evaluation of an IR Simulation.” *Journal of Political Science Education* 2, no. 1 (January 2006): 21

<sup>10</sup> Rebecca A. Glazier, “Running Simulations without Ruining Your Life: Simple Ways to Incorporate Active Learning into Your Teaching,” *Journal of Political Science Education* 7, no. 4 (October 2011); Ben-Yehuda et al., *World Politics Simulations in a Global Information Age*, 23.

<sup>11</sup> 60% of students were in their first year

<sup>12</sup> Shaw, “Using Role-Play Scenarios in the IR Classroom: An Examination of Exercises on Peacekeeping Operations and Foreign Policy Decision Making.”

<sup>13</sup> Victor Asal and Jayson Kratoville, “Constructing International Relations Simulations: Examining the Pedagogy of IR Simulations Through a Constructivist Learning Theory Lens,” *Journal of Political Science Education* 9, no. 2 (April 2013): 132–43.; Pamela S. Chasek, “Power Politics, Diplomacy and Role Playing: Simulating the UN Security Council’s Response to Terrorism,” *International Studies Perspectives* 6 (n.d.): 1–19; Michael D. Kanner, “War and Peace: Simulating Security Decision Making in the Classroom,” *PS: Political Science and Politics* 40, no. 04 (October 2007).

<sup>14</sup> Asal, “Playing Games with International Relations,” 364; Asal and Kratoville, “Constructing International Relations Simulations.”

<sup>15</sup> David A. Kolb, *Experiential Learning: Experience as the Source of Learning and Development* (Upper Saddle River, NJ: Prentice-Hall, 1984).

game to achieve the best possible outcome for their team. We knew that this goal was best achieved by keeping students' expectations for the game low, because high expectations have been shown to decrease student enjoyment.<sup>16</sup> The objective of student engagement has multiple motivations, including establishing a positive mood for future sections, getting students comfortable speaking to and in front of each other, and providing an accessible forum for students who do not respond well to traditional teaching styles.<sup>17</sup> Most importantly, student engagement facilitates internalization of class concepts, by making tangible what was formerly abstract.<sup>18</sup>

## Game Design

The literature on simulations stresses the importance of designing the simulation to maximize the attainment of the intended learning objectives.<sup>19</sup> Simulations like ours, that seek to teach concepts, can have less rigorous rules than those seeking to teach process. They work best by presenting students with problems to be solved.<sup>20</sup> We focused on designing a game that would maximize individual student involvement, reduce out of class preparation time for students, and make the lessons learnt from the simulation clear to students.<sup>21</sup>

A number of choices must be made when designing a simulation. Decisions have to be made about the delivery method, the participant universe, the interaction style, role assignments, student preparation, the simulation case, and the complexity of the simulation. Instructors also have to decide the type and degree of their involvement and how feedback and evaluation for the simulation will be collected.<sup>22</sup>

The basic parameters for our game design came from the pre-existing structure of the introductory International Relations (IR) course we were teaching assistants for. As Glazer (2011) argues, building upon the existing aspects of a class helps reduce the resources required for running a simulation.<sup>23</sup> Simulation design should consider the likely number of students, the length of class sessions, the distribution of themes and historical events in course material, and the amount and type of readings assigned. As TAs in a large lecture course, this meant designing a simulation for our weekly 50-minute 'section' of about 20 students. Limiting the simulation to in-class time and already required readings would also help us avoid placing extraneous demands on students as time commitments outside of the classroom have been found to be a major concern of students in longer simulations.<sup>24</sup> Because the simulation would be run in our sections

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<sup>16</sup> Sean P. Giovanello, Jason A. Kirk, and Mileah K. Kromer, "Student Perceptions of a Role-Playing Simulation in an Introductory International Relations Course," *Journal of Political Science Education* 9, no. 2 (April 2013): 197–208.

<sup>17</sup> Newmann and Twigg, "Active Engagement of the Intro IR Student: A Simulation Approach," 835. Victor Asal and Elizabeth L. Blake, "Creating Simulations for Political Science Education," *Journal of Political Science Education* 2, no. 1 (January 2006): 2.

<sup>18</sup> Asal and Kratoville, "Constructing International Relations Simulations."

<sup>19</sup> Elizabeth T. Smith and Mark A. Boyer, "Designing In-Class Simulations," *PS: Political Science and Politics* 29, no. 4 (December 1996): 690, doi:10.2307/420794.

<sup>20</sup> Asal and Blake, "Creating Simulations for Political Science Education,"; Asal, "Playing Games with International Relations," 363.; Asal and Kratoville, "Constructing International Relations Simulations."

<sup>21</sup> Chad Raymond and Simon Usherwood, "Assessment in Simulations," *Journal of Political Science Education* 9, no. 2 (April 2013): 157–67.

<sup>22</sup> Wedig, "Getting the Most from Classroom Simulations"; Asal and Kratoville, "Constructing International Relations Simulations"; Asal and Blake, "Creating Simulations for Political Science Education."

<sup>23</sup> Glazier, "Running Simulations without Ruining Your Life."

<sup>24</sup> Giovanello, Kirk, and Kromer, "Student Perceptions of a Role-Playing Simulation in an Introductory International Relations Course."

but not those of the other TAs, we needed to assure our Professor that the participants would not be assigned extra work, that they would get a chance to engage with the readings and that they would not be disadvantaged by not having regular sections. This required a game design that could be quickly and easily grasped by students, and which covered the most important course content.

The first major decision for game design was when to run the simulation and how many times. We wanted to have an opportunity to compare different simulations so we decided to each run two single session simulations in both of our sections. This made for a total of eight simulations. Because the course covered several wars, we then had to make a choice about which weeks were best suited to be taught as a simulation. We chose the Peloponnesian War and World War One, for three main reasons. First, the readings for these weeks lent themselves to the assignment of nuanced and interesting roles, because they focused on the interests, motivations, and experiences of important actors within the state.<sup>25</sup> Second, the details of these conflicts were sufficiently complex and unfamiliar for students that we could avoid pre-conceived notions of the causes and righteousness of the wars.<sup>26</sup> Third, these two wars fell at convenient times during the semester: the Peloponnesian war was covered in the second week, so that rosters were already settled, and World War One was covered in the fifth week, which was not so late that it would interfere with preparation for the midterm.

After choosing these two conflicts, the next step was to design the rules for game play.<sup>27</sup> We started by choosing the roles that individual students would play, a reflection of the first image in international politics. We then moved to designing interaction within polity-teams to reflect second image dynamics, and finally considered the mechanics of team-to-team relationships for the third image. All students would be able to interact in face-to-face exchanges, but teams would come together at the end of each round to make internal decisions concerning their moves in relation to other states.<sup>28</sup>

One challenge at this point of game design was choosing a set of roles that could be varied to accommodate different section sizes and unpredictable attendance, without assigning any students unimportant roles. There is a risk that being assigned marginal roles decreases student engagement, thereby reducing the satisfaction of learning goals.<sup>29</sup> We chose a large set of roles, and designated less important roles as expendable in case of a lower number of participants. None of the roles were truly marginal, but some were less central to the simulations. For example one type of role we added was that of arbitrators who would decide on the

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<sup>25</sup> Thucydides, *History of the Peloponnesian War*, trans. Rex Warner, Penguin Classics (Harmondsworth [u.a]: Penguin Books, 1980), 1–54; Donald Kagan, *The Peloponnesian War* (New York: Penguin Books, 2004), 31–151, 400–408; John George Stoessinger, *Why Nations Go to War* (Boston, MA: Wadsworth, 2011), 3–28; Margaret MacMillan, *The War That Ended Peace: The Road to 1914*, 2014, 544–632; Erich Maria Remarque and A. W. Wheen, *All Quiet on the Western Front*, 12. print, A Fawcett Crest Book (New York, NY: Ballantine Books, 1991), 98–137.

<sup>26</sup> Asal and Blake, “Creating Simulations for Political Science Education,” 7.

<sup>27</sup> Raymond and Usherwood, “Assessment in Simulations”; Asal and Kratoville, “Constructing International Relations Simulations.”

<sup>28</sup> Ben-Yehuda et al., *World Politics Simulations in a Global Information Age*. 14

<sup>29</sup> Michael K. Baranowski and Kimberly A. Weir, “Political Simulations: What We Know, What We Think We Know, and What We Still Need to Know,” *Journal of Political Science Education* 11, no. 4 (October 2, 2015): 391–403.

likelihood of success of certain action. We also decided to use role assignment to increase participation by assigning dominant students to the less central roles.<sup>30</sup>

Another way we ameliorated the potential marginalization of some students was through the design of internal team dynamics. During game play, the students would ‘role-play’ their assigned characters within the context of polity teams (Athens, Austria, etc.). The structure of team decision-making aimed at reproducing second image constraints on behavior: students were asked to consider the regime type, domestic interest groups, and the relationship between the military and government. This information was presented in both the lectures and the readings. During the game, the students would be responsible for maintaining fidelity to these second image characteristics (subject to some oversight by the facilitator). For example, a democracy should make decisions by majoritarian voting, while a monarchy would defer all final decisions to the monarch. On the other hand, leaders of hierarchical polities were constrained of taking unpopular actions due to the possibility that that might trigger a nationalist or Helot rebellion (in the Spartan case). Individual team members could choose to stage a coup, or lead a domestic revolt. These internal team dynamics made it such that every player could have an important impact on the game.

After choosing roles and teams, the next step for game design was to figure out the format for playing the game. It is here that the third image became relevant. Each team was initially allocated an amount and type of military resources, in a way that was intuitive both historically and consistent with the readings. The game play was organized in ‘turns,’ where teams could make any moves that were historically reasonable, such as issuing ultimatums, establishing or breaking alliances, and declaring war. This is a type of punctuated synchronous interaction style in which students interact synchronously within the turns but separate back into teams to make consolidated decisions at the end of a turn. Turns last for 5 minutes, and in between turns students communicate within and between their polity teams. At the end of a turn teams submit their moves to the facilitator. While in the first simulation moves were publicly declared to the class or privately to the instructor, in the second simulation we relied on action forms for move submission. At this point the instructor lists the moves taken by each team on the board.

There are two special moves that teams can take that are not shared with the rest of the class right away. The first category of special moves is secret moves. These can involve sabotage, secret agreements, secret weaponization, assassination attempts etc. These moves are kept secret by the facilitator until it is necessary or appropriate to disclose them. The second category of special moves are moves that have indeterminate outcomes. Troop mobilization, training, fighting, and some secret moves require an arbitrator to decide to what extent a move was successful. To deal with this type of move, we adopted a mechanic from the ‘Dungeons and Dragons’ game where dice rolls are used to decide whether an action is successful. Arbitrators assign a likelihood of success and a dice roll determines whether a team successfully accomplishes that move. Additional nuances in the taking of turns will be described in the following section.

One problem that may arise from special moves is how an instructor can set limitations on secret moves. For example, some teams tried to double their naval capacity, assassination attempts were frequent in the World War One simulation, attempts at making alliances outside of the simulation scope (Italy or Spain) were also challenging and attempts at developing

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<sup>30</sup> Chad Raymond and Kerstin Sorensen, “The Use of a Middle East Crisis Simulation in an International Relations Course,” *PS: Political Science and Politics* 41, no. 1 (January 2008): 179–82.

unconventional weapons (like anthrax) were also attempted. In response to creative moves by students, instructors will have to make decisions on a case-by-case basis. We recommend assigning low likelihoods of success to these actions. Beyond the instructor can inform students that more detailed and well thought out action forms would have a greater chance of success. For example, a generic decision to develop anthrax is less likely to succeed than a decision to hire scientists and to spend more than one turn on weapons development.

The decision to introduce game mechanics that were unique to polity and alliance type was also made in order to further our learning objective of helping students differentiate between Realism and the three images framework. By introducing three levels of constraints on decision makers, which were not all explicitly Realist, we hoped to illustrate how different theories understand the operation of international politics. We also hoped that through the simulation students would discover the advantages and limitations of each of the images and of Realism as a theory. Adding secret moves and chance or randomness to our games also helped to illustrate certain features of international politics, particularly the uncertainty that one's actions would result in intended outcomes. Allowing domestic conflict to run within international conflict alongside transnational dynamics added enough complexity to keep all students engaged while hitting on different aspects of multiple theories in a way that would be illustrative to students of the concepts that these theories use in practice.

Team	Actors	2 <sup>nd</sup> Image Structures	3 <sup>rd</sup> Image Resources	3 <sup>rd</sup> Image Structures
Athens	Pericles, Pro-Spartan General, 3 Assembly Members	Majority decision making	13,000 hoplites available 16,000 hoplites spread out ~300 ships Defensive walls	Athens has final say
Sparta	King Archidamnus, Ephors, 3 Assembly members	Consensus, risk of helot uprising	26,000 hoplites 4000 cavalry Some ships	More flexible among members
Corinth	2 Anti-Athens, 1 Pro-Athens	Majority decision making	2500 hoplites 100 ships	Colonial ties
Potidaea	Rebels, Aristocrats	Consensus	Defensive walls	Colonial ties
Corcyra	3 Members		2000 hoplites 120 ships	Colonial ties
Arbitrators	3 Arbitrators			
Germany	Kaiser Wilhelm, Chief of Staff Helmut Von Moltke, Chancellor Bethmann	Chancellor has final say, risk of domestic overthrow	45 army corps	Monarchical Kinship ties
Austria-Hungary	Emperor Francis Joseph, Count Leopold Von Berchtold, Conrad Con Hoetzendorff, Prime Minister Tisza	Emperor had final say, risk of domestic overthrow	16 army corps	Kinship ties
Russia	Tsar Nicolas II, Foreign Minister Sergei Sazonov, Minister of War Vladimir Sukhomlinov, Chief of Staff Ianushkevich	Tsar has final say, risk of domestic overthrow	50+ army corps	Ethnic ties, Kinship ties
Britain	Foreign Secretary Edward Grey, Lord of the Admiralty Winston Churchill, King George the 5 <sup>th</sup>	Majority decision making	23 army corps	Democratic ties
France	Premiere Renee Vivianni, President Poincarre, General Joseph Joffre	Majority decision making	21 army corps	Democratic ties
Serbia	Dragutin Dimitrijevic, King Peter, Prime Minister Pasic	King has final say, risk of overthrow	5 army corps	Ethnic ties

Table 1. Overview of Team Features

## Game Implementation

The game implementation for the most part followed our intended game design, however it became apparent that some changes would be necessary to make the game run more smoothly. A few days before section each student was assigned the role of a single actor within a team, such as Pericles or Kaiser Wilhelm.<sup>31</sup> Students were asked to do the readings with that actor in mind, taking note of the actor's personality, position, and motivations.<sup>32</sup> The only assignment that they were asked for was to email the instructor a description of their character's motivations,

<sup>31</sup> Newmann and Twigg, "Active Engagement of the Intro IR Student: A Simulation Approach," 839.

<sup>32</sup> Asal and Blake, "Creating Simulations for Political Science Education," 5; Wedig, "Getting the Most from Classroom Simulations"; Newmann and Twigg, "Active Engagement of the Intro IR Student: A Simulation Approach."; Elizabeth T. Smith and Mark A. Boyer, "Designing In-Class Simulations," *PS: Political Science and Politics* 29, no. 4 (December 1996): 690.

the second and third image constraints that they have to navigate, and a strategy for how they intend to behave in the simulation. As facilitators, our pre-class preparation was limited to planning a presentation of the rules, arranging the classroom, and assembling notes about the historical context that might be useful during game play. These notes would include role assignments, maps, the resources and positions of actors, and a list of possible interventions in case the simulation stalled.

Once advanced preparations were made the simulation could be confidently run in a single class session. Before the students showed up, instructors arranged the classroom into islands of tables, each having a placard indicating the political unit of a respective team. To that end having a classroom with movable furniture is advantageous. Students arrive to class without knowing exactly at what point in history the simulation will begin. This was done to prevent students from ignoring earlier parts of the conflict while still allowing alternate outcomes to emerge. In both cases the specific historical starting point was a key turning point that sparked or accelerated the conflict.<sup>33</sup> The instructor begins the class by giving a brief explanation of the rules of the simulation. Following a brief pause for questions, the instructor lays out the historical scenario from which the simulation begins. At this point it may be helpful to call upon students from different teams to give a brief account of their situation at the beginning of the simulation as a collective refresher for the class. With the scenario laid out, the simulation can begin.

After the end of each 5-minute turn, the facilitator may need to restore order to the classroom as students may be spread out among different tables deep in negotiations, alliance making, or planning. A timer with an alarm that is only turned off once all students are back in their seats may be used for this purpose. Students then have a minute to decide on their moves. In the Peloponnesian War simulation moves were publicly declared by students, however because this ended up advantaging teams that went last we moved to the use of action forms in the WW1 simulation.<sup>34</sup> After one minute, the action forms are collected and read aloud by the facilitator, and public moves are recorded on the board. It is helpful to keep track of history so to speak by dividing the board into a table with teams on one axis and turns on another. A public record of the progression of events helps students orient themselves to the developing situation. In parallel instructors keep track of secret orders and plans undertaken by each team on their own sheet of paper. Moves that required an outcome were assigned a likelihood of success and given a roll of the dice before the next team's move was announced. For example an order to sneak a force of submarines into the Baltic Sea by Britain required a secret dice roll with a high likelihood of success. After all moves are declared and resolved, the instructor declares the start of the second turn and students return to the simulation. The game continues in this manner until the time allotted for the simulation ends.

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<sup>33</sup> Asal and Blake, "Creating Simulations for Political Science Education," 7.; Hemda Ben-Yehuda et al., *World Politics Simulations in a Global Information Age* (Ann Arbor: University of Michigan Press, 2015), 4.

The starting point for the PP war simulation was the ultimatum that Athens gave to Potidaea in the long-winter and the starting point for the WW1 simulation was the assassination of Franz Ferdinand. These were ideal points because it required knowledge of the events so far and so tested student's ability to recollect the history to this point from the readings, it also gave us enough events afterward so that we had a historical record against which we could compare the action taken in the simulation. It also gave each of the actors multiple options of action independent of what the other actors decided.

<sup>34</sup> Newmann and Twigg, "Active Engagement of the Intro IR Student: A Simulation Approach," 837; Stephen M. Shellman and Kürşad Turan, "Do Simulations Enhance Student Learning? An Empirical Evaluation of an IR Simulation," *Journal of Political Science Education* 2, no. 1 (January 2006): 19–32.

In our experience, students moved the game forward with enthusiasm and without requiring prompts from the facilitator. However, in the case of simulation stagnation we had agreed on a set of possible prompts and events that would re-catalyze the simulation. During gameplay the facilitator can adopt multiple roles to enable the simulation. During rounds facilitators can go around the room to make sure everyone is participating and that no one person dominates a group. At times you may want to jump in and make a suggestion to a group struggling with the simulation, but for the most part your role at this stage is as neutral moderator.<sup>35</sup> The facilitator's role during gameplay can also include intervening to highlight teachable moments.<sup>36</sup>

### Lessons from Differences

Part of the purpose of running two different simulation scenarios was to compare outcomes and improve game design. Some changes between the first and second simulation were a function of the course material and specifics of the conflict, but others were corrections for issues discovered in the first simulation. In this way, our failures become productive inputs for change.<sup>37</sup>

Three main changes were most important going from the first to the second simulation. First, while in the Peloponnesian war simulation we assigned students to act as arbitrators, in the World War One simulation the role of arbitrators did not exist. This was both because of the new historical scenario, and because of negative feedback from the students assigned this role. During the Peloponnesian war, mutual arbitration was an available mechanism used to resolve disagreements between Greek city-states. In the simulation this meant that different teams could bring their cases to the arbitrators for a final decision. In practice none of the four Greek simulations ended up seeking arbitration and the role of arbitrators was limited to deciding likelihood of decisions requiring action. Students attempted to sway arbitrators to give them better likelihoods and in some cases student arbitrators leaned to one team more than others. Ultimately this was an unnecessary and unused component of the simulation. In the World War One simulation, arbitrators did not exist, and their functions were successfully taken over by the facilitator. While this took some degree of control out of the hands of the students themselves, it gave more consistency to probability assessments and arbitration outcomes.

The second main difference between simulations was the presence of an explicit Realist hierarchy of interests in the Peloponnesian War simulation and its absence in the World War One simulation. For the Greek simulation, actors were instructed to follow a hierarchy of interests in which survival was the main priority followed by increasing one's power and finally avoiding war. While we felt this was necessary in the first simulation when students were just getting introduced to Realism, the second simulation took place in the fifth week of the semester and therefore did not require such an explicit constraint upon actors. It also created an opportunity for students to critically consider whether Realist assumptions about state priorities were useful. We expected that removing the hierarchy of interests would have some importance for the outcome of the simulation and the behavior students pursued. Indeed, the lack of priorities seemed to encourage a greater ability to avoid war among the teams. A continent-wide war broke out in

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<sup>35</sup> Wedig, "Getting the Most from Classroom Simulations"

<sup>36</sup> Wedig, "Getting the Most from Classroom Simulations"; Asal, "Playing Games with International Relations," 370.

<sup>37</sup> Ben-Yehuda et al., *World Politics Simulations in a Global Information Age*, 44.

only one of the four World War I simulations. This may indicate that internalized Realist hierarchies may indeed be a barrier to peaceful resolutions.

Finally, a less substantial difference between the two simulations was the use of maps in the European simulation. After the first simulation we quickly agreed that having a map to track troop movements and to illustrate geographic distance would be a good idea. Within classroom constraints we were able to use projectors or laptop screens to show maps and troop movements in the second simulation. With the use of a basic image editing software like Paint, instructors can also trace public troop movements. We found that this improved the experience of the simulation for students and made for more realistic mobilization and fighting in the simulation.

### Debriefing and Evaluation

Debriefing students after the simulation is a crucial and essential part of the simulation. We designed the simulation to end with a short debriefing guided by the facilitator, where the students are given a chance to reflect on the outcome of game play. Debriefing should act as an opportunity to provide students some sense of closure for their experiences during the simulation. This can include both a discussion of what occurred, including any secret moves, and an opportunity for students to vent frustrations and express their excitement. The facilitator can guide this conversation by focusing on particular ‘teachable moments’ that illustrate and challenge certain theoretical concepts.<sup>38</sup> An especially useful place to start is by asking students what explains the difference between the actual historical outcome and what occurred during the game. This encourages students to think about what constrained and influenced decision-making during the game.

After the class period is over, instructors can assess the achievement of learning outcomes in multiple ways.<sup>39</sup> The literature on simulations has noted that instructors often either skip this step, or rely on anecdotal evidence and self-reporting.<sup>40</sup> Assessment techniques also need to go beyond simply asking the students if they enjoyed the simulation, because enjoyment alone is not proof of learning achievement.<sup>41</sup> Indeed, one cannot assume that simulations automatically fulfill learning goals; existing quantitative measures have yielded mixed results for the improvement of grades, student performance, and class evaluations.<sup>42</sup>

We designed a voluntary online survey, and distributed it after each of two simulations, in order to assess the achievement of our learning outcomes and as an extension of the debriefing process. Self-assessment has been shown to be less than reliable for indicating content retention, as students often over-estimate the educational benefits of the simulation.<sup>43</sup> Because of this, we designed a survey not to ask students whether they learned more, but to ask them how the simulation changed their preparation for class, how they incorporated both Realist theory and the three-image framework into game play, and whether they felt engaged in game play. These questions were tailored to our learning objectives, and intended to give some idea of whether those objectives had been achieved. While ideally, instructors would want to give students a

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<sup>38</sup> Newmann and Twigg, “Active Engagement of the Intro IR Student: A Simulation Approach,” 841.

<sup>39</sup> Baranowski and Weir, “Political Simulations,” 395–6.

<sup>40</sup> Raymond and Usherwood, “Assessment in Simulations.”

<sup>41</sup> M.E. Bredemeier and C.E. Greenblatt, “The Educational Effectiveness of Simulation Games: A Synthesis of Findings,” *Simulation & Gaming* 12, no. 3 (1981): 307–32.

<sup>42</sup> Raymond and Usherwood, “Assessment in Simulations”; Shellman and Turan, “Do Simulations Enhance Student Learning?”; Baranowski, “Single Session Simulations.”

<sup>43</sup> Shellman and Turan, “Do Simulations Enhance Student Learning?,” 25; Raymond and Usherwood, “Assessment in Simulations,” 160.

post-simulation quiz to objectively assess improvement in content retention, because of our need to minimize differences with other sections, we chose not to burden our students with an extra assignment.

Our post-simulation survey was imperfect but informative. The response rate to both surveys was lower than what we desired. The first survey had a response rate of 70% while the second survey had a response rate of 52%. This may have possibly skewed our results as students with a negative experience may have avoided filling out the survey. The more likely explanation is that apathetic students did not fill out the survey and students with stronger emotional resonance to the simulation did fill out the survey. Almost all respondents filled out the multiple-choice questions and a majority of respondents filled out the open ended questions on the survey. The three learning outcomes we tried to measure were reading retention, conceptual understanding, and student engagement.

For the objective of reading retention, two questions were designed to glean information about how the simulation changed student preparation for section. The overwhelmingly majority of respondents indicated that knowing about the game changed the way they read and took notes. Specifically, students focused more intently on their own roles and read in ways that were useful for potential simulation scenarios. For example, students reported that they “read the readings more closely,” for their own roles and teams, compiling information about motives, strategies, alliances, and resources. Many students reported taking “very detailed notes,” some even creating an “outline of everything” they might need to know. At least one student directly suggested that their role assignment had served as a framework for internalizing the readings: “It was a lot easier to sort through the dense readings and gain insight on a specific part that contributed to the whole.” Ideally in future simulations we would want to improve this part of the evaluation by giving a quiz about reading content to both simulation participants and a control group.

Our second learning objective was to teach students about course concepts. We wanted students to not only distinguish between the three-image framework for understanding world politics and Realism as a theory, but to also gain a more nuanced and critical understanding of Realism. In order to gain some insight into whether the simulations achieved these objectives we included three questions in the survey that attempted to measure whether the simulation impacted how students felt about Realism as a theory and the role of the images in the simulation. The first was an open ended question about whether the simulation changed their assessment of Realism as a theory, the second question asked students which image had the greatest impact on their role’s decision making, and finally we asked them which image had the greatest impact on the overall outcome of the simulation. We expected that students would become more critical of Realism after the second simulation because of the way the game was designed and because by that point in the course they would have been exposed to a larger number of readings about world politics.

These expectations about students’ perceptions of Realism were borne out by the survey results. When students were asked whether and how the simulations changed their assessment of Realism, a majority in both surveys reported that Realism was a useful theory of international politics. This number decreased, however, after the second simulation, when a larger number of students indicated that the simulation led them to develop doubts about Realism. The survey questions reveal that students perceived the restrictions of Realist theory at the same time that they were acquiring knowledge about how it can be used to understand historical events.

In the first survey many students said that the game gave them a better understanding of Realism in general, and “how it was actually applied.” More specifically some students said that it helped them understand how Realist assumptions factored into individual decision-making. Students also reported that the simulation helped them understand the historical events of the Peloponnesian war better, and the difference between the three images of analysis. While most students found that the theories they learned in class mapped well onto the simulation, a few students found that the “game didn’t match up exactly to the theory of Realism” which indicates the potential that some students could be led to approach the theory more critically.

The second survey conducted after the World War I simulation had many more students indicating that the simulation led them to question the efficacy of Realism as a theory. Students expressed doubts about Realist assumptions of rational decision-making and the primacy of security motives. For example, one student said that “decisions ... involved emotions, hurt feelings, righteousness ...” and another that the absence of a hierarchy of interests “increased... inclination to maintain peace rather than go to war.” These comments suggest that students had learned both the concepts of Realist theory, and different ways of problematizing them.

Questions about the three images of analysis provided insight about how students understood the drivers of their simulated history. Most students indicated that the second image had the greatest influence on their role’s decision making, and a majority of students indicated that the third image had the greatest impact on the game’s overall outcome. Between the first and second simulation, more students moved to choosing the first image as having a greater impact on their role behavior while there was no change in a majority agreement that the third image played the biggest role in the game outcome. While slightly over half of students indicated that the third image was the most important for overall game outcome, the rest were split between first and second image factors. We understand these results as indicating that most students came to believe that political outcomes often progress contrary to individual intentions or domestic constraints. The distribution of responses also indicates that the simulation modeled a dynamic international system, such that even first and second image constraints that were not determinative still conditioned the course of international events.

Our final learning objective was the promotion of student engagement, including emotional connection to the game, accommodation of non-traditional learning styles, and interaction among students and between students and instructors. Although these concepts are difficult to measure, we believe that our simulation achieved these outcomes to some degree. Students came to class knowing only their role assignments, and that a game was going to be played. With only a brief 5-10 minute introduction to the rules, students were able to play a 40-minute game that almost 90 percent of survey respondents described as “fun” or “lots of fun.”<sup>44</sup> The most common response to “Would you do anything differently?” was a request for more time to play the game. During the simulation, students appeared excited to announce creative moves, and eager to hide secret deals. The decision-making periods between turns were abuzz with diplomatic envoys and internal consensus building. It is our hope that this communicative energy, within the framework of a relatively minimal and open-ended game design, represents students drawing on the theoretical concepts introduced in lecture, and the historical knowledge they gleaned from the readings. At the very least, the simulations had a positive effect on our teaching evaluations, where several students mentioned the game in response to the question “What are the best aspects of this course?”

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<sup>44</sup> 92 percent of respondents for the Peloponnesian War, 87 percent for World War One

## Conclusion

We believe that our game design is a successful example of a theory-driven simulation. The rules of the game encouraged students to consider the veracity and operationalization of Realist concepts, without pre-determining the outcome of the simulation. By incorporating the three-image framework, students could easily review the multiple layers of constraints and inducements on their decision-making. In this way, they learned about Realism's strengths and limitations at the same time.

In addition to the pedagogical advantages to our particular game design, this paper also makes a basic argument for the use of simulations in introductory IR courses. In particular, the design of games by TAs offers advantages for advancing the literature on simulations. Large courses with multiple sections offer the opportunity for both experimentation and comparison. A professor can teach their TAs the basic ideas behind game design, and encourage them to develop their own particular games. This experimentation, combined with feedback and assessment, can serve as a useful laboratory for what works and what does not. Once a professor or TA has settled on a game design, they may also choose to run the simulation in half of their sections, and have the other half serve as a control group. In our case, each TA has two sections. Asking each TA to teach the game in only one of their sections could help control for the influence of the particular facilitator. Combined with content-based assessments, this structure could enhance our ability to evaluate the achievement of learning outcomes.

While we believe that the simulations we ran were for the most part successful, there are a few things we would do differently. In retrospect, we needed a more nuanced and informative means of assessing the achievement of our learning objectives. Indeed, the literature on the development of post-simulation surveys and tests suggests that better assessment methods are needed in general.<sup>45</sup> To avoid over-looking the assessment step, we suggest that instructors develop their debriefing and evaluation approaches in the game design phase. We also recommend spending more time on debriefing, even at the expense of taking away from simulation time. In our simulations the debriefing phase was essential for students to internalize potential lessons from the simulation itself.

Finally, we also think that this paper shows that advancement in world politics simulation design is not only about becoming larger, longer, and more technologically sophisticated. The development of low-preparation, modular game designs can decrease the perceived barriers to using simulations. Games that are too simple, however, tend to teach theoretical concepts in a way that discourages their critical evaluation by students. Our game design attempts to find an optimal balance between ease of preparation and implementation, and educational benefit.

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<sup>45</sup> Raymond and Usherwood, "Assessment in Simulations."