Nationalism-as-Technology and Peace in Europe, 1815-1914

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ABSTRACT

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This study offers a theory in which nationalism is not only conducive to war –which is the conventional wisdom-, but also brings peace to entire groupings of states under a specific set of conditions. After the theory is laid out, a plausibility probe of 19th century Europe offers good justification for a continued research program of nationalism-of-technology and its effects.

The theory's insight comes from seeing nationalism not as an ideology, but as a form of military technology. For such technologies, their effect on war depends on how widely all countries employ them. When everyone has the same technology (i.e. when all countries are similarly endowed with nationalism), peace is cemented because countries mutually deter each other from launching wars of conquest. They do this by building mass armies to offset that of their neighbors, and threaten would-be conquerors with costly guerrilla wars and insurgencies. (Conversely, if only a few states possess the technology, the temptation to abuse it in conflict does rise.) The theoretical section of this study first justifies this analytical possibility of seeing nationalism as a technology. Among other things, the absence of definitional stumbling blocks is discussed. That is, given how technology is broadly defined by leading technologists, there is nothing inherent in the concept of nationalism that prevents its consideration as a technology. The study then proceeds to derive a series of hypotheses about the curvilinear effects of nationalism on war across a given region.

As mentioned, the primary case study is 19th century Europe (1815-1914), which lends itself to a plausibility probe. The results are corroborating. Napoleonic France first "discovered" nationalism as a technology with military applications – it formed the first mass armies and

attempted continental conquest. Later on, other "early-adopters" also employed nationalism to take land from their neighbors. Sardinia, for instance, used Italian nationalism to build volunteer armies and fight Austria for control of northern Italy in 1859. But the early adopters were then followed by most other European countries, which took reins of their own nationalisms to build mass-armies and boost their defenses. In line with the theory, the widespread adoption of nationalism preceded two whole generations of European peace, from 1871 to 1914. (So rare was this long peace that it would not be equaled until after World War II.) In sum, the history of the 1800s seems to fit broadly with the theory, and gives good reason for continued research into the pacifying role of nationalism.

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In the real world, I thank my friends, I thank C, and I thank K. She knows why – so why should you?

Of course there are errors in this manuscript, and of course they are mine. Many are part and parcel of the prototypical nature of this work. Any apologies would belie understanding.

This work is only incidentally a dissertation, and it lives despite Columbia, where the ideal of reason was betrayed for weakness and appearance.

Yet wax melts.

DEDICATION

To the mad, and their lonely theater

Introduction: Nationalism-as-technology and war

Does nationalism fuel or prevent war? Modern scholarship has mostly settled on the first choice by linking nationalism to both civil and interstate wars (Mansfield & Snyder, 1995a, 1995b, 2005; J. Snyder, 2000; Van Evera, 1994). This near-consensus rests in part on prominent examples, like the expansionism of Napoleonic France, where it is nearly undeniable that nationalism strongly contributed to war. Yet, at the margins of the scholarship there is also an opposing view of nationalism: that it can moderate the chances of war. For instance, "to the extent that people are imbued with nationalist consciousness, they may become willing to fight harder for territory that they understand to be part of their national homeland" (Glaser & Kaufmann, 1998, pp. 66-67). This prospect of staunch nationalist defenders could arguably deter attackers, and forestall wars. And there might be plenty of historical evidence supporting this argument, insofar as a myriad of state-dyads exist in which peace prevails and no conquest has been attempted for decades, if not centuries. In the Americas, for example, annexations of territory became extremely rare by the late 19th century. However, must we choose between these pessimistic and optimistic views of nationalism? And if not, how can these views be reconciled, given persuasive evidence on both sides?

To discuss whether nationalism promotes or prevents conflict first requires that we define it. Here, nationalism is understood as a popular sentiment of collective belonging, or "a belief held by a group of people that they ought to constitute a nation or that they are already one" (Haas, 1997, p. 35). This definition has been featured prominently in discussions of the military value of nationalism. In particular, in past discussions of which factors make military offense easier than defense, nationalism has been considered mainly as a popular sentiment.[1] To be sure,

[1]

such discussions of the ease of conquest, or the offense-defense balance, tended to focus on how "hard" technologies, such as conventional and nuclear weapons, affected that balance. But there are proponents of a broader conceptualization of factors behind the offense-defense balance, such as military doctrine and nationalism (Glaser & Kaufmann, 1998; Van Evera, 1999).

Nevertheless, discussions of nationalism and other "soft" factors have mostly lacked systematic analysis. For instance, Biddle notes that Van Evera's discussion of military doctrine (1998a, pp. 17-18) "provides no systematic theoretical specification", while factors like "nationalism and [resource] cumulativity are more problematic". This prompts Biddle to just focus on "technology, geography, and force size" when it comes to the offense-defense balance (2001, p. 746n). Unfortunately, Biddle's avoidance of a broadly-defined balance, a choice also made by others before him, meant that nationalism experienced analytic neglect regarding its role in conflict.

The purpose of my dissertation is to offer a systematic treatment of when nationalism promotes and prevents conflict. The conventional wisdom treats nationalism as an ideology, or "a belief system that explains and justifies a preferred political order" (George, 1987, p. 1). This is one obvious way to approach the research topic, and would involve the study of how ideology generally contributes to conflict, something which dovetails with the constructivist school of international relations.[2] But while constructivism has shed light on what ideas can do, the overall approach of linking ideology with war has been plagued with an unfortunate degree of non-systematic analysis and under-specificity.

(For a clear instance, see the quote in Glaser & Kaufmann, 1998, pp. 66-67; which appeared in the first paragraph of this essay)

[2] It would also parallel previous studies that examined the role of ideas in fostering war, like the cult of the offensive (Van Evera, 1984a).

Rebooting our view of nationalism

Perhaps it is still possible to make scientific progress by pressing forward with the assumption of nationalism-as-ideology. This persistence would imply that past scholars left stones unturned along the analytical path offered by that assumption. At the same time, maybe the assumption has inherent and unmanageable ambiguities which plague those who theorize under it - not to mention those doing empirical work. This raises a troubling possibility: nationalism-as-ideology could be a rigged game against systematic research, and this prospect begs for an alternative assumption to undergird future research.

Another approach lies in fleshing out the role of nationalism in conflict by adopting the logic applied to technological advances - in other words, we can treat nationalism as a military technology. To be sure, nationalism would be one brand of technology not usually covered in discussions of military technology. This has not been explicitly done before, and such an odd omission results from military technology being narrowly understood as the hardware employed in war, but not the *social* technologies which modify the behavior of citizens in productive activities. This widened view of technology comes not from military historians, but from theorists and researchers looking at technology in general (Eveland, 1986; Perrow, 1967; Thompson, 1967).

Besides being unexplored, nationalism-as-technology offers an unambiguous picture of the relationship between nationalism and war, as will be seen further below. Still, because the categorization of nationalism as military technology goes against the grain of the conventional wisdom, that choice should thoroughly justified before any serious research is begun. There are

two main reasons supportive of the new view.

First, it is analytically possible to conceive of nationalism as technology. We can subsume nationalism under the rubric of technology without creating any undue logical contradictions based on the premises behind either concept. Insofar as technology is concerned, military historians and analysts tended to see technology as hardware and/or, at its most abstract, the know-how needed to design and employ that hardware. But again, it is also possible to conceive of "social technologies" which encompass the knowledge and techniques used by humans in *any* productive activity, even those in which hardware is not primarily involved.

If we accept that social technologies can exist, then one such technology -nationalism- seems to possess the generic characteristics of all military technology. That kind of technology, like others, is system-oriented, ubiquitous, and diffuse across various actors (Hannay & McGinn, 1980). Nationalism meets these characteristics. In terms of system-orientation, it usually co-exists with other beliefs within the social fabric of states. Some ethnic nationalisms, for instance, promote an identity that reinforces a religious identification – Israeli nationalism suggests itself. [3] It is also safe to say that nationalism is ubiquitous worldwide (see, for instance, Muller, 2008), although its precise effects are still up for debate. And related to its ubiquity, nationalism also exhibits a diffuseness across various actors. These range from the obvious, like soldiers defending the motherland, to less visible actors, such as bureaucrats and common taxpayers.

Second, besides being analytically permissible, nationalism-as-technology sheds light on aspects of nationalism that might be neglected otherwise. This happens as we apply several ideas derived from the study of technology. Consider the choice of which technology to adopt. Just as

[3] The manner of such co-existence poses interesting parallels with hard technology. Co-existing technologies often are mutually-reinforcing, like many ethnic nationalisms and religions – or personal computers and the internet. When reinforcement is not possible or desired, technologies can merely try to avoid clashing with each other. The civic nationalism in the US, for instance, has long had an uneasy but "civil" relationship with Christianity. In hard technology, a similar thing happens between PC and Mac computers– both have coexisted safely for years, yet their interaction is still plagued by recurring incompatibility issues.

some technologies compete with others in a battle for adoption, nationalism also conflicted with both narrow tribalism and transnational loyalties – like the late allegiance to the Holy Roman Empire in pre-Westphalian times. Further, after initial adoption, a technology's continued use is contingent on its persisting advantages over other technologies and/or the path dependencies since early adoption. Applied to nationalism, this logic leads us to explore the path dependencies and continuous advantages that national loyalty enjoys over its contemporary competitors, such as a global cosmopolitanism that has yet to take root.

Third, and related to the point immediately above, nationalism-as-technology leads us to identify its precise effects. Despite widespread disagreement over the scope of technology and its role in society, it is commonly agreed that an intended effect of technology is the increase in human capabilities. This is why, when encountering any new technology, the follow-up question almost invariably becomes, "so what does it *do*?" Thus we understand technology for its effects - so that, say, telephones are meaningful to us because they allow communication over long distances. In contrast with the ambiguities posed by nationalism-as-ideology, the assumption of nationalism-as-*technology* takes us along that line of reasoning. It prompts us to pointedly ask: What does nationalist technology do?

All this said, nationalism-as-technology should not be seen as an exclusionary or irreversible perspective. Few will deny that nationalism is also an ideology, but seeing it as a technology does offer uncharted analytical and empirical land to explore. Thus, the technological assumption should be seen as a new logical venture, whose fruits may (or not) justify its continuation.

Nationalism-as-technology

A central premise of this dissertation is that nationalism enhances the military capability of nation-states. It does this by increasing the importance that citizens give to the well-being of the nation-state (Posen, 1993, p. 81). In formal terms, this altruism alters the utility function of individuals, so that more weight is given to the nation-state's gains than under pure egoism.[4] States can in turn recruit these more-altruistic citizens into armies that are both larger and more committed than if nationalism was absent.

Note that individuals need not become total altruists for nationalism to work. As Levi points out, functional mass armies can be made of "contingent consenters," whose decision to join is "reducible to neither material self-interest nor normative and moral considerations" (1997; 2002: 348). For these consenters, compliance can be secured by a state that honors its commitments to its subject nation, and institutes fair policies (e.g. does not allow the rich to be unduly exempt from military drafts). At any rate, it bears emphasizing how nationalism is fundamental for the effective recruitment of conscript or volunteer soldiers. Without it, states are forced to contemplate a host of unsavory choices, from funding mercenary armies (whose loyalties can switch and are costly) to just coercing the population into fighting (which risks problems of desertion and insubordination).

Once nationalism is reconceptualized as technology and its effects are specified, we can tackle its systematic role in conflict. This can be done by looking at general patterns in technological adoption. That is, technologies often suffer from *uneven adoption* – they are first adopted by early innovators, whose positive experience with the technology-in-question prompts

[4] The elucidation of this "altruism effect" further justifies the nationalism-as-technology approach. Imagine tomorrow a microchip is invented that, when implanted, makes a person more loyal to the state. Surely the media and civil-rights groups would express outrage at this new "technology". Obviously such technology is not known to exist in microchip form, but it exists in the form of nationalism. It thus seems limiting to only accept as technology an effect –loyalty, in this case- induced by electronic means, whereas the same effect induced by nationalism would be dismissed.

subsequent adoption by emulators, until the technology spreads to all but the laggards. We can apply this technological-adoption model to the spread of nationalism, and in turn derive several testable hypotheses.

In this dissertation, the generation of hypotheses follows a thematic approach. First we will discuss themes that apply to technology in general. One theme is that technology is never truly controlled by any one party. Another is how technology always surprises its users and designers. The discussion of each theme, in turn, leads to hypotheses that are consistent with it. In this dissertation, the hypotheses are at two different levels: 1) dyadic hypotheses concerning states at war; and 2) systemic ones concerning the effects of nationalism across an entire region of states. Below is a brief summary of these hypotheses. We begin with the dyadic ones:

Proposition 1.1: A nationalistic army will perform better in warfare that is strategically defensive as opposed to offensive

Proposition 1.2: All else aside,, a nationalistic army will defeat armies that are either non-nationalistic, or less nationalistic than it.

And the below are the systemic hypotheses, which predict a sequence of phases as nationalism is adopted throughout a region. The phases are as such:

An initial partial adoption phase, in which few if any states are willing to adopt the new and risky technology of nationalism. No wars are seen to occur, assuming states are evenly balanced in their power;

An extended partial adoption phase, in which a minority of innovators acquire the technology and use it successfully to conquer territory in short-lived irredentist wars; and

A full adoption phase, in which the rest of states become assured of nationalism's effectiveness and adopt the technology; any irredentist wars have already been waged, and with no more nationals to liberate, the states focus on building large mass armies that deter each other. A lasting peace is the result.

Thus, as to whether the spread of nationalism fosters war in a given region, the short answer would be, "First it does, then it doesn't." Returning to offense-defense theory, the reasoning here implies a *curvilinear* relationship between the distribution of nationalist technology, the offense-defense balance, and the concomitant propensity for conflict in a region. A very uneven distribution of nationalism favors the offense, and triggers conflict; but past the tipping point, an even distribution favors the defense and stymies conflict.[5]

This view is decidedly different from those of previous studies. Posen (1993), for instance, discusses how nationalism –among other factors- facilitated the first mass armies, and how the success of those armies prompted other states to promote their own nationalisms. But Posen's treatment of nationalism is limited because he does not consider how nationalism could contribute to peace. Instead, Posen is primarily concerned with the question, "How might nationalism cause war?", and offers that the "impulses of nationalism may… help cause international 'spirals' of insecurity" (123-124).[6] Any curvilinear relationship between nationalism

[5] The argument applies the dyadic version of the offense-defense balance. For example, the emergence of French nationalism made easier any offensive military action by France, but this did not immediately affect the offense-defense balance of dyads lacking France. Certainly, as every state in a region implements nationalism, the systemic offense-defense balance (or alternatively, the average country's offense-defense balance) inevitably shifts in favor of the defense.

[6] See page X for a more thorough discussion of differences between Posen's views on nationalism and the theory of nationalism-as-technology. Note that this discussion also revolves around nationalism in 19th century Europe.

and war is thus ignored.

Testing the theory of nationalism-as-technology

This dissertation adopts the view that there is no single best way to test a theory or hypothesis. Instead, it favors tests with rigor in direct proportion to the *maturity* of any proposition. That is, a proposition is more mature if it has greater specificity, and has passed more demanding tests, than others. A guiding motivation for this approach is to prevent the premature dismissal of "young" ideas that may have long-term merit. For these, it is better to examine their plausibility first, and only then turn to progressively harder tests. A longer discussion of this maturity approach is in chapter X.

At any rate, for the dyadic hypotheses, such approach translates into a mix of tests. Proposition 1.1, which pertains to the defensive bias of nationalism, is subject to two case studies meant to highlight the plausibility of the concept. Because the notion of a defensive bias is still at an immature stage, it is fair to begin with such case studies. Turning to proposition 1.2, which refers to the ability of nationalism to lead to victory in conflict, the testing turns to a more rigorous, large-n study. This is in part because one of the case studies in proposition 1.1 already highlights the advantage of nationalism in conflict, so proposition 1.2 gains some maturity by association. It is also because there are readymade statistical sources that facilitate such testing. (On the other hand, I ignore any datasets that would *easily* allow for the quantitative testing of nationalism's defensive bias.)

As for the systemic hypotheses, the testing consists of an extended plausibility probe of 19th century Europe. The rationale is similar as that for proposition 1.1 – that is, the idea that fully-

spread nationalism leads to peace is still fairly immature. Special care is taken to see both where the historical data contradicts the theorized expectations, and also where it points out interesting findings that go beyond those expectations. For instance, the historical research suggests an additional mechanism for nationalism to produce peace, which was unpredicted at the time of hypothesis generation.

The structure of the dissertation is as follows. Chapter 1 discusses both what technology is, and how nationalism can be construed as a social technology. Afterwards, chapter 2 discusses the theme of technology being free from absolute control from any one user, while chapters 3 and 4 test the two hypotheses derived from that theme. Subsequently, chapter 5 introduces the theme of technological surprise, and derives the sequence of systemic hypotheses. Chapter 6 conducts a historical plausibility probe of those hypotheses. Finally, a conclusion closes by examining a serious counter-argument to the findings, as well as potential future contributions from the theory.

Chapter 1 – what is technology, and what is nationalism-as-technology?

Theoretical Hurdles

Before discussing how nationalism may contribute to either peace or war as a social technology, it is first necessary to overcome elementary hurdles of a theoretical nature. That is, if nationalism just cannot be conceived as technology in the first place, any theory-building efforts linking those two concepts may be unjustified and perhaps even wasteful. So, it pays to review how technologists define their object-of-analysis in order to overcome two hurdles. The first is whether extant definitions of technology have any components which contradict the notion of nationalism and prevent a conceptual linkage. For instance, if technology was strictly concerned with physical artifacts, as is frequently thought, then nationalism would clearly fall outside the scope of technological diffusion theories. At the same time, even if no logical contradictions are found between technology and nationalism, this only creates a definitional linkage between the two in the "negative" sense – merely due to the absence of contradictions. Although we would be closer to seeing nationalism as a technology, it is still worthwhile to find if a tighter linkage is possible. If so, we would have attained a "positive" definitional linkage, in which not only the concepts-of-analysis are unopposed, but one actually *informs* how we subsequently think of the other. So besides the absence of contradictions, the second theoretical hurdle is to prove that the very conception of technology indeed sharpens what we think of nationalism. The next section tackles these two hurdles.

Is Nationalism not a Technology?

"Common sense" is a tricky word. It often refers to reasoning that truly is beyond doubt.

At other times, though, it merely clothes our frail conventions with the mantle of faux obviousness. When this happens, popular consensus dictates our thoughts, and any challenges to it will raise doubts about the questioner's grasp of the self-evident. In the case of nationalism, it is just not commonsensical to see it as "technology." Our collective imagination reserves this word for radios, phones, tanks, and satellites – in other words, concrete physical objects. Even when it comes to things we cannot see – like computer programs - we conceive them as "technology" because we understand that they are ultimately rooted in the physical world. In the case of computer programs, we know that they exist as sets of 1's and 0's, however tiny, inside memory chips of silicon.

We are unwittingly affected by this physical-bias when it comes to technology. International relations and political science are no different. In 1981, Gilpin wrote of changes in the international order, and his discussion of technology clung to the same bias. When discussing the diffusion of technology across states, he would give us examples of "military technologies such as Greek fire and nuclear energy or productive technologies such as the spinning jenny and electronic computers" (p. 177). To be sure, he distinguishes between technologies with direct and indirect security implications, still an important distinction when it comes to the subject. But it is clear that Gilpin thought of technology in purely material terms.

It has been almost 30 years since Gilpin's words saw print, yet political scientists have largely clung to this conception. A few examples suffice. Here is Taylor (2004, p. 603n): "Technology is defined as a physical product, or a process of handling physical materials, which is used as an aid in problem solving" His examples are just as conventional as Gilpin's – Taylor's study of patent specialization goes over 'technology classes' like consumer goods, machine tools, and optics (for instance, see p. 608). Closer to the topic of this study, and also relatively recent,

are works treating technology in the context of the offense-defense balance and international security. One such case is Lieber (2000), who defends a "core" definition of the offense-defense balance, "which focuses almost exclusively on how technology shapes the relative ease of attack and defense." His list of the "four biggest technological innovations in mobility and firepower in modern history" is unmistakably materialist: "railroads, the artillery and small arms revolution, tanks, and nuclear weapons" (2000, p. 81). Of course, neither Lieber nor Taylor is singled out for the exceptionality of their technological biases, but to show how ubiquitous those biases are.[7]

In all fairness, perhaps political scientists and IR scholars do not ponder the meaning of technology because they are addressing other questions. But it is nonetheless puzzling why so little effort is devoted to give a well-thought-out definition of "technology", especially in IR debates where the concept is so pivotal (e.g., the offense-defense balance). An ideal conception of technology should not be implicit and rely on conventional examples, particularly if these are firmly embedded in the materialist bias. Bluntly, it is not enough to mention "technology", go on to discuss ballistic missiles and semiconductors, and expect readers to draw away their own conclusions as to the concept itself. Unfortunately, that seems to be the norm in the offense theory debates. Or, if a materialist bias is deemed appropriate, we need explicit reasons as to why we cannot transcend this bias. Unfortunately, little work has been done on this front.

[7] Lieber's article is part of an *International Security* reader devoted to the offense-defense balance (Brown, Cote Jr., Lynn-Jones, & Miller, 2004). All the works therein share the same technology materialism. For instance, Van Evera's discussion of how military technology has historically affected the offense-defense balance, too, is firmly delimited by the materialist bias: his examples range from fortresses and medieval cavalry to railroads and machine-guns (1998b, pp. 238-240). And more explicit in his conception of technology is Shimshoni, who explains that technology, "if applied, [amounts to] piles of machinery and equipment in warehouses and on parking lots" (1990, p. 201). Further revealing is when Shimshoni, who questions whether technological innovations truly alter the offense-defense balance, defends himself from potential critics by stating that "I…do not argue that technology is not a central pillar of warfare, for surely we fight with '*things*'" (p. 205; my emphasis).

Defining technology

While the meaning of technology has been taken for granted in political science, we can get closer to a theoretically-fruitful definition by engaging those scholars who deal with the concept head-on: technologists. Like in other fields, they have not arrived at a consensus definition of their term, but we can still find a definition of technology that provides a useful starting point for theory-building. One such definition is provided by Everett Rogers, a central figure in the study of how technologies spread, or diffusion research, since the 1960s. He sees technology as "a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome." (2003, p. 13). This definition undergirds a remarkable variety of diffusion research,[8] and for good reasons.

The definition is not jarring to conventional sensibilities, since it does not exclude those physical artifacts which we tend to understand as technology. This is important (but often neglected by scholars), as extremely counter-intuitive definitions simply end up forgotten or ignored. At the same time, though, this definition manages to distance itself from the materialist bias, and is abstract enough to encompass a variety of cases. Thus, we can comprehend the spread of integrated circuits as technological adoptions, but also simpler practices like boiling water in Peruvian villages (see the latter case in Rogers, 2003, pp. 1-5).

Understandably, a definition with usage so broad as to capture vastly disparate things may raise suspicions of losing much of its intended significance. But that is not the case with

[8] Rogers' definition is used in studies of information technology (IT), where the definition's abstraction fits the very nature of the topic (some examples are Carayannis, 1998, p. 699, 1999, p. 142). But it also appears in studies of technological adoptions in healthcare (Carter, 2008, p. 309; Downing, Whitehead, Terre, & Calkins, 1999, p. 292; Timpka, 1989, p. 1) and education (Murray, 2008, p. 48; Visser, 2002, pp. 86-87; Witte, 2007, p. 205; Yates, 2004, p. 4).

Rogers' definition. It nonetheless excludes many other important kinds of entities. Things found in nature, insofar as they are in their original state, are not technology. Hence the vast majority of biological entities and raw materials known to man, as well as himself, fall outside the scope of technology. (Of course, if man tinkers with himself genetically so that a new entity is discernable, the latter would be technology, or the result of it.) Thus, even though Rogers' definition gives latitude, it is not hard to come up with a list of things that would not be considered human "technology" - and needless to say, such a list inevitably covers the vast majority of our known universe. The definition is far from being so vague or broad that anything can fall under it.

Others may also criticize the broadness of Rogers' definition as something undesirable in itself. I am partial to this argument, and agree that, as a matter of principle, narrow definitions have their analytical attractiveness. Perhaps Rogers' definition really is susceptible to the charge of offending our penchant for strict definitions. The point is debatable, but even so, this broadness goes hand-in-hand with a very clear epistemological benefit. Rogers' definition, with all its abstraction, lets us mentally connect events and things under a common analytical framework. For example, this abstract conception of technology has helped to identify the common impediments to technology diffusion that occur in very disparate innovations.

Consider two populations that never show up in the same sentence: American car drivers and Peruvian village housewives. Each is apprehensive about a technology that contradicts their belief systems. Contemporary American drivers, who have "grown used to (and feel comfortable with) binary, on-off traffic control", are reluctant to embrace the "modern roundabout," a circular type of intersection that does *not* rely on traffic lights, but is widely employed elsewhere in the West and has been shown to drastically reduce traffic accidents (Vanderbilt, 2009). Similarly, a

two-year campaign to persuade Peruvian housewives to boil water for consumption met the comparable reluctance of the vast majority of potential adopters. The reason was that the housewives believed in a "hot-cold superstition," whereby extremely hot water was only meant for consumption by the physically-ill, and the general population learned to dislike the taste of boiled water. The Peruvian housewives' "belief system [did] not involve the notion of bacteriological contamination" (Rogers, 2003, pp. 1-5), just like American drivers' belief system does not involve the idea that third-party signals (i.e. traffic lights) can be safely eliminated. And both groups seemed impervious to evidence that challenged their beliefs and promoted the technological innovation.

Without an abstract way of conceiving of technology, it is hard to think how these connections can be made between cases, populations, and innovations that, in all likelihood, would be confined to walled-off categories.[9] We can further specify two distinct advantages that this cross-linkage provides for the advancement of a research enterprise. First, from an abstract conception of technology, we can think of other abstract elements and deduce hypotheses to be tested across this greater variety of cases. In other words, an abstract conception of technology helps enlarge the pool of available cases for testing. Consider the advantage conferred to technologies that are slightly more mature than their competitors, irrespective of the latter's

[9] Of course, this definition of technology still lets us associate "hard" technologies that are nonetheless "unrelated" to most people. Consider these two hard technologies, which nonetheless are hardly discussed together: light-water nuclear reactors and electric refrigerators. The two actually share a commonality in their adoption: an initial burst in R&D over their competitors (heavy-water reactors and gas-operated refrigerators, respectively) during the first half of the 20th century. This headstart eventually let each technology reach widespread adoption in their respective markets, even though the competing technologies enjoyed considerable advantages of their own. For instance, gas refrigerators are silent and have no moving parts that can break down, while heavy-water reactors tend to be cheaper and safer to operate (Dixit & Nalebuff, 1991, pp. 237-238; Rogers, 2003, p. 147). In the case of light-water reactors, in the United States of the 1950s, two American companies, General Electric and Westinghouse, contributed to the technological headstart by developing that technology for the US Navy. (Compared to heavy-water reactors, light-water ones were more compact and easier to install onboard submarines.) The two companies were later chosen to implement light-water reactors for civilian reactors, although the size advantage of these reactors was no longer a determining factor for their new application (Dixit & Nalebuff, 1991, pp. 237-238). For electric refrigerators, the technological entrepreneurs were again corporations, which chose to invest in them because they were deemed more profitable than gas refrigerators (Rogers, 2003, p. 147).

inherent advantages. The role played by this factor can be examined across cases that we normally do not associate, like nuclear reactors and refrigerators.[10]

A second benefit of an abstract definition is that researchers in Field A might "discover" a variable that, after the necessary theoretical conversions, is found to also determine the adoption of innovations in a very different Field C. This is no mere speculation – time and again, it happened in diffusion research. Consider one of the earliest pieces of such research, Ryan and Gross's study of adoption of hybrid corn in Iowa. One of its main findings was that farmers with higher income tended to be the earlier adopters of hybrid corn (Rogers, 2003, pp. 31-35). Note that this is, by no means, self-evident on purely deductive grounds. For instance, one can hypothesize that, all else being equal, poorer actors have a greater incentive to risk innovation than their richer –and presumably more complacent- counterparts. Nevertheless, the pattern has also appeared in other studies of very different technologies. It was found in Colombian coffee farmers, with those enjoying more income-per-acre being more inclined to plant greater varieties of coffee and use fertilizers and pesticides. But the pattern is clearly not limited to agriculture – more than half a century after Ryan and Gross's study, the adoption of cell phones in Hong Kong shows a similar pattern: richer individuals tended to adopt them significantly earlier than their lower-income counterparts (Rogers, 2003, pp. 294-295). Surely we can debate whether this pattern must always hold, or more thoughtfully, what are the conditions that make it so frequent. This obviously fosters theoretical development, which is ideal for scientific progress. In addition, such theorizing is not vacuous, but is instead enriched by insights from a varied pool of case studies.

Thus, the above definition of technology is a good candidate to engage nationalism. But it is not a perfect one. A particularly glaring problem with Rogers' definition is that it is

[10] See the previous footnote for a discussion of headstart advantages in technological adoption.

nonetheless open to serious misinterpretation. To define technology as "a design for instrumental action that *reduces* [uncertainty in achieving an outcome]" (2003, p. 13; my emphasis) can, quite reasonably, be taken to mean that technologies are those things which actually work as intended. But there is an entire subset of technologies which were designed to work in certain ways, but were either ineffective or counter-productive. The list is long, but includes easy, modern-day examples. The Windows Vista operating system was once a new piece of software that, for most computer users, did not create much added-value. But just because Vista did not actually reduce uncertainty in our daily work (in fact, the argument can be made that Vista actually increased it), we do not stop calling it a "technology" – instead, we may call it a "useless technology," but never consider that term an oxymoron.

This difference between a technology's intended and actual effects is far from trivial. In fact, it is a (perhaps even *the*) main driver of diffusion research. Technologists study the adoption of innovations to grasp why many are not readily adopted by prospective users. Oftentimes the reason is not puzzling: users simply do not know of the innovation. But the bulk of research relates, in one way or another, to the ever-present ignorance that surrounds the usage of *any* technology – even well after its existence is known to a user or manufacturer. Consider the executives at Toshiba Corporation in 1985, when they were presented with the first working prototype of a laptop computer. Despite its obvious advantages, the Japanese executives "argued that the new product was just a fad that would fill only a small market niche" and only relented after trial sales in Europe were successful (Rogers, 2003, pp. 144-146). This case is interesting because the executives had easy access to the inherent qualities of laptop computers (the prototype was made by their own R&D department), yet still experienced an understandable uncertainty about the laptop's real-life interaction with several other factors – like a relative

disadvantage in technological maturity versus desktops, as well as their customers' own ignorance about the product. As will be discussed later, a similar uncertainty quite possibly afflicted the states that first contemplated the adoption of nationalism. So, before pursuing an extended theoretical linkage of technology with nationalism, it only makes sense to improve upon the former's definition to avoid future misunderstandings.

Fortunately, a big problem does not always necessitate a big solution. That is the case here. For this study, Rogers' definition of technology can be revised as so:

> technology is a design for instrumental action that is *intended by at least one stakeholder (i.e. a user or developer)* to reduce the uncertainty involved in achieving a desired outcome.

This re-definition substantively enlarges the universe of entities captured by "technology", so that it now encompasses five kinds of technology, all from the point-of-view of potential users:[11]

effective technology, which works as intended;

ineffective technology, which has a null effect on improving the likelihood of the desired outcome (but may involve costs in the time and effort of its implementation);

counter-productive technology, which backfires and significantly decreases the likelihood of the desired outcome – and which at an extreme, may even harm the interests of the user;

uncertain technology, which due to imperfect information, cannot be categorized as any of the previous three categories.

unknown technology, which the stakeholder simply ignores.

The thrust of the above discussion has not been lost on technologists, either. Early on, Rogers himself recognized the problem of pro-innovation bias in his field, as "researchers…often

[11] Like many classifications, this one too is bound by convention and grey zones between classes. For example, some users may deem certain technologies to be borderline uncertain/harmful, and only firmly classify a technology as harmful when its likelihood of being so exceeds a large threshold (say, a 25% chance of being harmful).

assume that adoption of a given innovation will produce only beneficial results for its adopters" (1971, p. 319). Further, he is keenly aware that much-needed research never happens due to it:

> [pro-innovation] bias leads diffusion researchers to ignore the study of ignorance about innovations, to underemphasize the rejection or discontinuance of innovations, to overlook re-invention…and to fail to study antidiffusion programs designed to prevent the spread of "bad" innovations (crack cocaine or cigarettes, for example) (2003, p. 107).

These recognitions parallel the above discussion about grasping the difference between a technology's intended and actual effects – a difference that pro-innovationists are just prone to miss. And Rogers goes beyond paying lip service to this point; his discussions are peppered with examples of technology that is admittedly inappropriate, or just plain bad.[12] It is intellectually comforting to see a leading technologist recognize and correct for this bias. But this makes it all the more surprising that Rogers' own definition of technology is left open to the charge of pro-innovationism (and doubly so that much subsequent researchers embraced his definition reflexively). That said, we should not make much of this, except that to see Rogers' definition as suggestive of the vestigial tinge of pro-innovationism in diffusion research, even among the cautious. Clearly, this also suggests analytical care to avoid a comparable bias when developing a theory of nationalism as another technology.

Finally, we should also point out another obvious shortcoming in Rogers' definition – an emphasis on uncertainty at the expense of effectiveness. Sure, many technologies are meant to

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[12] A particularly "bad" innovation is the N-Trak soil testing kit, whose failings Rogers discusses. It was supposed to let farmers gauge and optimize the level of chemical fertilizer in their fields, all on their own. But the test demanded too much time and effort, did not allow testing of a popular fertilizer, and could only be conducted after the crop season was over. Thus, most farmers quickly opted out of this "bad" innovation and settled on mailing soil samples to testing labs (2003, pp. 227-229). On the other hand, an example of an inappropriate technology is the introduction of Western chickens to Nigeria by a US poultry expert during the late 1960s. As opposed to their African counterparts, the imported chickens had more meat, and were accompanied by Western methods of poultry farming. However, the new arrivals had one crucial handicap: they were not adapted to the new epidemiological environment. When a poultry epidemic broke out in eastern Nigeria, all the imported birds died. The native poultry was immune to the disease (p. 376).

perform certain tasks with less uncertainty than others. An air conditioner, for instance, is a more reliable cooler of room temperature than an open window. After all, the latter is subject to the vissicitudes of the weather. But even if the open window delivered a flow of air at a steady temperature, the air conditioner is able to deliver it more effectively (at least in the view of its users). The air conditioner can better deliver a flow of air in the desired direction, with its adjustable vents, as well as better maintain the desired temperature, with its thermostat. Open windows are evidently incapable of this. And so, it helps to perform one more revision to Rogers' definition:

> technology is a design for instrumental action that is intended by at least one stakeholder (i.e. a user or developer) to reduce the uncertainty *and/or effectiveness* involved in achieving a desired outcome.

Notice that this revision does not require much extended debate. To be sure, some forms of effectiveness can be construed as forms of uncertainty-reduction, and vice versa. For example, returning to the previous example, we can say that open windows deliver air to a preferred spot at a steady temperature with a high degree of uncertainty. But it appears more intuitive to discuss the relative performance of air conditioners and windows in terms of effectiveness. Certainly this is a matter of individual preference, but it seems fine to include both uncertainty and effectiveness in the definition, and let usage dictate which of the two criteria is more fitting for a discussion.

In sum, any versatile definition of technology is to avoid three tendencies: to mistake technology as either purely material, or as exclusively beneficial, or as only concerned with reducing uncertainty. This is especially important in developing a theory of nationalism as technology, since those biases could short-circuit even the most basic theorizing. For instance, if

only hard objects comprise technology, then nationalism can never be a technology – it resides in people's heads.[13] And if nationalism can only be seen as a beneficial innovation, that contradicts the bulk of political science literature that emphasizes its role in war. Those stumbling blocks are avoided here, by arriving at a workable definition that revises Rogers' own. Thus, no overt contradictions seem to exist between the revised definition of technology, and the notion of nationalism as a form of collective identity. This opens the door to seeing just how nationalism can actually *function* as a social technology, which is the goal of the next section.

What is nationalism-as-technology?

With a general definition of technology in our pocket, we can now fashion a *technological definition* of nationalism. Given that technology is something which improves both the effectiveness and variance of an intended outcome, we can state the following:

> *Nationalism is a technology which produces an intense attachment to a self-identified nation in a member, and reduces the uncertainty of that member's commitment to the fundamental goals or interests of his nation – particularly its security.*

Thus, the outcome of nationalism-as-technology is to produce citizen commitment, and with less uncertainty than other methods – like, say, sheer coercion or bribes. Very crudely put, then, nationalism is akin to a microchip that, when implanted in people, would make them care more about the collective to which they belong. Still, this leaves several unanswered questions: 1) what is meant by "commitment" and how is this manifested?; 2) which national security interests are embraced by the nationalist citizen?; and 3) what is the precise "technology" that is being

[13] Here I am not including the possibility that ideas are "material" in the sense that they might be visibly embodied in neural connections. So, nationalism and other concepts might actually have a material basis in the brain, but they are clearly not "hard" technologies whose physical presence can be easily seen – like airplanes, tanks, or even microchips.

alluded to, and what operation or "fix" does it perform to achieve its intended outcome? Each of these questions must be answered, lest we leave the incipient theory on shaky ground.

The first question seems the simplest to answer. Commitment to a goal is not akin to sympathy or even vocal agreement with said goal. Certainly commitment may entail sympathy, but sympathy need not entail commitment. For instance, someone may agree with the Red Cross's mission – but that clearly does not mean that this individual is committed to it, or that he will donate frequently or participate in charity events. Instead, a commitment is a pledge or promise to act in an *unordinary* way. In other words, the committed individual sets himself to contribute to a certain goal through behavior that he would not have elicited otherwise.[14] The nationalist obliges himself to keep his nation secure, even though he could simply pursue his self-interest and disavow any ties with the collective.[15] Later we will discuss both the extent and character of the nationalist's contribution to security. Yet here it suffices to say that, by this definition, any effective nationalism should give solid signs of such citizen commitment.

The second question requires more elaboration – which national interests are the objects of the citizen's commitment? Naturally, this question is vastly open-ended, and even the specification of security does little to narrow things to specific *policies*. It also helps little to appeal to the existence of "objective" national interests. Simply put, all specifications of national

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[14] Dahl's (1957) concept of power is applicable here, since nationalism's power is shown in making people do things they otherwise would not do.

[15] Note the concern felt by the nationalist is intrinsic towards the nation, and not instrumental. In other words, in his love, the nationalist does not necessarily care what the nation provides him or her. What matters is the furtherance of the national interests in themselves, even though a nationalist could also balance selfish concerns alongside his nationalist ones. This view contrasts instrumental ones like Hardin's (1997), who argues that people mostly gravitate towards any groups because they provide collective goods for them to enjoy. To him, it does not really matter which particular group is the object of such "loyalty", as long as it indeed provides such goods. But Hardin's view accounts poorly for cases in which nationalists assume significant self-risk in support of their nation. Presumably, such self-risk would obviate any purported benefits from the nation's provision of collective goods. To be sure, Hardin accepts the possibility that people may have a primordial tendency to identify with groups, but his emphasis is not to develop much further this view of such "extra-rational" motivations. Instead, he narrowly identifies rationality with self-interest, and is concerned with explaining how the latter can explain group allegiances (p. 46).

interests are contextual, and moderated by forces at different levels of analysis, from the international balance of power to the inner balance of policymakers' minds.[16] But this is not to say all statements of the national interest are equally valid – for instance, those that rely on poor knowledge of history, or that downright contradict it, are easy targets for dismissal.

At first glance, it seems that theory-building is hindered by the recognition of complexity in the national interest. After all, if we want to hypothesize that nationalist citizens will support the national interest, which particular conception of it should we assume? This is crucial to know *beforehand*. Imagine there are at least two possible national interests, A and B. If we theorize A as the national interest, but citizens seem to act in support of B, what should we do? Try to link A and B through ad-hoc theorizing? And if A and B are mutually-exclusive goals, and citizens seem to support B, do we go back to the drawing board and re-hypothesize based on B as the national interest? Absent a thorough theoretical evaluation, such drastic revision would run too close to simply chasing the latest empirical findings. The trouble would be one of logical indifference. If we can arbitrarily switch between A and B as equally plausible goals, we are showing an inability to logically necessitate a particular national interest – and thus an analytical inability to predict outcomes, a basic function of all science. Needless to say, this trouble is compounded with more than one specification of the national interest, and with the increasing sophistication of those interests. The theorist can easily become overwhelmed.

This quandary can be avoided once we accept its implications. Even if the national interest

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[16] See Clinton (1994, pp. 25-35) for an overview of general conceptions of the national interest. My multi-causal conception of the national interest does not necessarily reject any longstanding notions of the national interest, but it does subsume them. Consider the pluralist view of the national interest, which sees it as "the sum of all the particular subnational interests found within the society in question" (p. 25). Certainly the interests of subnational groups do matter, but that does not mean they will overwhelm other important forces – such as macro-economic needs, or geographical imperatives. The national interest emerges from the sum and interplay of various forces at different levels. That said, this admission does not preclude the search for some solid footing, to identify at least certain "bedrock" interests that are relatively stable and amenable to analysis. I offer one of these in the main text.

can be articulated through very sophisticated notions and policies, these have to be subject to greater research scrutiny than more basic goals. Simply, any sophisticated goal must be vetted to make sure it is coherently held by both a nation's leaders and a sizable portion of that nation's membership. Otherwise, we risk embarking on the trial-and-error theorizing that was mentioned in the previous paragraph. This vetting process is time-consuming to conduct for one country, let alone a group of them. Thus, at least during the birth of a research program, a more efficient course of action is to select basic goals that are presumably shared by all nations.

Note that basic goals need not be vague ones. For example, a nation's security is widely considered to be one such basic goal or interest. But it can be expressed in very precise ways that are unlikely to be contradicted by policymakers or the average nationalist. Consider the possibly universal concern of a nation about its territory – specifically, regarding the risk of any foreign intrusions. The intensity of this concern will hinge on the following criteria:

1. Whether such foreign intrusions involve military personnel, as opposed to civilians or diplomats. Foreign troops are presumed to either carry weapons or be able to secure them once inside the nation (e.g., by trafficking them afterwards, or stealing them from friendly troops). Since weapons are a typical means of coercion, they can be used to threaten the freedom of a nation's citizens, and in the long-run, jeopardize the national sovereignty.
2. Whether such foreign presence is permitted by the nation's legitimate leaders and/or a majority of nationals. Naturally, foreign soldiers that cross the nation's territory under a right-of-passage agreement, or to carry out joint exercises, are bound to cause much less alarm than those which are part of an invading force.
3. Whether such intrusions involve many foreigners or few. For instance, nationals may be more concerned about millions of foreign civilians entering the national territory, as

opposed to a handful of foreign troops. This is possible even if the foreign troops are inside the national borders without permission – for instance, if they intruded intentionally as scouts. Numbers do matter, and past a certain point, nationals will worry about them.

4. Whether such intrusions are deep inside national territory. This applies even if the foreign presence is welcomed by the nation-in-question. Foreigners that meander around the borders are less worrisome than those which reach the heartland of the nation.

5. Whether such intrusions are close to cities, or very populated areas. The nation is a social entity before being a legal or territorial one. Simply put, it is easier for a nation to regain legal status, or even lost lands, than to recover from losing large numbers of its members. Thus, nationals will consistently place a security premium on areas with greater population density – such as cities or conglomerates of towns.

To sum up, if a state is endowed with nationalist citizens, it should be able to easily rally them to combat foreign military invasions that threaten to go deep into national territory and approach cities or other densely-populated areas. This may seem like the natural reaction of *any* threatened peoples, whether they are nationalists or not. But the invaded typically have choices. They can cooperate with the invaders. They can join others in resisting the invasion, but defect as soon as the enemy is removed from their immediate vicinity. Or, they can do both things in sequence – join the resistance until a stalemate is reached, and switch to the invaders' side if given the adequate compensation. Needless to say, a citizen's commitment to nationalism precludes such flexibility.

So, it is possible to define nationalism with reference to defensive security goals, and build a theory from there. Can the same thing be said of *offensive* security goals, such as the conquest of

neighboring lands? Here the case is murky, at best. Nationalist citizens that ponder any proposed offensives will encounter a set of considerable doubts – Is there any unproblematic criteria by which such offensive is necessary? Do we have enough information to validate such criteria as being met? Are the risks too high, and do they encompass danger to the nation if we lose? The reader will recognize a parallel between these doubts and those faced by scholars who debate whether a particular non-defensive policy is in the national security interest. That is, for laymen and scholars alike, beyond a bedrock interest such as territorial integrity, it is difficult to confirm the validity of many other national interests. With such doubt, the scholar cannot write in good faith. But when the citizen doubts, the consequences are more severe. He cannot commit to his nation.

Later on we will discuss the implications of this "commitment differential" which arises when nationalist citizens support defensive over offensive goals. But for the purposes of defining nationalism, this defensive-orientation is a choice that owes more to a desire for *definitional certainty* than to any observed behavior by nationalists. That is, a definition ought to incorporate terms that are clearly defined themselves, and which can be justified logically or empirically. Thus, citizens endowed with nationalism will commit to their nation's security – and we can *confidently* include territorial integrity as a goal under that umbrella. Its obviousness is an asset for theory-building. But we cannot include very extensive goals (including offensive ones such as conquest) because it cannot be fairly argued that there is certainty about their validity in most cases. If we cannot consistently link the logic of such offensives to national security, it is sensible to avoid doing so. After all, such a linkage would only muddle our incipient understanding of nationalism-as-technology, and possibly lead to ambiguous or erroneous hypotheses. Thus, at best, what we can conclude is this: nationalism leads individuals to reliably contribute to the

basic defense of their nation, and less reliably to more extensive or elaborate goals such as conquest.

More problematic, however, is discussing *how* nationalism accomplishes the task under this definition. How exactly does it lead individuals to produce such commitment to national defense? This is the third open question regarding the given definition of nationalism, which explicitly treats it as a technology. Such label must be earned. That is, there needs to be some technological mechanism at play, something which taps certain elements to address a natural shortcoming or limitation. Without such technological explanation, the theory risks the charge of wallowing in empty terminology. The next section tackles this question.

Defining the technology – what is so "technological" about nationalism?

Technology deals with overcoming limitation. It performs a certain action with more effectiveness, and less uncertainty, than the preceding methods or tools. And it often does this by addressing a gap or problem that beset its predecessors. Technologists may balk at this "progressive" notion of technology, and they have a point – many technologies clearly are a step backwards from their predecessors, at least in some respects like their effect on the surrounding environment. But the equally valid point is that such progressive view is common in the minds of both technological designers and users. These create and adopt a technology precisely because they have a problem in mind, and want to address it. So it helps to understand the goal and problem-solved of any technology that interests us, even if one is to ultimately challenge its use.

In the case of nationalism, as defined above, the goal is to produce reliable citizen commitment for national goals. It is obvious that the nationalist will identify with his nation of

choice, but less obvious how such identification can emerge. This is the problem faced by the technology of nationalism. We can tackle such problem by first discussing the clearest markers by which nations are formed. This is a good starting point because those markers give us important clues into how people nurture collective allegiances. More specifically, for each marker, the emphasis here is threefold:

1. To identify the mechanism(s) by which the marker is associated with nationalism. Each marker may have more than one possible mechanism. The focus is on causal mechanisms by which the marker could lead to nationalism.

2. For each causal mechanism, to determine if the marker is necessary, sufficient, or at least contributive to the basic emergence of national identity.

3. Also, for each mechanism, to determine if the marker can account not only for the appearance of national identity, but for its *intensity*. Note this is analytically independent from the simple appearance of such identity. For instance, a person may identify himself as a Kurd, and so exhibit a national identity. But he may not be willing to join a Kurdish army, or risk his life to defend others Kurds. He may not be even willing to pay taxes to legitimate Kurdish authorities. If so, whatever prompted him to call himself a Kurd (a common language or set of customs, perhaps) cannot be said to foster the intense loyalties associated with nationalism.

After all the major markers are discussed, we take stock of their deficiencies as a group. Simply, it will be seen that the markers exhibit major deficiencies in fostering nationalism. But as a group, there is a telling pattern to such deficiencies, a pattern that helps us articulate the technological solution performed by nationalism. Such solution hinges on the *interaction* among markers, but a more detailed explanation can only come after each marker is individually

explained. We begin with perhaps the most obvious marker of nationhood.

Marker #1 - a common language

Linguistic markers are standard fare in discussions of how nationalism emerges and is maintained. Even as early as the 18th century, J. G. Herder, the intellectual promoter of a then-nascent German nationalism, would openly wonder if "a nation [has] anything more precious than the language of its fathers?" (quoted in Edwards, 2001, p. 171). The association carried over to the 20th century until today. In 1945, Hans Kohn would include language as one of "several potentially unifying elements" behind nationalities (1945, p. 13). Later, Gellner (1983, p. 57) would argue that intellectual elites actually fashion nationalism through the promotion of a unifying language. Another example is Anderson (1991), who emphasizes the role of mass literature (e.g., newspapers, popular magazines) in fostering nationalistic awareness – and evidently, a common language is a pre-requisite for the successful consumption of such mass literature. These are, of course, only prominent examples in a rich literature. But for our purposes, we need only discuss any literature insofar as it addresses three concerns: defining what language is, explaining the mechanisms by which language may foster national identity, and tackling whether language is necessary or sufficient for nationalism and its intensity.

Defining language may seem like a straightforward task, yet it is easy to define it in such a broad way that it overlaps with other concepts like culture. Naturally, such overlap is a liability if we want to discuss those other concepts separately – which is the case in our discussion. Consider two such overlapping definitions. The first belongs to Antonio Gramsci:

…Every language is an integral conception of the world, and not just an outer garment

> that functions indifferently as a form for any content...[For instance,] two conceptions of the world were in conflict [during the Renaissance period]: a bourgeois-popular one expressing itself in the vernacular and an aristocratic-feudal one expressing itself in Latin and harking back to Roman antiquity…(1996, p. 366)

It is no exaggeration to say this overlap is enormous – language seems to swallow a people's entire worldview. But equally problematic is a definition that goes in the opposite direction, so that language is instead the one swallowed by a neighbor concept. Gellner offers us a good example in his cultural definition of nationalism:

> …two men are of the same nation if and only if they share the same culture, where culture in turn means *a system of ideas and signs* and associations and ways of behaving and communicating (1983, p. 7; my emphasis)

Of course, if nothing else, language is just such a "system of ideas and signs", and certainly one way of communicating. But if we were to follow Gellner, then language merely turns into a province of culture. To avoid this problem of overlap, we need a narrower definition – one that exclusively highlights the basic functions of language, without attributing it either grand properties or memberships. The following candidate fits this bill:

> The essence of human language is a communication system composed of arbitrary symbols which possess an agreed-upon significance within a community. Further, these symbols are independent of immediate context, and are connected in rule-governed ways (J. Edwards, quoted in Edwards, 2001, p. 169).

This definition does its job without smuggling notions of identity, culture, history or other such stuff. In fact, this barebones definition could just as easily apply to mathematics, which exemplifies a form of communication about as "neutral" and context-free as we can find among

humans.

To this definition of language, an eager critic might remind us that language *does* intertwine with culture and identity – no matter our definitional predilections. So, should our definition of language not incorporate those relationships? Not necessarily. This is where scientific inquiry parts ways from rich description. To theorize how one thing is affected by another, we need them to be analytically independent. Otherwise, if A is defined to inherently encompass B, we need not explain how B was given rise by A. The definition simply makes the task redundant. Instead, we would prefer to separate the A's and B's of the world with an analytical scalpel. Certainly our incisions ought to be careful, but sometimes our surgery will seem like butchery – especially with things that seem naturally linked, as language and the other factors mentioned. I assume that risk here, with the expectation that the chosen definition will pave the way for clear causal inquiry.

So, how can language, in its barebones version, be associated with nationalism? At least four mechanisms may be at play, two of which are relatively basic, and two involve more sophistication. The first is rooted in language's primary function to let humans communicate. Any collective unit –whether it be a nation, tribe, corporation or gang – usually involves its members communicating with each other. If this communication is frequent, as is almost always the case in such groups, then a common language is a very convenient tool to have. The examples are legion. Co-workers speak the same language to conduct business in the office, which often extends into a particular lingo for certain industries and corporations. Gang members act likewise, although they may develop a special language to confuse outsiders that may pose a threat. And co-nationals evidently do the same, in activities that span an even wider range – from dealmaking to politics and warfare.

An easy criticism to this mono-linguistic preference is that some nations could comprise members to do *not* communicate with each other on a frequent basis, perhaps because they are geographically distant. The Jewish people are an example, at least before the founding of Israel. They were dispersed across the world, and primarily spoke the local languages. Hebrew was maintained, but its practice was usually relegated to religious life. This criticism would hinge on what actually constitutes a nation – do we include archipelagos of people who identify themselves as such? Perhaps we could, but even then, this kind of exception is often short-lived in the case of "mature" nations. In these, members strongly prefer to live with each other because of their greater mutual trust, and have garnered enough political power to attain some form of self-determination. Almost always, such mature nations will feature a common language. Returning to the case of the Jews, this explains why the modern Hebrew language was promoted by the state of Israel after its formation. Evidently, a mature Jewish nation would need a common language to facilitate interaction – no matter the original linguistic diversity of its first immigrants.

A second mechanism linking language and national identity is based on another basic ability of language – to act as a vessel for a nation's traditions and shared history. This mechanism has been recognized long ago. As early as 1915, Albion Small, the first professor of sociology in the United States, would remark on it. His summary is just as applicable today:

> More indispensable than all other media for passing along tradition is language. Peoples perpetuate tradition by custom, by ceremony, by ritual, by visible symbols, by law, by personal example, etc. To a certain extent we may detach each of these in thought from language, but it is doubtful if savagery could have advanced into a much-mitigated barbarism if language had not furnished the most flexible tool for shaping these and other instruments…
> Language is the most flexible means of capitalizing human experience and of making it…a circulating medium [for the following reasons:] (a) language stores up previous experience in forms available for present application; (b) language makes past discoveries instantly available; (c) language is a master-key to choice between processes

> that will and will not serve present purposes; [and] (d) language is a deposit of valuations which are like lighthouses for the sailor. They make navigation a matter of comparative safety and certainty, whereas without these guides it would be extra-hazardous…
> For example, (a) the homely proverbs of each race crystallize the experience of that race as to relations of cause and effect throughout the whole range which that experience has covered. Proverbial wisdom is therefore a social heritage, as literally as a family estate is a heritage for the children of succeeding generations. It probably cost the race thousands of years to get the experience capitalized in the precept, "Go to the ant, thou sluggard; consider her ways and be wise." Such social achievement as this precept perpetuates is not a monopoly of one language of course…the same result has accumulated in all civilized languages…Language is, therefore, to a certain extent a means of making peculiar experience universal (1915, p. 629).[17]

Note that this mechanism is related to the first one that was discussed, but goes beyond it. In the first mechanism, a nation needs a common language so its members interact with each other for any number of reasons. For instance, co-nationals may prefer a common language to conduct business, just like merchants at a market. This implies that the first mechanism makes no assumption as to why nations *in particular* require a common language. Simply, a group of people can settle on using a common language for goals that have nothing to do with nationhood itself. Already we discussed how a common language is shared by corporate co-workers, or organized criminals. So under this first mechanism, whenever we see a common language, it is not the case that we will necessarily see a nation.

On the other hand, the second mechanism tells us why nations have a special need for a common language. A nation is supposed to be dependent on the power of traditions, customs, and history to sustain it – and so language here acts as a conduit for national preservation across time

[17] Small refers to "race" in much the same way that we may refer to an "ethnic group", and also to groups that simply see each other as different regardless of physical markers: "when the word 'race,' or any of its derivatives, appears in this section, the facts referred to may not…be very largely racial at all. In moral effect, it is enough that they stand out in the reactions of the people as race peculiarities. Thus there would doubtless be friction of a very intense sort between a group of Kentucky mountain whites, and a group of the purest English stock that could be found in Connecticut or Vermont, if the two groups were suddenly thrown together in a single area [,even though the] racial ancestry would be very nearly the same" (1915, p. 644).

and space.[18] Also note the necessity implied by this second mechanism. A common language is *needed* to sustain traditions. This stands in marked contrast to the first mechanism of basic communication, in which a common language is not actually needed, but simply preferred (albeit strongly) to facilitate interaction.

A third mechanism for language to foster identity goes beyond seeing language as a mere vessel for nationalism to pass from one group member to another. Instead of collective meanings (like a shared national identity) existing outside of language, the process of using language *itself* is what allows these meanings to emerge and change over time. What is important to note is the intersubjective aspect of this process. That is, no one subject singly controls or decides the meaning of things – even to himself. Meanings arise collectively. Taylor gives a fuller idea of this:

> We first learn our language of moral and spiritual discernment by being brought into an ongoing conversation by those who bring us up. The meanings that the key words first had for me are the meanings they have for *us*, that is for me and my conversation partners together…So I can only learn what anger, love, anxiety, the aspiration to wholeness, etc., are through my and others' experiences of these being objects for *us*, in some common space…
> This is the sense in which one cannot be a self on one's own. I am a self only in relation to certain interlocutors: in one way in relation to those conversation partners who were essential to my achieving self-definition, in another in relation to those who are now crucial to my continuing grasp of…self-understanding…[So,] the full definition of someone's identity thus usually involves not only his stand on moral and spiritual matters but also some reference to a defining community (1992, pp. 35-36; his emphasis).

Clearly, someone's self-accepted nation would be one such "defining community." Like the second mechanism, here language is also necessary for national identity, and more obviously so. Without language, it is not that national identity cannot spread – it is that, quite simply, there is no such identity in the first place.

[18] Of course, we are presupposing that a nation needs culture (traditions, customs, and a shared history) for its self-preservation. This may seem commonsensical, but there are specific mechanisms by which culture may contribute to national identity, and they deserve discussion. Later on, we will separately cover the relationship between nationalism and culture.

This mechanism confers great power to language, but it also incurs an oversight. It ignores the role of exogenous conditions. We can imagine that, indeed, identities will take shape from shared discourse – but the shape and extent of such identities may be demarcated by forces that take place both before and outside the conversation. And in some cases, this demarcation may be long-lasting and immune to discourse itself.

For instance, since its inception, the notion of the American nation has been increasingly civic. Whereas it may have begun by only identifying white European-Americans as nationals, it is now more widely shared that law-abiding American citizens are members of the nation irrespective of race, ethnic, or religious origin. However, certain historical features in international politics have circumscribed the direction of inclusion in the American nation. The Cold War, especially during its early years, fomented a view that the United States was caught in an epic and wide-ranging struggle against an opposing Soviet giant. And if the Soviets were communists, then the American nation was reluctant to embrace the more obvious markers of their opponents' worldview. Hence, American nationalism has historically held far-left elements at arm's length, and many Americans have traditionally felt uneasy about accepting fellow citizens who may profess communist beliefs. Particularly telling is the naming of the House Committee on *Un-American* Activities, which spent the greater part of its existence (1938-1975) investigating alleged subversion by American communists. Clearly for the committee's supporters (which were not few in number during the early years of the Cold War), being an American and a communist were all but mutually-exclusive identities. Without the rise of Soviet Russia, it is hard to imagine the persistence of such an entrenched exclusion.[19]

[19] Consider, too, how far-right views are typically not seen as excluding an American citizen from being considered a member of the nation. Here a thought-experiment is provoking: if Nazi Germany had emerged as a superpower after World War II, and not the Soviet Union, perhaps the HCUA would have focused on fascist sympathizers instead of communist ones. And today, it would be the far-right that is on the receiving end of charges of unpatriotic behavior.

Another flaw in this mechanism, and perhaps a more serious one, is that it fails to logically necessitate a shared collective identity. If language somehow produces a national identity, it should be possible to elaborate an argument in which national identity is but the only (or at least one of only a few) possible outcomes from the intersubjective practice of language. But actually, we could deduce very different outcomes from such discourse. For instance, a tribe may gather to talk everyday, and instead of fostering a common identity, its discourse may take a highly individualistic path. Tribe members may decide that it is best to only agree on two things – their mutual disagreement about a great many things, and the need to value freedom of opinion over collective allegiances. So, a mechanism that promises a definite effect for language in engendering collectivist norms should not only explain that some norms will arise from discourse, but also that these norms will be *collectivist* in the first place. Unfortunately, this mechanism does not. Just like the constant communication of married couples is no guarantee that they will arrive at shared understandings of the world, so too the daily discourse of peoples is no guarantee that they will feel close enough to form a nation. Also, if intersubjective discourse struggles to account for the rise of national collectivities themselves, the intensity of nationalistic feeling is also beyond its reach.

The flaws of this third mechanism, however, should not detract from its general intuition. It is not far-fetched that language is more than just a conduit for identity, and that it plays a central role in fostering it. But if so, we require a mechanism that does not hinge on the ambivalences of intersubjectivity. Let us now turn to a fourth mechanism, which suggests itself as a neater alternative. It is rooted in homophilic psychology.

Simply, homophily is "the principle that a contact between similar people occurs at a higher rate than among dissimilar people" (McPherson, Smith-Lovin, & Cook, 2001, p. 416).

There is extensive evidence of this. People tend to associate with, and often feel closer to, others with whom they share a number of general characteristics – from race and ethnicity, to age, religion, and education (for a review of the literature, see pp. 419-429). Thus, it is plausible that a shared language may also induce homophily. Taken at an aggregate scale, this may explain why the use of a common language contributes to national identity despite the existence of significant differences among co-nationals. For instance, rich and poor Frenchmen will identify each other as compatriots by virtue of their common language (as well as other markers, to be sure), even though they may feel very differently about the same concepts – like "economic freedom" or "social justice."

This mechanism offers a reason for language to necessarily, and sufficiently, lead to some of the closeness we find among co-nationals. But it does not explain the full extent of such closeness. Co-linguists may instinctively feel closer to each other than to foreign-language speakers (all else being equal). But this mechanism still does not explain the *intensity* that we associate with nationalism. Co-linguists may like each other and spend time together – but is their bond of closeness enough to prompt them to sacrifice their lives for each other, or rise to the defense of an imagined group of all other such co-linguists? After all, this is what nationalists are understood to do. They routinely have enlisted in their nations' armed forces, and assume the risk of death and injury in defense of their homelands. It is not clear that linguistic homophily, if it exists, can account for such extreme levels of co-identification and allegiance.

In sum, the marker of common language seems to be a requirement for mature nations. This appears to be the case in all the mechanisms discussed, with the exception of the first one (which deems language to simply be a great convenience for facilitating intra-group communication). But in none of the above mechanisms that link language and nationalism, we find sufficient

cause for nations as we understand them. In particular, the use of language never manages to translate into the intense attachment of the nationalist. Still, we have garnered some clues. The second and third mechanisms included culture, but relegated it to language. Yet culture encompasses a great deal more of the things that we associate with nations – like a shared history and ways of doing things. So despite the ultimate failings of the linguistic mechanisms here, it seems sensible to examine how culture, through mechanisms *independent* of language, may account for nationalism. We turn to this marker next.

Marker #2 - Culture

Like with language, a discussion of culture can easily become an exercise in conceptual overflow. To be sure, in the case of nations, the expression of culture involves "a combination of language, religion, laws, customs, institutions, dress, music, crafts, architecture, [and] even food" (Brown, 1993, p. 5). Few would argue with that. But as already mentioned, analytical progress requires that we dissect overarching concepts in understandable ways. A new incision can be done with language and culture. If language is a set of symbols that convey mutually-agreed meanings (see p.31), then culture amounts to the shared meanings "behind" those basic linguistic meanings. For instance, consider a famous document in the English language - the constitution of the United States. Strictly speaking, it is simply a document establishing general rules and procedures for the functioning of that country's government. Constitutions are nothing exceptional – most countries have them in some form or another. And any English-language dictionary can give us a perfectly value-neutral definition of what a constitution is. But ask a patriotic American about his constitution, and he will tell you more than the dictionary definition.

Even if your respondent is mostly ignorant of the ins-and-outs of the document, he will likely profess the following:

- That the Constitution was written by the Founding Fathers, extraordinarily noble and wise figures that marked a clear separation from the ways of a corrupt Europe, and that it has guided the country well ever since. This *shared history* affects the lives of all Americans.
- That it is all but perfect in establishing a democratic government "for the people and by the people," and which respects the life, liberty, and property of its citizens. These are *shared values* in American life.
- That it helps guide the day-to-day practices of American civil society and government. Society can use the constitution as a benchmark by which to judge the behavior of government, and government can abide by it to prevent dissent. The result is that citizens act in accordance with a level of political and economic freedom unparalleled anywhere in the world. These are *shared practices* accepted by most, if not all, Americans.

This is not the place to debate the truth value of those statements. What is interesting for our purposes is that these hidden meanings behind the words "US Constitution" allude to cultural beliefs that fall into three broad categories: a shared history, values, and practices. These categories are the main elements of culture, and we can discuss the mechanisms by which they can foster nationalism.

A first, and obvious explanation, is that culture is simply acting as a proxy for another cause. Perhaps individuals with a common culture also share life experiences, and it is these that fashion a sense of unity. Or people with common origins are also geographically proximate to each other, and it is this proximity that is behind national unity. Yet this "mechanism" just shifts

the burden of explanation to another, yet-to-be-discussed mechanism. It evidently tells us little about the necessity, sufficiency, or contributive power of culture – and much less why nationalism is so intensely felt by many. As such, we can dismiss this explanation as a genuine mechanism that links culture and nationalism in a causal manner.

A second, and more relevant, mechanism may come from organizational sociology. In particular, many groups can be understood to embody a cycle of interaction and shared information, and this cycle may be responsible for why national communities are marked by a common culture. This is the intuition behind sociologist K. Carley's "constructural" model of organizations (1991). In this model, a group begins to take shape when individuals socially interact much more with each other than with outsiders. In this interaction, individuals exchange information, which if fruitful, will imply that someone learns a new "fact" that he previously ignored. Through such interaction, individuals may also increase their repository of *shared* knowledge – and this enhances their relative similarity.[20] In turn, this higher relative similarity tends to foment even more interaction for a variety of reasons:

> For example, individuals may be more "comfortable" interacting with someone with whom they have much in common, individuals may avoid "costs" because information exchanges may be more efficient between similar individuals, or individuals may acquire "rewards" because common knowledge may produce more opportunities for interaction. [However,] the point of constructural theory is that an individual's perception of his or her motivation to interact is not the determinant of interaction; rather, it is the sheer volume of what each individual has in common with other individuals[,] relative to how much he or she has in common with everyone else[,] that determines interaction…(Carley, 1991, p. 335)

So this interaction among similars gets repeated in a positive feedback loop: similar individuals tend to interact more, share more knowledge, and become even more similar to their inter-actors. As a result, these individuals coalesce into a distinct group. But the maintenance of such a group

[20] This meaning of "similarity" does capture more than just someone's ethnicity or physical characteristics. So, all else equal, two individuals who agree on a set of facts are more similar than those who do not.

also involves a trade-off between new information and stability:

> …groups form and endure because of discrepancies in who knows what. Groups typically are in flux simply because members are continually acquiring new information and communicating it to each other. [Thus,] a group is perfectly stable only when no new information enters the group and everyone in the group knows everything that anyone else in the group knows (p. 332).

Of course, so far we are simply discussing information in general. But in Carley's formulation, culture enters the picture as simply another form of knowledge:

> Every society has a culture. Culture is often characterized in terms of the distribution of information (e.g., ideas, beliefs, concepts, symbols, technical knowledge, etc.) across the population…[And] many research traditions…characterize information as discrete pieces that can be learned independently of each other. [Constructural theory does] employ both of these characterizations. Thus, society contains a certain number of pieces of information or facts…that the individuals in that society can learn. [And] the number of available facts determines the complexity of the culture (p. 333).

This neat argument seems to explain why a nation's members tend to share the same culture. And it gives common culture as a necessity for a nation – since, by definition, culturally-dissimilar individuals would not interact enough to be any sort of group, much less a nation. But the argument still fails to sufficiently account for nationalism in particular.[21] Compatriots or co-nationals do interact with each other, evidently, but they are not the same as co-workers or members of the same club. Again, the relative intensity of feeling matters. So, the simple sharing of the same facts is not necessarily conducive to the self-imposed burdens and risks of

[21] Carley readily admits the limitations of her model: "[it] is most applicable to small groups over a limited time span. Extensions to large communities or nations over centuries would be highly speculative" (1991, p. 350).

nationalists. For example, you and I may have the same cultural origins, but if our nation gets invaded, you may tell me, "we share many things, and it was nice knowing you, but I have to leave town and look out for myself." In other words, the past existence of a common path is no guarantee of its future continuation, and interaction is no guarantee of altruistic cooperation. If this is so, it seems that we need to detail a mechanism that goes beyond the mere sharing of information in culture.

A third mechanism for shared culture may assume that it engenders a sense of co-identification with our fellow compatriot. This co-identification, in turn, can become either nationalism or some sort of collective allegiance. The key to this mechanism seems to be the simultaneity of cultural practices. Anderson explains, referring to the singing of hymns, which are often short summaries of shared history, practices, and values:

> There is a special kind of contemporaneous community which language alone suggests – above all in the form of poetry and songs.[22] Take national anthems, for example, sung on national holidays. No matter how banal the words and mediocre the tunes, there is in this singing an experience of simultaneity. At precisely such moments, people wholly unknown to each other utter the same verses to the same melody. The image: unisonance. Singing the Marseillaise, Waltzing Matilda, and Indonesia Raya provide occasions for unisonality, for the echoed physical realization of the imagined community…How selfless this unisonance feels! If we are aware that others are singing these songs precisely when and as we are, we have no idea who they may be, or even where, out of earshot, they are singing. Nothing connects us all but imagined sound (2006, p. 149).

However, while this unisonance may "feel" very selfless, it does not *necessarily* translate to actual selflessness. Everyday, millions of people perform the same cultural activities – but what prevents them for resuming a selfish lifestyle afterwards? Or put conversely, what is it about any cultural activity that engenders long-lasting selflessness? For example, some music bands have developed true cult followings – with fans that attend their concerts religiously, and sign their

[22] Note that Anderson's quote refers to the cultural artifact of the national hymn, not to language per se. The reader will recall that, under the narrow definition of language that I employ (see p. 31), the national hymn belongs to the rubric of culture more than it does to that of language.

songs in unison. The Grateful Dead are a good example. But despite such unisonance on the part of fans, these have never coalesced politically, and it is doubtful they would ever risk their life for one another. If simultaneous cultural participation was so powerful, we should have seen many more signs of its political power and affective intensity. But we do not, and something seems missing in the formulation of shared cultural experience leading to intense co-identification.

At the level of nations, not rock bands, there are also examples of the inadequacies of common culture in leading to nationalism. A good one is the Jewish diaspora before the founding of modern-day Israel. Clearly, Jewish communities were scattered throughout Europe, the Middle East, and the American continent. Yet, despite participating in a common culture –with a shared past, values, and practices- the scattered Jewish peoples did not necessarily express the intensity that is associated with nationalism. They did not clamor, *en masse*, to establish their own state. For instance, the Zionist movement did not gain traction until after the calamities of World War II. Nor is there much evidence that Jews, in absence of a Jewish state, sought to coalesce politically in widespread fashion across the diaspora. Under such a counter-factual scenario, Jews could have remained citizens of their respective states, but also formed a parallel social network in which information and resources were consistently exchanged across state boundaries. This did not seem to happen. Instead, Jews fomented their own shared culture, but also integrated themselves into the social fabric of their place-of-birth. Further, even if the rise of modern-day Israel shows that a common culture may contribute to future nationhood, the time before 1948 still demands an explanation. Quite simply, we have centuries of Jewish cultural communities existing in parallel without any significant nationalism at play.

The above suggests that we still face a theoretical issue in explaining nationalism from

shared culture. We need an *additional* analytical component. Certainly that component cannot be language, either. Successful cultural sharing already presupposes a common language – at least if we take seriously the argument that such common language is a vessel for the transmission of culture (see p. 33). Something else is missing, something which can turn cultural and/or linguistic experiences into convincing forms of nationalism. To his credit, Anderson admits such a deficiency in his theory of imagined communities:[23]

> …I have tried to delineate the processes by which the nation came to be imagined, and, once imagined, modeled, adapted, and transformed. Such an analysis has necessarily been concerned primarily with social change and different forms of consciousness. But it is doubtful whether either social change or transformed consciousnesses, in themselves, do much to explain the *attachment* that peoples feel for the inventions of their imaginations – or,…why people are ready to die for these inventions? (2006, p. 141; emphasis in original)

In short, we must look elsewhere. However, the case of modern Israel already gives us another hint. Recall that in its discussion, we had to distinguish between the pre-1948 Jewish diaspora, which lacked a definitive nationalism, and the post-1948 Israelis that saw themselves as a nation residing in the Middle East. So perhaps there is something to the element of distance. Could it be

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[23] The offered quote opens the chapter "Patriotism and Racism" in Anderson's *Imagined Communities* (2006). In it, he does try to shed some light on how patriotism is given birth by common cultural practices. But the chapter is vague on just *how* these practices necessarily give rise to intense feelings of attachment. Anderson offers some explanations as to why the nation earns sacrifice from its members: the nation is "interestless" and its purity allows it to demand much from members; the national language gives a sense of primordialness that is believable to members; and each national language is semi-exclusive and not perfectly accessible to outsiders, who at least need to spend time in learning it (pp. 144, 148). Evidently, none of these engender sacrifice as a matter of logical necessity. You could be an accepted member of a nation – and if it is disinterested and pure, you could *abuse* it instead of sacrificing yourself for it. Or, you may acknowledge its primordialness, but prefer to break ranks in search of better opportunities as an emigrant. Or, your national language may be very difficult to learn for outsiders, and you could defect to your nation's opponents as a very valued translator. So despite his attempt at explaining the functioning of nationalism, Anderson ends the chapter without breaking the logical impasse of getting from culture to nation (if we accept the latter to be made of members who are significantly devoted to each other, and do not just share customs).

that nationalist attachment arises only from people who live in close proximity to each other? This could explain how Jewish nationalism gained traction after enough Jewish immigrants concentrated in Israel after World War II. Or if proximity alone is not enough, could it interact with either language or culture to foster nationalism? We evaluate this prospective marker next.

Geography

One basic finding in sociological studies of homophily is that social contact tends to happen with greater ease among individuals who are physically closer to each other. For instance,

> [e]ven factors so seemingly trivial as the arrangement of streets, dorm halls, and legislative seating can influence the formation of relatively weak [social] ties (and the potential for stronger friendship formation). Women are more likely than men to form close ties with neighbors…because they are less likely to be tied to extralocal foci of tie formation like work and their voluntary associations are more likely to be geographically local…[And] older people also are more constrained by their immediate geographic environment and have networks that are more reflective of it (McPherson, Smith-Lovin, & Cook, 2001, pp. 429-430).

The reader will easily recall the pride shared by people who live in a particular city (e.g., New Yorkers, Parisians) or even larger geographical areas (e.g., the American Midwest). Thus, it is no stretch to conceive of spatial proximity as a marker and potential contributor to national identity.

But by what mechanisms can proximity bring about national feelings of closeness? At least two are apparent, each with its own appeal and weakness. The first mechanism is rather obvious – nearness simply increases the probability that individuals will come into contact with each

other, and physical contact is a precursor to social closeness.[24] This explains the most common instances of proximity-related friendships in colleges, neighborhoods, and places of employment. Clearly, this may also apply to nation-building. After all, many nations emerge from people that have lived close to each other – like the French, Russians, and Americans. Note also that this mechanism may correlate with culture and language – for instance, people are more likely to share a language if they grew up in the same geographic area. Of course, this linkage is not always so. In the case of Americans, say, a sense of nationhood may have emerged despite considerable cultural differences among immigrants in close proximity to each other.

So, it is not implausible that proximity plays a role in national identity – but is this role necessarily and sufficiently conducive to nationalism? The answer is decidedly "no." Many populations have lived close to each other, but this has not prevented plenty of fighting among them. Bloodshed among neighbors simply litters the pages of history – like today's conflicts between Israelis and Palestinians, ethnic war between Hutus and Tutsis in 1990s Rwanda, and historical feuds between French and Germans until the mid-20th century. All these were neighbors who fought vigorously, with proximity only contributing to, or at least enabling, their fighting.

Here we may think that nations are an exception to the rule that, large and by, proximity *does* foster closeness among people. But this is plainly not so, either, and accepting it leads us to identify a crucial logical flaw in the argument. First, consider that proximity is also associated with conflict at the sub-national level. Perhaps, as the examples above indicate, college students,

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[24] We should not consider "contact" to be necessarily the same as "interaction." For instance, university students may come into contact with one another in classes, at the cafeteria, during parties, etc. Naturally, this contact is sensory (the students see and hear each other) and involves physical proximity. But it need not involve social interaction – many students will readily recognize classmates who they have never spoken to, much less exchanged ideas or information, even though they were in close contact during their entire university stays. So, the *contact*-producing mechanism of proximity is not exactly the same as that of constructuralism (see p. 41), in which relative similarity leads to greater *interaction*.

housewives, and the elderly tend to have more friends in proximity. But other groups bound by proximity are also immersed in constant strife. Prison populations are a good example. Towards his fellow man, the average prisoner does not necessarily feel a sense of kinship in their common plight. Instead, prison life is rife with solitude, sporadic violence and degradation (Liebling & Maruna, 2005, p. 3). One solution to these hardships is, of course, collective arrangements. In the United States, this takes the form of prison gangs like the Aryan Brotherhood, Mexican Mafia, and United Blood Nation. These gangs are not based on proximity alone, but also on race and ethnicity. On the other hand, consider the counter-factual. What would we see if proximity was the overriding influence on collective organization in prison? Perhaps we would find racially-diverse gangs that unite based on, say, their shared prison floor or cell-block. But large and by, we do not find that. Prisoners tend to join "race-based cliques" which exclude members of other races (Trulson, 2005, p. 109).[25]

So it seems that proximity is not a surefire contributor to kinship among men at the international and sub-national levels. The reason for undue emphasis on proximity may stem from a simple, and perhaps even obvious, conflation that nonetheless is very prevalent. It is often thought that social contact is akin to social closeness. Of course, as the examples above showed, this is empirically not so. And analytically, too, contact and closeness are simply independent concepts. Besides the examples above, one can plainly feel close to someone who is physically far-away (which is why love letters are written), and even to someone that one has never met – consider the attachments of millions of fans to their favorite star, and of the devout towards long-gone religious figures. Thus, even if there is an association between contact and closeness, we need an apt explanatory mechanism to link them. But by itself, proximity does not lead us to

[25] Note, though, that a race-based clique is exclusionary of other races, but not all-inclusionary of their own. That is, "[i]n some cases, there is more fragmentation and shifting loyalties *within* racial groups. Thus, not only are gang members fighting other races, they are also fighting [other cliques] within their own race" (Trulson, 2005, p. 109; emphasis in original).

closeness and much less co-identification.

A second mechanism linking proximity and nationalism may be interactive, so that proximity plus another force may trigger co-identification. Above we mentioned the Jewish diaspora, and how its common culture was nonetheless insufficient to foster a very strong nationalist movement until after 1945 and World War II (see p. 44). Perhaps, then, national co-identification may emerge among a people that both share a culture and are in close proximity. (At the sub-national level, this appears to sufficiently explain the rise of ethnic prison gangs.) The fostering of Jewish nationalism within Israel after its founding also seems to suggest this as a solution. Yet this second mechanism also seems to suffer from a logical impasse. If common culture in itself is insufficient to foster nationalism, just like proximity, what is it about their *combination* that may surmount such insufficiency? It could only be that culture exhibits a specific "causal deficiency" that is pointedly addressed by proximity, or vice versa. Let us examine this in more detail.

First, recall that people with a common culture are not logically bound to risk life and limb for their group. We can call this a motivation deficiency or gap. Is it addressed by geographical proximity? Not in any obvious way. For instance, even if co-culturals were somehow geographically trapped, so that they could not evade an outside threat, it is not clear that a defensive alliance, and much less mutual sacrifice, would result. One of the co-culturals may simply sell out the other, and offer the invader an advantage in conquering his former friend. This is the insight that history reminds us of – that threatened parties may bandwagon with an aggressor, instead of balancing with others against him (Schroeder, 1994). What prevents co-culturals from acting similarly? The mechanism of culture plus proximity does not give us the answer to this question.

Also evident is that the combination of proximity and culture does not address the deficiencies inherent in proximity itself. Proximity is missing a causal mechanism for deriving closeness from contact, and more particularly, for deriving the intense social closeness that we come to associate with nationalism. This affective deficiency is not addressed by common culture, although it may be reduced. That is, at most, a common culture may make people interact more often with each other, and this greater interaction may (if we are optimistic) eek out greater closeness among co-culturals. However, this effect is merely additive to that of proximity, but is not qualitatively distinct from it. So if we grant the assumption that greater contact implies greater interaction, then proximity yields greater interaction – just like common culture does. But we already established that greater interaction is not sufficiently conducive to foster the intense social closeness associated with nationalism. We still cannot fully explain the latter. What seems to be needed, then, is a mechanism to make that jump from interaction (even among physically- and socially-close individuals) to intense co-identification.[26]

Let us take stock. So far, the usual suspects have been found wanting. Language, culture, proximity – all are imperfect markers and determinants of nationalism. Still, we are not necessarily empty-handed, and can learn from the preceding discussion. Evidently, with each marker, the unanswered puzzle has been the intensity of nationalism. This suggests that we focus on a new marker that, if nothing else, can explain such intensity – and then assess whether it can also account for other features of nationalism. At the very least, this may give us an important clue. If found viable, the new marker will have a mechanism that produces deep altruistic attachment. So, even if such marker cannot fully account for nationalism, we would know the attachment-producing mechanism. And in turn, we can look for it elsewhere. In other words, we

[26] It also seems that the interaction of language and proximity is bound to encounter similar difficulties, if not greater ones. A group of people living together and speaking the same language will not be any more prone to unify as a nation than one experiencing both proximity and a common culture – that is, of course, as long as we cannot resort to an additional causal mechanism.

can consider other ways in which that mechanism can be triggered *without* the marker itself. And one of those ways could very well explain nationalism.

This new candidate marker is also not hard to produce, as long as we ignore some orthodoxies of social science. Notice how the thing to be explained, the intensity of nationalism, is very similar to the altruism that often characterizes relations among blood kin. Consider the ties among brothers, or that of a mother towards his son. If there is a marker in those cases, it is one of genetic relatedness. Could it also explain at least some cases of nationalism? Of course, this is jarring[27] if we assume that human relations are socially-constructed, and that things like genes simply play a marginal role. But let us briefly consider otherwise, and see what the next marker reveals.

Marker #4 – Biology

Given the novelty of this marker for a discussion of nationalism, we should first examine its plausibility. If genetically-related individuals have evolved to look after each other, we are likely to see a crucial process at play – humans should be able to perceive or otherwise "sense" others with a similar genetic makeup. This seemingly impossible process of "similarity detection" is actually quite common in nature. Consider these intriguing examples:

> In a classic study of bees, [they were] bred for fourteen degrees of closeness to a guard bee, which blocks the nest to intruders. Only the more genetically similar intruders got

[27] Discussions of genetics and social behavior are usually exposed to charges of "advocating for" genetic determinism. Here I side with Dawkins' (1981) rebuttal of critics to his interest in selfishness as an evolutionary (and thus genetic) trait. Namely, he separates the positive and normative aspects of sociobiology. For instance, we may find compelling evidence that humans are genetically predisposed to side and protect their genetic kin (which roughly falls under the work of positivist sociobiology). But this does not mean that such predisposition must be accepted as the *ultimate arbitrator* of human affairs (which would be a normative claim). For instance, an adoptive parent cannot neglect his responsibilities towards an adopted child by simply arguing that he is not biologically predisposed to care for that child – the law rightfully assigns him the full-fledged responsibility for the child's welfare. Thus it is important to not confuse normative and positive claims, and to note that the latter are the focus of this work.

> through. A classic study of frog tadpoles separated before hatching and reared in isolation found [that they] moved to the end of the tank where their siblings had been placed, even though they had never encountered them previously, rather than to the end of the tank with non-siblings. [And] squirrels produce litters that contain full-siblings and half-siblings. Even though they have the same mother, share the same womb, and inhabit the same nest, full-siblings fight less often than do half-siblings. Full-siblings also come to each other's aid more often (Rushton, 2005, p. 494).[28]

Certainly, we routinely indulge in "human exceptionalism", and pretend that men and women are uniquely divorced from many of the biological forces that guide other organisms. But for better or worse, what guides nature, routinely guides man as well. There is evidence of such similarity detection taking place among humans.

First we see interesting findings at the level of immediate kin. Consider the relations of identical or monozygotic (MZ) twins versus fraternal or dizygotic (DZ) twins. MZ twins share a full 100 percent of their genes, whereas DZ only share 50 percent – so if genetic homophily matters, MZ twins should manifest closer ties than their DZ counterparts, even after controlling for other factors. This is actually the case, as found in not a few studies:

> The majority of [twin] studies have variously found higher levels of closeness, cooperation, positivity, and familiarity between MZ than DZ co-twins…Some twin studies have also explored more specific aspects of twins' social relations. [For instance, psychologist F. J. Neyer] found that the quality of DZ twin relationships depended on frequency of contact, while this effect was minimal or absent in MZ twinships…[Further, in a 2002 study by psychologists from California State University, it was shown] that bereaved MZ twins reported greater social closeness which, in turn, predicted elevated grief, relative to bereaved DZ twins. [And a subsequent 2003 study] reported greater social closeness and familiarity between reared-apart MZ than DZ co-twins. In addition, both MZ and DZ twins in that study expressed greater closeness towards the co-twin from whom they were separated, than to the adoptive siblings with whom they were raised…The pattern of greater social closeness within MZ versus DZ twinships is robust.

[28] See the original text by Rushton for the experiments cited. The literature on kin selection in animals is sizable and established, though, and goes beyond his mentions. Additional sources on tadpoles are Blaustein (1988), and Waldman (1985); while Davis (1982) gives further evidence on ground squirrels. Kin selection has also been observed in green iguanas (Werner, Baker, Gonzalez, & Sosa, 1987), mice (Porter, Matochik, & Makin, 1983, 1986), hamsters (Heth, Todrank, & Johnston, 1998), and beetle larvae (Lizé, Cortesero, Bagnères, & Poinsot, 2010), among others. Some nonhuman primates have been found adept at kin *recognition* – for instance, chimpanzees are able to match pairs of unfamiliar chimpanzee mothers and sons, and fathers and daughters (Parr & de Waal, 1999; Parr, Heintz, Lonsdorf, & Wroblewski, 2010). Evidently, such recognition ability is a precondition for, but not a guarantee of, successful kin selection and/or cooperation.

> [It] has been observed across twin pairs of different age, gender, and rearing status (apart or together). It has also emerged despite differences in research methodology (e.g. experimental tasks, structured questionnaires and naturalistic observation) (Segal, Seghers, Marelich, Mechanic, & Castillo, 2007, p. 488).[29]

Such genetic homophily seems to extend past brotherly ties as well. In a 2007 study, psychologists compared the social closeness expressed by MZ and DZ twins toward the *children* of their co-twins. Again the same pattern – "[social closeness] scores were shown to vary as a function of genetic relatedness. MZ twins expressed significantly greater closeness towards their nieces and nephews than did DZ twins" (p. 500).

Naturally, when twins feel especially close to one another, it is not because they have studied their specific degree of genetic relatedness in some chart. Instead, humans are possibly hard-wired to employ simple heuristics in estimating others' genetic relatedness to themselves. An obvious heuristic is phenotypic matching – that is, like many other organisms, humans may look for the observable traits (or phenotypes) that stem from the genetic makeup (or genotypes) of individuals around them. This is Dawkins's "armpit effect", in which recognition of kinship arises when an organism matches its phenotype (e.g., its own scent) against that of another (1982). Of course, in actual practice, humans do not make a point of smelling each other's armpits. But the phenotypic matching can take less dramatic forms. For instance, MZ twins may spot each other's striking facial similarity, and develop feelings of closeness as a result. By logical extension, then, biological family members will tend to feel closer to each other than towards non-family members. After all, they also spot each other's physical similarity relative to outsiders.

Can this be taken further to apply to broader groups, and perhaps nations? The answer is

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[29] For readability, this quotation omits citations for over 10 studies of twinships, which can be found in the original text.

"possibly." There is evidence that human beings are broad applicators of phenotypic matching. For example, there is a general tendency to trust faces similar to one's own, even when those faces belong to strangers who clearly are not immediate kin. Consider a 2002 study in which a group of subjects played a two-person sequential game of trust. In it,

> [a] player 1 (P1) chooses either to dictate an equitable division of a small sum or to trust player 2 (P2) to divide a *larger* sum equitably, even though the latter has a more selfish option [i.e., to keep the larger sum to himself]. Standard game-theory models of self-interested choice suggest that P2 should always act selfishly in an anonymous one-shot game of this sort, and therefore P1 should never trust P2…
> [For this study,] to create a cue of kinship, facial resemblance was manipulated using digital morphing techniques to combine same-sex faces of persons unknown to the subject (called 'unknown' faces) with either the subject's own face ('self') or another unfamiliar same-sex face ('non-self')…
> …In the experiment, 24 subjects played 16 rounds of this bargaining game in sessions with one to four players at individual computer stations. Subjects played with what were ostensibly different playing partners on-line at other universities, but in fact played against programmed choices associated with displayed facial morphs…
> *Experimental subjects [playing as P1]…trusted opponents who resembled themselves significantly more than they trusted other opponents*…These results were replicated in two independent groups of subjects, using two distinct facial morphing procedures…
> (DeBruine, 2002, pp. 1307-1310; my emphasis)[30] [31]

[30] The magnitude of the effect also deserves mention. On average, the experimental subjects chose to trust the 'self' morphs 0.6 more times than 'non-self' morphs. This difference of 0.6 has to be gauged against the maximum number of times either set of morphs ('self' or 'non-self') could be trusted, with was three times. So, the average difference of 0.6 represents 20% of the entire range of possible pro-social (i.e. trusting) choices for any P1. In terms of magnitude, then, this is not a negligible effect from facial resemblance alone (p. 1309 and Fig. 5 in p. 1311).

[31] DeBruine also notes that *P2*'s did not exhibit any resemblance effects – that is, they opted to be selfish about the same number of times toward both 'self' and 'non-self' P1 morphs alike. She imagines this may have something to do with the different pay-off structures for P2's. Unlike P1's, P2's will not enlarge the final monetary sum by engaging in pro-social behavior (P2's can only choose to split the sum in their favor, or not.) Yet it is interesting to consider why P2's behaved selfishly, assuming that they are intent on promoting their own genes, whether through themselves or others with a similar genetic makeup. Any "gene-promoting" P2 would be unselfish toward P1 only if P1 is *very* genetically-related to P2 (as in the case of full siblings). If so, then acting unselfishly is promoting one's direct kin as well. But the altruistic tendencies of P2's are arguably watered down by the certainty that P1's are not direct kin (even if they look very similar), and the uncertainty about whether they may even be distant kin (p. 1311).
The question arises, though – if P2's are equally selfish toward similarly-looking P1's, why would P1's ever have a predisposition to trust their similarly-looking P2 counterparts? The answer may well lie in P1's ability to enlarge the final sum at will. That is, if P2 is seen as possible distant kin, P1 may tend to trust and risk whichever distribution will result from a larger sum. At best, P1 is helping both himself and P2 if P2 acts unselfishly and divides the sum equitably. At worst, P1 may receive a smaller distribution, but this is offset by two things: the guaranteed larger sum from which such distribution will take place, and the inkling that a possible distant kin (and not a complete "genetic stranger") is deriving the benefit. This seems like a sound choice, especially since the average P2 is actually not very selfish at all (and so may bring about the best-case scenario of equitable

Consider the implications of this and other forms of phenotypic matching by large numbers of people across time and space. It is not implausible that various ancient tribes took shape as conglomerates of genetically-related individuals, whose "genetic distance" among themselves was shorter than that relative to surrounding peoples. Members of these tribes would consistently incur phenotypic *mis*matching against their outgroup neighbors, and hence be less comfortable in forming intimate social arrangements with them (e.g., friendships, marriages, or close alliances). This does not necessarily mean that such phenotypically-distant tribes would wage war against each other. But it does suggest that tribes would maintain a certain phenotypic distinctiveness into the future. And as some of these tribes grew larger and crossed into modern times, they may have formed the backbone of many ethnic nations.

Is there evidence of this common biological origin for some groups? There is, although studies on genetic distance in nations are still scant. Some interesting studies have been done concerning the Jewish people, and hint of a common origin. Below are the rationale and results from one such study:

> Before the Second World War (1939–1945) and the founding of the modern state of Israel (1948), there were many longstanding separate Jewish communities in Europe, North Africa, and Asia. All of them claimed an origin in one or another dispersal from Israel and Judea…
> We have analyzed the maternally-inherited mitochondrial DNA[32] from each of nine geographically separated Jewish groups, eight non-Jewish host populations, and an Israeli Arab/Palestinian population, and we have compared the differences found in Jews and non-Jews with those found using Y-chromosome[33] data that were obtained, in most cases,

division). That is, contrary to what game theorists may expect, P2's were unselfish about two-thirds of the time on average – whether they faced 'self' or 'non-self' morphs (p. 1310).

[32] Mitochondrial DNA (mtDNA) refers to genetic material stored in mitochondria, which are "structures within cells that convert the energy from food into a form that cells can use" (see a more detailed explanation in U.S. National Library of Medicine, 2011a). mtDNA is very helpful to sample the genetic heritage from maternal ancestors because humans typically inherit it only from their mothers.

[33] As is commonly known, the Y-chromosome is one of two sex chromosomes in humans. (The X-chromosome is the other.) Males have one X- and one Y-chromosome; females have two Y-chromosomes instead. The Y-

> from the same population samples…
> [The] comparison of Y-chromosome and mtDNA patterns reveals a striking contrast between the maternal and paternal genetic heritage of Jewish populations. On the Y-chromosome, there is no consistent pattern of lower diversity in Jewish communities when compared with their non-Jewish host populations…
> However, the pattern in the mtDNA is quite different. *In each case, the Jewish community has a significantly lower mtDNA diversity than its paired host population. Indeed, every Jewish population has a lower mtDNA diversity than any non-Jewish population…*
> Even more striking than this, however, is the high frequency of particular mtDNA haplotypes[34] in the Jewish populations. No host [or non-Jewish] population in our sample has an mtDNA modal frequency >12% (mean 7.7%). In contrast, seven of the Jewish populations have a modal frequency >12% (mean 22.6%), and some of the Jewish groups have much higher frequencies…
> The greatly reduced mtDNA diversity in the Jewish populations in comparison with the host populations, together with the wide range of different modal haplotypes found in different communities, indicates female-specific founding events in the Jewish populations. Although we cannot be certain whether this occurred immediately after the establishment of the communities or over a longer period of time, a simple explanation for the exceptional pattern of mtDNA variation across Jewish populations is that each of the different Jewish communities is composed of descendants of a small group of maternal founders. After the establishment of these communities, inward gene flow from the host populations must have been very limited (Thomas et al., 2002, pp. 1411, 1414, 1417; my emphasis).

This is not to say that all national origin stories have a genealogical basis.[35] But again, it is possible that many early human groups were formed and maintained through repeated phenotypic matching. If so, this pattern would no longer be kin selection in the strict sense – instead, it would fall under the variant of "inclusive fitness." Simply, inclusive fitness holds that

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chromosome carries the gene SRY, which determines male sexuality in a fetus. Other genes in the "Y" are thought to be related to male sex determination, development, and fertility (U.S. National Library of Medicine, 2011b). Since the Y-chromosome is passed down exclusively through sperm, it is useful as a proxy for the genetic heritage from a person's male ancestors.

[34] Roughly, haplotypes are particular genetic markers (or "alleles") along mtDNA. Geneology research typically looks at some haplotypes of mtDNA to compare individuals' maternal genetic heritage (as opposed to comparing entire strands of DNA, which would be daunting). An allele, in turn, is the specific form of a gene. A useful analogy is to think of genes and alleles as variables and values, respectively. For instance, the gene for (or "variable" of) hair color has different possible alleles, or "values" – one may result in black hair, another in blond, and so on.

[35] Consider that, "in other cases, genetic evidence refutes origin myths, such as that the Chinese gene-pool goes back a quarter of a million years to Beijing Man, or that Amerindians have always existed on the American continent rather than being only the most ancient of 'immigrants'" (Rushton, 2005, p. 501).

"not merely our offspring but *any* genetic relative socially available to us is a potential avenue of genetic reproduction" (Alexander, 1979, p. 45).

So, organisms that pursue inclusive fitness would have an evolutionary advantage over those that seek only classical fitness (i.e. the protection of direct descendants to the exclusion of others). This seems applicable in early human interactions. In ancient tribes in which homophily occurred among distant kin, its members could engage in more trustworthy economic and social arrangements. They could organize into hunting and raiding parties. On the other hand, humans less disposed to identify with distant kin would be unable to gain the necessary numbers to survive against both human and non-human threats. This may be the reason why, today, we are hard-pressed to find human families with members that only care about each other, but are socially isolated from any and all non-family members. Long ago, this kind of insular family was probably phased out by selection processes.

In sum, phenotypic matching could help explain the cohesion of some nations. Recall that each of the previous markers –language, culture, and geography- was incapable of accounting for the affective intensity of nationalism. But if co-nationals feel a sense of extended kinship towards each other, their willingness for exceptional self-sacrifice becomes understandable. Under extreme circumstances, dying for the nation (or at least risking such an outcome) may seem required to protect those people with whom a phenotypic match is made.

Two points deserve mention. The first is that this sense of extended kinship is not necessarily conscious or fully articulated by people imbued with nationalism. Humans, like any other complex organism, possess instincts that they do not understand (at least not fully, and often not even in part). So, the members of a large tribe may feel close to one another, but need not know that their "brothers" and "sisters" are selected on the basis of certain phenotypes.

Simply, the tribesmen's instincts are constantly at work, and do not wait to be rationalized.

A second point is that the argument of inclusive fitness not only accounts for the intensity of nationalism, but also for its *limits*. Obviously, people do not sacrifice themselves for their nation on a casual basis. Such sacrifice happens, but only under very extreme circumstances – such as an invasion by an enemy that threatens annihilation or slavery. For example, in 1941, Russian troops did mount a staunch defense against the German juggernaut in the onset of Operation Barbarossa. These soldiers may not have hoped to be successful in their defense of particular cities and towns -much less to come out alive from the fighting- but they saw a dire need in at least delaying the enemy advance.[36] But absent such an extreme situation, the same men may not have willingly complied with their marching orders. Neither would many non-conscripted Russians have actually volunteered to join their armed forces during the German invasion, as was the case. In fact, this is very much the recurring pattern in military volunteerism – people volunteer in greater numbers at wartime than at peacetime (Levi, 1997, p. 205).

This variability in nationalist commitment must be accounted for, and inclusive fitness offers a fair explanation for it.[37] When his entire country is at risk, the nationalist will willingly risk life and limb to protect it. Even if he dies, he would have still contributed to an entire

[36] It is a popular Western misconception that coercion was the predominant method for troop enlistment and retainment in Stalinist Russia. Surely it may have prevailed at many times, but apparently the obvious German threat overwhelmed the distaste of many Russians towards their leader. Consider the popular response to Stalin's initial command to mobilize every Russian male born between 1905 and 1918, issued hours after German troops crossed the border on June 22nd, 1941: "in all, five million people were called up immediately, and by December [of the same year] almost 200 new divisions –averaging 11,000 soldiers each- were considered ready for battle. Citizens in their fifties and sixties also formed militia divisions." And despite being ill-equipped, these green soldiers "were able to dig defenses and were set to work throwing up anti-tank ditches, pillboxes, and machine-gun posts, usually working twelve hours a day, often while being bombed" (Roberts, 2009, p. 157). As we will discuss later, even the most far-reaching state coercion is unable to extract such extensive cooperation from millions of people.

[37] It is easy to dismiss this variability in commitment as needing little or no explanation. But it is far from self-evident. In fact, if we assume that people are rational egoists, then military volunteering may well be *lower* at wartime than peacetime – all else equal. The reason is that, with the onset of war, it is easier to get killed, and so the selfish volunteer will be less inclined to join the troops. But at peacetime, he could enlist and just derive the material benefits of membership – like housing, food, and medical care. So, the notion of inclusive fitness does explain a pattern of volunteer behavior that rational egoism does not.

population of distant kin – so many of his genes are still passed into the future. The tradeoff is unsavory, but sensible. On the other hand, when the country is at peace, or the threat is less grave, the same nationalist will behave increasingly selfishly. He will care more about his immediate kin and himself, and approach the ideal of classical fitness – that is, he will be more interested in supporting direct offspring whose genetic relatedness is very close to his own.

However, there is a serious explanatory downside to genetic markers of nationalism, which is fairly evident when looking at previous markers like culture or language. Biology may tell us much about the intensity of nationalism, but it stays mum about its vast demographic and geographic reach. Nations are, quite simply, not tribes in the conventional sense. Nations are typically much larger - even if by "larger", we understand a distinction that is inherently conventional and unavoidably fuzzy. And the importance of this size difference is that nations often incorporate people who do not all share the same phenotypes. Certainly some nations seem to keep a tighter handle on their genetic diversity, as we have seen in the Jewish case (see p. 55). But what of civic and diverse nations like the United States, which routinely score high in their citizens' expression of nationalism?[38] Moreover, a strictly genetic argument for nationalism also fails to account for the successful assimilation of immigrants into many successful Western nations. The first-generation of these immigrants experiences a shift in their national loyalties, with subsequent generations usually blending into the national fabric. When these new nationalists come from very diverse racial and ethnic backgrounds, genetic kinship simply cannot account for their successful integration.

In sum, biological markers do not fully explain the puzzle of nationalism, either. But let us recall the reason why we discussed them. None of the previous markers could explain the intensity of nationalism, and we needed to find a type that could. Now that we found it, we also

[38] For a discussion of recent nationalism scores, based on survey data, see de las Casas (2008).

have an idea of the mechanism behind such intensity – phenotypic matching. When it is triggered, many organisms act in accordance with a sense of deep kinship. In humans, this translates into greater social contact, mutual trust, and even a willingness for self-risk (if not self-sacrifice)[39] when the kin is in serious danger. Recall, too, that we accepted the possibility that a marker may explain nationalism's intensity, but not other aspects of the phenomenon (see p. 50). That possibility has obviously been realized, and the result is a dilemma. If we accept the markers of language and culture as determinants of nationalism, we explain the large geographical reach of nations, but not the emotional attachment of their members. And if we accept biology as the marker, the opposite happens.

This dilemma holds as long as we accept the choices as mutually exclusive. But that is illusory – we are not forced to explain nationalism in terms of either biology or cultural/linguistic markers. Instead, we can squarely adopt the position that nationalism is a technology, and turn this dilemma into a *technological problem*. That is, we have a set of apparently opposing requirements, and require an artifact that bridges them. Technologies do that, and quite often. Just consider your average personal computer, which brings together speed and precision. So, the question is not necessarily if nationalism can behave as such an artifact, but how it does so. Below we consider this.

Nationalism as a technological solution

[39] Self-risk means that one incurs the risk of negative happenings to oneself (from lost material resources, to loss of life), while self-sacrifice can be interpreted to mean that one accepts such losses as *certainties*. The difference is subtle, but significant. Self-risk clearly encompasses self-sacrificial behavior – in the latter, the risk of losing one's own life is just so high as to constitute a certainty. But self-risk also encompasses a great host of altruistic behaviors in which the risk is more reduced. For instance, a nationalistic soldier may join an army in which there is some probability of dying, but it is uncertain. The soldier may accept that self-sacrifice is one outcome from his enlistment, but it is certainly not the only one. So, if we equate altruism only with the most extreme self-sacrifice, we miss seeing those other, more complex instances of altruistic behavior.

At its most basic, technology involves the manipulation of matter, and of the laws governing such matter, for a desired purpose. So technology does not invent new laws. Instead, it "plays" with existing ones to do something that ordinarily would not happen. In some fields of technology, this notion is expressed with a simple term – "hacking."

Examples of hacking are simple and abundant. Obviously, we can think of computer hackers who break into a bank's database to steal its customers' information. These hackers are manipulating the bank's computer system in a way completely unintended by its creators. But the notion of technological hacking goes beyond computers, and may also involve "hard" or physical technologies. For instance, in the phone systems of the 1960s and 70s, a plastic whistle could mimic special ringtones to reset lines and dial numbers for free (Lundell & Haugen, 1984). And an even "harder" hack involves using a credit card – not to pay for items, but to unlock a regular front door.[40] Hacking also need not involve tampering with anything man-made. Nature can be hacked – for instance, our common ancestors "hacked" fire and used it to cook, hunt, and light up their homes.

These varied examples suggest an obvious possibility: we also can conceptualize the dilemma of nationalism markers as a hacking problem. Plainly, we have an object (human communities) which performs a function (establish intense ties of kinship) based on a natural mechanism (phenotypic matching). As we established, this mechanism is based on sensory cues – how others look and sound, for instance. But if one thinks as a hacker, it is evident that such a mechanism opens itself to manipulation. And it is this manipulation which gives us the intense attachment of the nationalist, and which constitute the technological "twist" of functioning nationalisms. Let us better understand this point with a brief thought-experiment.

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[40] One simply slides the card in the narrow space between the lock and the door frame, and "jimmies" the lock by forcing the card into the tiny area between the bolt and the strike plate.

How nationalism "hacks" kinship

Imagine a nation of people whose skin is a bright hue of orange. These orange people are very close to each other and willingly contribute to the provision of public goods. Based on our earlier discussion of phenotypic matching, if we wanted to infiltrate such a nation –perhaps to benefit from their generous welfare system- the obvious solution would be to color our skin. We may need to look for the shade that best approximates that of the orange people – but the closer the match, the more likely it is that we will be accepted into the fold.

Next, consider the converse case, which is even more relevant to our discussion. Suppose that we ruled over a group of people of diverse colors (blue, red, and purple), and we knew that phenotypic matching was predominantly color-based. If so, we could try to "hack" this mechanism and foster closeness in this diverse group. Evidently, we may not easily re-color all these people. But we can try to issue them clothes of the same color, or at least require that citizens carry same-colored bracelets or hats. The more effective our enforcement of such mono-chromaticity, the easier it would be to trigger phenotypic matching and thus social closeness.

Of course, no longstanding nation has ever tried to issue uniforms to all its members. But armies regularly do, as well as some companies and even street gangs. In fact, street gangs are particularly obvious about it – they usually require the rank-and-file to "wear their colors." On the other hand, nations have more varied means at their disposal. Reconsider the broad markers of language and culture, which heretofore seemed incapable of explaining the intensity of nationalism in themselves. When people speak the same language, or express similar cultural convictions, they may unwittingly engage the same mechanisms of phenotypic matching as when

MZ twins see each other. But instead of relying mainly on visual cues, like twins presumably do, co-linguists and co-culturals may employ auditory and behavioral cues as well. In other words, a common language and culture fosters a widespread similarity in what is said, how it is said, and what behaviors are carried out. The result is that social closeness would emerge from this matching of "manufactured" or artificial phenotypes. Of course, co-culturals may never feel as close to each other as MZ twins – but on a large-scale, a common culture will still bring about greater social closeness than if it were simply missing. And nations that effectively trigger phenotypic matching will enjoy greater cohesion relative to other kinds of organizations.

In short, the case for nationalism-as-technology seems to rest on its ability to "hack" the mechanism of phenotypic matching, by bridging the impasse between genetic and non-genetic markers. Yet one should avoid the conclusion that nationalism is simply an artificial reproduction of genetic homophily – burdened with all the natural constraints of the latter, but lacking in the intensity of "true" kinship. This is far from the case. As many technologies that harness a natural process, nationalism is also able to enhance some aspects of phenotypic matching.

To see why, first consider that all of the markers we discussed have two crucial characteristics that are relevant for hacking purposes: their ease of generation, and their ease of exportation. Let us consider geography first. Geographic markers seem like the easiest to generate. One can build landmarks, for instance, to "brand" a certain area and help make people identify each other as inhabitants of it. Migration policies can also help populate a certain area, and set the stage for co-identification among the newly arrived. But when it comes to their ability of exportation, geographic markers seem like a poor choice. By definition, a distinct geographic area is beholden to its boundaries. If a nation tries to expand across a larger region, it will naturally lose such geographic distinctiveness. If it tries building the same landmarks or

structures across a very large expanse, those buildings may lose their saliency or uniqueness. And besides these issues, we already discussed the general problem with geography and its fostering of closeness – just because a people are in a certain area, it does not follow that they will identify with it, much less bond with their neighboring cohabitants.

Genetic markers face similar problems in being created and exported. Suppose this was attempted for a certain set of phenotypes – say, certain hair and skin colors, cheekbone structure, height, and so on. In terms of generation, the most reliable method would be controlled or coerced reproduction, which is morally abhorrent to most modern nations, not to mention very hard to carry out. Further, a nation that attempted to export these phenotypes to neighboring lands would be faced with a new set of difficulties. If the conquered lands are sparsely populated, the nation will have to contend with the reproductive limits of its own growth. It may be decades before the nation can populate such areas with enough grown men and women endowed with the preferred phenotypes. Or, if the conquered lands are highly populated, the nation can try coupling its select members with the conquered peoples. But this does not guarantee that the desired phenotypes will prevail in the newborn with mixed heritage. Thus, absent any bizarre schemes, the management of genetic markers seems all but an impossible proposition. Of course, this was part of the dilemma of explaining nationalism with genetic markers – they may be the most effective for fostering closeness, but are bad at accounting for the growth of today's large nations.

Let us next consider both language and culture, but with our new understanding of them as forms of artificial phenotypes. Compared to genetically-based phenotypes, both markers are relatively easy to create – or at least borrow from a pre-existing template. For instance, what we commonly know as the Spanish language was based on the Castilian dialect, which the Iberian

crown (and later, Latin American states) conveniently promoted for their populations. Further, both of these markers are easier to export across time and space. Across territories, schools can be built to teach the chosen language, and spread an enduring literature that imparts common values. Newspapers and other mass media are evidently able to act in similar fashion. And with the invention of radio and television, the export of language and culture can be done much faster.

Of course, if the propagation of language and culture only involved their intrinsic contents, we again could not explain the affective intensity of national loyalties. But with the technology of nationalism, the propagation is also one of phenotypes – the way one speaks (or dresses, or just goes about life in general) are "converted" into mass markers of core identity.[41] And nations develop these markers to a great level of consistency, complexity, and widespread appeal. For instance, consider the tendency of national cultures to standardize hymns – these tell a simple tale of collective virtue, yet are also linked to layer upon layer of historical events. So effective is this development that people are unconsciously persuaded to treat those artificial markers *as if*

[41] If the above argument is true, then also consider an interesting possibility – what happens if an artificially-created phenotype is not added, but removed? Could it induce feelings of strangeness and distrust among social contacts that previously felt comfortable with each other? I know little of any scientific literature that has explored this question in depth, and recognize that any case studies could be few and far between – and especially so in the case of nationalism, which seems to "stick" very well in people's identities. But there are glimpses of such phenotype-removal and its effects in other areas of human collectivity. For instance, for much of the 20th century, American FBI agents tended to dress and groom in a very conservative style – long hair and beards were frowned upon, and somber business suits were the norm. But during the 1970s, when the FBI sought to infiltrate radical domestic organizations like the Weather Underground, its "deep cover" agents had to adopt the appearance and customs of such groups (which typically were the total opposite of the FBI's). One such undercover operative recalled arriving to the FBI academy in Quantico, Virginia, in his adopted hippie attire – and meeting the open distrust of the very organization he worked for. That is, the reaction of his colleagues was not limited to "scornful looks, offhand comments, and public speculation about [his] gender." He and other "long-haired 'freaks'" (all sworn FBI agents) were "not allowed access to the post exchange, package store, or… other…base privileges during [their] stay, and…were not to leave the Academy grounds without official permission" (Payne, 1980, p. 127). A gathering of similar cases would do much to corroborate the role of artificial phenotypic matching in fostering social closeness.

they were natural ones, and so phenotypic matching takes place.[42] [43]

Thus, nationalism surpasses the weakness inherent in both biological and cultural/linguistic markers. That is its technological turn. It borrows the phenotypic mechanism of the first, and couples it with the reach of the second. At the same time, it does not seem to water down the strengths of each set of markers – at least not significantly. If history is any guide, nationalists have shown themselves very willing to engage in self-risk for national defense. One need only consider the masses that complied with their marching orders during the two world wars. Such behavior is not unlike that of, say, sons and daughters who come to the aid of an imperiled biological parent. And nationalist culture is clearly not any less adroit in spreading as much as its non-nationalist counterparts. After all, both kinds of culture use the same repertoire of media to reach vast numbers of people across time and space. If anything, national cultures often have some added advantages in their transmission: they are regularly sponsored by states, and already have a devoted following. Many non-national cultures must find new investors to spread them, or adherents that will favor them over many other cultural choices.

The above discussion gave a technological explanation for nationalism. As it turns out, not only was this explanation needed for the coming theory-building, but it also fills a gap in our

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[42] Not discussed here is the ability of any nationalism to replace either other nationalisms, or a pre-existing form of collectivism (e.g., tribalism). I contend that it is obvious this ability exists – otherwise, we would not see nationalism as the dominant form of collectivism from the 19th century (at least) to the early 21st. But the ins-and-outs of this ability are not well understood. Sometimes nationalisms "take", and successfully so, like the American and French cases. But at other times, they have not overcome longstanding loyalties. Recall the failure of Soviet nationalism to replace the nationalisms of Ukrainians, Georgians, Armenians, and others. This was so despite ample propagandistic efforts by a powerful state. So, we must not equate the access to a technology (even if it involves the powerful use of it) with a solid knowledge of it. See chapter X for a discussion of forms of technological access (p. X).

[43] How can this argument be tested empirically? Here we will test at least some implications from artificial phenotypic matching – like the lower tendency to desert from an army by people who speak the same language as that of the country's leadership. But it pays to consider other research paths. For instance, neurologists could compare the brain function of co-nationals, direct kin, and unrelated strangers. If phenotypic matching can be induced artificially, then upon meeting each other, co-nationals may exhibit heightened activity in the same parts of the brain as those of direct kin. Such brain areas may be associated with feelings of trust and closeness. On the other hand, total strangers would exhibit greatly reduced activity in the same areas, or instead exhibit activity in other parts of the brain (perhaps those associated with wariness or alertness).

understanding. Much of the contemporary literature on nationalism is dependent on cultural and linguistic markers, but it omits their inability to account for its affective intensity. And it is this intensity which separates nationalism from other forms of collectivisms, like cosmopolitanism – which may enjoy a good-sized audience, but just does not elicit a strong commitment from its members. Yet for all its usefulness in marrying intensity with reach, this technological explanation only lays the theoretical groundwork. We may accept nationalism as a convincing social technology, but still ignore its role in the area that concerns this study: security. What is the effect of nationalism on military recruitment across vast areas, especially in regions where the people are loyal to a nation other than that sponsored by the state? What is the role of nationalism in war, and how does it facilitate the defense versus the offense? And what happens to the prospects of war when nationalism is adopted by all states in an entire region, as opposed to just a few?

These questions require that we add more elements to the incipient theory. The elements include well-worn ones in social science, like the distinction between the elite and the mass at the domestic level. But they also comprise more abstract and unfamiliar ones – like technological realms and the principles that bridge them, or systemic thresholds that get triggered by mounting (or declining) processes. These will be more familiar to the engineer or systems analyst, respectively, than to the political scientist. But in this theory, they are the building blocs of testable hypotheses. Still, all blocs need an arrangement. In the chapters that follow, two different technological themes are introduced. Each one offers just such an arrangement of nationalism-as-technology and other elements, and also guides the derivation of hypotheses. Then, after each theme is explored, its related hypotheses are subjected to empirical testing to gauge their worth. We begin with one theme that shows us the basic parallels between, of all things, a particular

guided missile and nationalism.

Chapter 2

Technological theme #1: No one truly rules technology

To the present day, the AIM-54 Phoenix has the longest range of any air-to-air missile ever adopted by the United States military. At least in theory, it could lay waste to an aerial threat about 115 miles away. The Phoenix was designed in the 1960's, a reaction to persistent fears of Soviet anti-ship capabilities among American naval strategists. These fears were not mere paranoia, and dated to the previous decade:

> …in the 1950's…American intelligence agencies identified a growing family of Soviet air-launched cruise missiles as a potential threat to NATO fleet units. Carried to their launch points by heavy bombers, aircraft like the Tu-16 Badger or Tu-95 Bear, they could be launched well outside the range of enemy SAMs[44] and antiaircraft (AAA) guns. Designated by NATO intelligence analysts as AS-1 "Kennel", AS-2 "Kipper", [and others in the AS-series, ending with the] AS-6 "Kingfish", these long-ranged, radar-guided pilotless jet- or rocket-powered weapons packed enormous ship-killing power. Armed with 1,000-kg/2,200-lb warheads (or high-yield nuclear warheads), they were capable of destroying a destroyer or frigate with a single hit. By way of comparison, the single AM-39 Exocet air-to-surface missile (ASM) that sank the British guided-missile destroyer HMS *Sheffield*…in 1982 had a warhead just one-tenth that size. Since a single large bomber might carry two or three such monster ASMs, finding a way to defend the fleet against them became a high-level priority (Clancy, 1999, p. 145).

The resulting US naval doctrine was to shoot-down these heavy bombers well before they could launch their missiles. In the case of carrier groups, this meant having a plane that could loiter in the air for extended periods of time, and quickly engage any approaching bombers with missiles that were similarly long-ranged. After two failed proposals,[45] the US Navy settled on the

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SAMs are surface-to-air missiles, which typically are meant to shoot down either planes or missiles about to strike at one's own forces.

45 The failed proposals were for the Douglas F-6D Missileer, and the General Dynamics/Grumman F-111B. See

Grumman F-14 Tomcat. Of all the planes in the US military, this fast and maneuverable jet was (and still is) the only one to carry the AIM-54 Phoenix. Only the Tomcat was large enough to accommodate the large missile, while also having the requisite fire-control radar to guide it.[46]

The Tomcat-Phoenix "package" was first deployed aboard US carriers in 1974, and remained in service for about 30 years. At least during the 1970s and 80s, this technological combination was arguably the most advanced aerial interception system in the hands of the US military – and ironically, also of one of its largest potential rivals in the Middle East, the Islamic Republic of Iran Air Force (IRIAF). The story of how this powerful technology was shared by these two staunch opponents is illustrative of the major theme in this chapter: technology has no master. It is hard, if not altogether impossible, to rule by any single handler.

To better grasp this theme, though, we ought to proceed methodically. First, we will define what is meant by "ruling" a technology. This definition rests on two fundamental forms of access to any technology, and well applies to the case of the Tomcat-Phoenix package that was shared by the Iranians and Americans. Second, we will go beyond the issue of access itself, and explore the related notion of "control-of-access". As we will see, there are fundamental reasons why a technology's handlers[47] find it very difficult to control access to it. Naturally, this limited

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Clancy (1999, pp. 147-148) for a brief and accessible history of these projects, and his footnote #Error: Reference source not found for more information on the F-111B.

[46] Another plane was also designed to carry the Phoenix missile, but it ultimately did not go into full-scale production: the General Dynamics/Grumman F-111B. Only seven were built before the program was cancelled in 1968 (Marrett, p. 3). The US Navy found it "too heavy, fragile,…complex for carrier operations, [and having] little maneuverability and thrust from its overworked engines" (Clancy, 1999, p. 147).

[47] The reader will notice that I often use the term "handler" instead of "user". The reason is that "handler" is more all-encompassing – and this fits better with the broad thematic scope of the chapter. That is, the term "handler" includes those individuals and other entities which may have access to a technology, but are not typically seen as "users" by the literature or popular convention. For instance, regarding the Tomcat-Phoenix technologies, the "users" may be seen as the purchasing countries, their respective air forces, and perhaps the pilots themselves. Certainly, these all qualify as handlers of the technology as well. But the category of "handlers" also includes others that are typically ignored – like the theorists that designed the technology, or the engineers tasked with its repairs and maintenance. Each of these handlers accesses the technology in a particular way (and just as importantly, not in others). But all these handlers, and not just the obvious users, must contend with the fundamental unruliness of technology. It thus makes little sense to just emphasize the "users", and so limit the perceived applicability of the ideas discussed in the main text.

control-of-access further lends to the unruliness apparent in most, if not all, technologies. Once these tasks are done, we return to the topic of nationalism-as-technology. We will apply the chapter's theme, and aim to build some plausible expectations of how unruliness also influences the employment of nationalism in warfare.

How technology is ruled

Before one can hope to rule a technology, it is first necessary to have access to it. Such access must take place in two realms – the physical and the informational. The physical or material form of access is the most apparent. Let us return to the case of shared technology that opened this chapter. Iran received its first of 79 Tomcats in 1976 (Clancy, 1999, p. 158, 55n; Cooper & Bishop, 2004, p. 19). By then, many Iranian technicians and pilots gained the most basic form of physical access – the ability to touch and examine the Tomcats and Phoenix missiles without any American interference. Of course, just being able to see and touch a technology is a very superficial form of access. There are deeper forms of physical access, each of which involves other aspects of the technology. Consider the more extended access given to those technicians who can actually access the cockpit and taxi the plane across the hangar, or can tinker with the avionics suite.

Yet physical access is not limited to the planes and their missiles. The Tomcat-Phoenix package is exactly that – a package. It comprises several artifacts that are not immediately associated with the plane and missiles themselves, but are just as fundamental to the technology's operation. For example, Iranian technicians also needed access to an unavoidable flow of spare parts for the Tomcat-Phoenix. Even more fundamentally, to fly the plane, they

would have required a constant supply of products – jet fuel, various oils to lubricate the complex engine, thermal batteries for the missile's electronics, and so on. Unless all these things are secured, one cannot be said to truly have "full physical access" to the Tomcat-Phoenix as a working bundle of technology.

However, suppose the Iranians had all the tools, supplies, and spare parts to fly their Tomcats for many decades after the initial delivery. (Below we will discuss what really happened, but let us engage in this supposition.) Would this have granted them effective control, and thus rule, of the technology? Not necessarily. They also required *informational* access to it. Obviously, it is of little use to have several F-14s in your hangar if you have no trained pilots to fly them, or no technicians taught how to service their complex fire-control radars. This form of access is evidently intangible but also necessary. Further, much like physical access does entail access to objects beyond the most obvious artifacts, the requirements for full informational access also run far and wide. For the Iranians, this implied knowing the optimal tactics for using their F-14s in aerial combat (both in conjunction with the Phoenix missiles, and without them), or if there were any inherent weaknesses in the product (which may not have been disclosed by the manufacturer at the time of sale). For instance, for more than two decades after its introduction, the F-14 used a troubled turbofan engine, the TF-30. When taking in turbulent or "dirty" air, it tended to either stall or flameout – which contributed to most of the 125+ American F-14s lost in accidents through the late 1990s (Clancy, 1999, pp. 153, 158). There is no open-source information on how the Iranians fared with this troubled engine, but it is hard to see how the TF-30 would have been any kinder to them. With better informational access to the inherent limits of their bought technology, the Iranian Air Force could have won greater mastery of it, and would have likely avoided their own share of deadly accidents.

Still, informational access may go further, and transcends the use of a technology in its originally-intended area. For instance, such access may not be limited to how best employ the Tomcat-Phoenix package in aerial combat. It may also comprise any knowledge about the various effects of the technology in other fields – like international politics, and even other unrelated technologies. For instance, perhaps the introduction of F-14s may have scared opponents of Iran to adopt a less aggressive stance against it. Or, if we take seriously the realists' emphasis on balancing, the plane may have simply contributed to a continuing arms race in the region. Neighbors like Iraq could have even decided to venture into different military technologies to offset the Iranian Tomcats – such as by developing ballistic missiles, or pursuing nuclear weapons. (Iraq evidently sought both of these technologies in the 1980s, although it is unclear the degree to which the Tomcat contributed to this.)[48] If those indeed are the strategic implications of the technology, then full informational access also implies such extended knowledge.

So, the order is quite tall when it comes to fully accessing or tapping into a technology. Were the Iranians actually able to harness the Tomcat-Phoenix package in both material and

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[48] Iraq was the first country in the Middle East to "operationalize [the indigenous production of long-range ballistic missiles] and use them in a major conflict[, the Iran-Iraq War (1980-1988)]." Its major forays in that field seemed to gain momentum by the turn of the 1980s – it spent $3 billion alone on missile development during that decade (Goldman & Eliason, 2003, pp. 193-194). Turning to nuclear weapons, Saddam Hussein launched Iraq's nuclear development program in 1971, well before the first Tomcats ever arrived in Iran. But the program only intensified in the 1980s, again during its conflict with Iran, and soon after the latter had acquired the Tomcat-Phoenix package (Solingen, 2007, p. 145). Absent radical new evidence, it is not justified to claim that the Tomcats had a pivotal role in influencing Saddam's strategic decisions during the 1980s. But neither is it necessary to do so. All that is required is to show that the technology had a *contributive* role in leading Iraq to pursue alternative military technologies like ballistic missiles. There is some suggestive evidence of this - at the very least, the F-14 had produced a strong impression in the Iraqi military. Consider the testimony of Lieutenant General Ra'ad Hamdani, who served as corps commander in Saddam Hussein's Republican Guard. Having served from the 1973 Arab-Israeli War until 2003, he explains the general Iraqi feeling towards Iran's military in the late 1970s-early 1980s:

> "When…Khomeini emerged in Iran, we did not have any other understanding about the regime and its capabilities, other than what we knew about the Shah's army…All we knew was that the Iranian military had significant capabilities, along with a first-rate American armament – *for instance, the F-14 aircraft was something big, a truly advanced aircraft.* They also had trained division staffs in many places, units that used to go from Iran to the United States for training" (Woods, Murray, Holaday, & Elkhamri, 2009, p. 27; my emphasis).

informational terms? The evidence does not point to it, neither when they first acquired the technology or afterwards. To be sure, in terms of physical access, they did acquire 79 of the jets, as well as 284 Phoenix missiles, before the revolution struck in 1978-79 (United States Senate Committee on Armed Services, 1979, p. 3206). But even then, Iran had limited access to the full spectrum of physical components that comprised the technology. Most obviously, with the fall of the Shah, the US cut off the flow of spare parts. This soon limited physical access to the two main items in the package. Two Iranian pilots recall:

> By September 1985 we had only 30 to 32 F-14s in combat-capable condition, and only half of these had working AWG-9s [fire-control radars] at any one time. Our AIM-54 stocks were also depleted. Despite international media claims, Iran received no new Phoenix missiles after October 1978, when the last regular batch of 24 rounds was shipped to the [Imperial Iranian Air Force]…[So,] by 1986 many of our remaining AIM-54s had passed their shelf life, while a number of others were nearing [the end of theirs]" (Cooper & Bishop, 2004, p. 62).

Besides this shortage of spare parts, the Iranians also lacked physical access to another crucial component of many healthy technologies – upgrades. The Iranians had received the Tomcat F-14A, but the plane eventually enjoyed several technical upgrades in the US. For instance, the F-14*B* was introduced in 1988. It enjoyed a new turbofan engine, the F110, which "had greater thrust and none of the vices of the TF-30." And in 1991, the F-14D would enter service, and improve upon the –B series with a newer fire-control radar, the APG-71. Among other improvements over its predecessor, this radar is able to "perform advanced ground mapping in heavy weather", which allowed the F-14 to also function as a proficient bomber (a role it was never originally intended for) (Clancy, 1999, pp. 156-157).

The other side of the access coin did not look better. The Iranians also suffered from limited informational access. This limitation was partly by design – on the side of the United States. Consider that,

> "although roughly 120 [Iranian] ground crewmen were trained on the F-14 by 1976 and another 100 were in training, the Iranians were not allowed by the Pentagon to maintain or repair any of the Tomcat's sensitive systems, requiring such components to be sent to the United States for maintenance" (Ward, 2009, p. 208).

Good know-how requires a kernel of hands-on training that is coupled with informed corrections. After the revolution, the Iranians would certainly tinker with the sensitive systems of their Tomcats. But since they never repaired those systems alongside knowledgeable American technicians, their informational access was already hindered. It is thus no surprise that only a handful of F-14s had operational fire-control radars, as mentioned above by those two Iranian pilots.

Still, the Americans were not all to blame. The Iranians themselves contributed to their own dearth of informational access. For instance, proficiency in new technologies is often facilitated by solid knowledge of *older* technologies. But in this case, "[a]t the time the first Tomcats were delivered, [Iranian] air force mechanics were not fully proficient in maintaining the airframes, engines, and weapon systems of [their country's] less sophisticated F-4 and F-5 fighters" (p. 208). Further, the Iranian pilots faced serious limitations in accessing the new technologies, both before and after the revolution. For instance,

> [a]ir force commanders, wary of displeasing the shah by losing one of his expensive new aircraft, restricted the use of the Tomcats in training. Aircrews, sensing their leaders' unease, became reluctant to fly in any conditions that might increase the risk of accident.

> As a result…during the last years of the shah's reign one of the world's most sophisticated and combat-capable aircraft was flown almost entirely in daylight hours and in good weather as it conducted simple missions, with no dogfighting (p. 208).

This was a case in which the limited informational access actually derived from physical access that was also limited (e.g., no flying at night or in bad weather). Simply, the Iranian pilots' hands-on experience could not grow if they cannot develop their mastery of the plane under demanding conditions. After the shah's overthrow, though, the form of curtailment changed. We already discussed how another physical restriction –a US embargo on spare parts- contributed to few functional Iranian Tomcats. This evidently limited the number of flight hours available to Iranian pilots, and thus to their acquisition of informational access over time. But following the revolution, the new Iranian regime also crippled its own informational access by removing an additional source of knowledge – many of its own pilots. At the outset of the Iran-Iraq war,

> Iranian pilots had the edge in training and experience, but as the war dragged on, this edge was gradually lost because of the repeated purges within the ranks of the Iranian military, which removed experienced officers and pilots who were suspected of disloyalty to the Islamic fundamentalist regime or those with close ties or sympathies with the West (Marrett, 2006, p. 106).

Less known is that these purges were not always permanent. In fact, many pilots were "rehabilitated" by the regime when the need to fight Iraq arose. But even then, these pilots' ability to access and develop their experience was hindered. Consider the typical case of one such Iranian pilot, as told by a cohort:

> "Once out of jail and returned to his unit [at the outset of the Iran-Iraq war], this pilot was only permitted to fly with a Weapons System Officer indoctrinated by the regime. Most

> of these were actually young second lieutenants whose training was discontinued by the 1979 revolution. Few were fully qualified officers, let alone fully qualified fast jet pilots, yet they gave orders to the pilots and ensured their obedience" (Cooper & Bishop, 2004, p. 20).

The Tomcat requires a skilled weapons officer in the backseat, to operate the fire-control radar and facilitate the launching of missiles. Having a backseater who is well-versed in political correctness, but not very technically proficient, simply prevents the pilot from employing the F-14/Phoenix combination to its full potential. And since this less-skilled weapons officer is also supposed to lead, the use of the technology is bounded by his scant knowledge of it. For instance, he may prohibit the pilot from a "risky" maneuver or tactic – simply because he was never exposed to it before.

In sum, even though Iran has possessed the main parts of the Tomcat-Phoenix package since 1976, it failed to win full physical and informational access to the technology. They evidently did not rule it. But can the opposite be said of the Americans? After all, they were the ones who designed, built, and have most extensively used the technology – so if anybody would be closest to achieving complete rule, it ought to be them. But to answer this question, we must consider whether the Americans also met a second requirement for anyone seeking technological rule.

Control of access

To truly rule any technology, one must not only access it, but also control the access of others. This is more elaborate than it first seems. Naturally it covers both physical and informational access to a technology. For instance, if one only controls physical access to an

artifact, but not the knowledge about it, it is possible for others to learn enough and just replicate the artifact on their own. And besides involving these two forms of access, it is also important to consider the "sign" or direction of any control-of-access. That is, such control can be positive or negative, and both kinds are needed for complete rule.

"Positive" control-of-access is associated with the ability of granting access to a technology. Ideally, the ruler of a technology should be able to grant both physical and informational access to anyone (especially, of course, to himself). But control-of-access also has a "negative" form, in which the ruler should be able to *deny* access to any and all parties. A good example of someone with both kinds of control is the typical systems administrator in a computer network. She can give users all the requisite permissions to access certain databases – but she can also remove such permissions with varying degrees of permanency. This administrator is also powerful enough to even remove her own access to the technology – although, of course, that would be her last action as a ruler.

Let us return to the case of the Tomcat-Phoenix technology. It is clear from the above definitions that the Americans shared a displeasing feature with the Iranians – the former were not rulers of the technology, either. They certainly had a measure of positive control in that they were able to grant Iran some access to the Tomcat-Phoenix package. But once they gave the technology, the Americans lacked *negative* control-of-access in any thorough way. They simply could not take back all the knowledge and artifacts.

Of course, the United States did manage to impose a limit on the access enjoyed by the Iranians – and this still constituted a sizable degree of negative control. We already mentioned how it stopped the flow of spare parts to Iran, which quickly reduced its number of flyable F-14s, and how Iran was never privy to the technological upgrades that took place after it broke

relations with the US.[49] Yet the Americans also seemed to take additional, and more intrusive, steps through different venues. For instance, in terms of physical access, the Phoenix missiles did remain in Iran – but one Iranian pilot explained how "Hughes technicians had sabotaged 16 AIM-54As at Khatami Air Base before departing for the US" (Cooper & Bishop, 2004, p. 20).[50] And there seemed to be efforts, albeit seemingly improvised ones, to cripple Iran's acquired informational access. A second Iranian pilot reported that "when the Americans left, many of our [US-trained] technicians went with them" (p. 20). Further, there were some unconfirmed reports that "Iranian military officers still loyal to the Shah destroyed the training and test manuals and, more importantly, the coded taped program (AWG9) that ran the fire control system which allowed the F-14 to identify six different targets at the same time and to fire both [medium-range] Sparrow and Phoenix missiles…" (Block, 2007, p. 16).

It would be very surprising if these covert actions did not contribute to the aforementioned reduction in Iran's access to its Tomcats and Phoenix missiles. But true to the theme of this chapter, such efforts were consistently imperfect – even in closing off access to their intended targets. Consider the supply of spare parts. The official flow may have stopped, but Iran did manage to secure parts through the black market. For instance, above we mentioned how US contractors managed to sabotage 16 Phoenix missiles before leaving Iran. But according to the same source, that was not the whole story:

> [Besides those 16 sabotaged missiles,] all the other AIM-54s were safe in their sealed storage/transport cases, and permanently under guard, in underground bunkers at

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[49] As long as any technology grows with time, the denial of upgrades is a particularly unpreventable form of control-of-access. For instance, even if Iranian engineers could have gleaned any and all available information about the Tomcat-Phoenix package before 1980, much significant new information and upgrades to the technology only arose *after* that date. Thus, Iran could do little to avoid such a significant curtailment of future informational access. (Of course, if interceptor-jet technology had already fully matured by the 1970s, then Iran would have experienced no great loss from US sanctions.)

[50] Hughes Aircraft and Raytheon were the two US corporations that manufactured the Phoenix missile.

> Khatami. Ironically, later we repaired all the 16 rounds damaged by Americans – [with] parts stolen from the US Navy" (Cooper, 2006).

In fact, US customs officials suspect that Iran has continuously managed to secure American-made spare parts for the F-14. Apparently, its preferred method is to use front companies to purchase surplus military equipment from the Pentagon itself (Theimer, 2007).

But perhaps a more interesting manifestation of this chapter's theme is how the US, in trying to deny access, may have actually opened unexpected access channels for Iran. Through these, Iranians seemed to develop an indigenous and unique relationship with the Tomcat-Phoenix technologies. For instance, as early as 1981, it seemed that Iran had discovered a whole new use for its F-14s: as "control aircraft, with their advanced radar and electronics guiding other planes to their targets or warning the pilots of Iraqi aircraft attacks" (Block, 2007, p. 16). In other words, the F-14 had become a poor man's AWACS platform.[51] This went against American orthodoxy – in the US Navy, the F-14 was supposed to rely on other planes especially designed for such a role. But this new role made sense for Iran – having few operational F-14s, it could not wantonly risk them in air duels. So this restriction likely opened a new venue of informational access for Iran. Perhaps its pilots discovered that the F-14's radar had capabilities not covered in the training manuals, or perhaps they invented new tactics for the AWACS role. Either way, they would have explored ground not covered by their American counterparts.

[51] Airborne Warning and Control System (AWACS) aircraft usually do not carry any weaponry. Instead they serve as an "eye in the sky" by having a very powerful radar and other detection systems. A popular example is the American E-3 Sentry, which is a modified jet airliner with a large dome on top of its fuselage. This dome houses the plane's radar.

Table 1. American and Iranian control over the F-14 Tomcat/Phoenix missile technological combination

Form of access	
physical	informational
United States: has full access to all artifacts of the Tomcat/Phoenix package as it developed in country (e.g., latest F-14D model); lacks known physical access to Iranian adaptations. *Iran:* has limited access to the package as it stands today; only owns older Tomcats and Phoenixes from the late 1970s; does have ownership of artifacts through modification, adaptation, and reverse-engineering (e.g., its homegrown spare-parts); lacks known access to American upgrades, and has only sporadic access to smuggled US spare parts. Both parties can reverse-engineer artifacts to translate their physical access into new informational access, but the US has little need for it.	*United States:* has full access to nearly all knowledge about the Tomcat/Phoenix package – from all its design schematics, to its optimal operation in combat. Its access to Iranian findings, including combat experience in the Iran-Iraq war, is unknown. *Iran:* has limited access to American knowledge of the package, most of which was originally acquired in the 1970s (see p.); has compensated by developing its own knowledge, from experience gained during war with Iraq, to alternative uses not intended by the US (e.g., using F-14s as AWACS platforms). Both parties can build artifacts by translating their informational access into feasible designs, but Iran's limited manufacturing capabilities may not allow for very sophisticated designs.
Control-of-access for each form above	
+	
United States: full positive control, since it owns all artifacts related to the package (with the exception of Iranian adaptations), and can give them to anyone it wishes. Iran: limited positive control, as it can only give others the early American versions of the Tomcat/Phoenix, as well as its own adaptations of the artifacts.	United States: full positive control, as it can give its knowledge about the Tomcat/Phoenix package to anyone it wishes. Iran: limited positive control, as it can only share basic knowledge about the early versions of the technology, as well as its own improvised findings; however, it lacks core knowledge from the original designers, and from the more extensive experience of the US military.
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United States: at present is none, outside of military or covert action to damage the technology. The feasibility of such action is unknown, but can be assumed to carry serious risk of conflict. In the past, it was able to sabotage a portion of Iran's equipment, but with effects that are unclear in the long-term. Iran: none; it cannot realistically curtail American access to its own artifacts.	United States: none; it simply cannot recall knowledge imparted to Iran or others. Iran: none; it cannot restrict US access to its vast repository of information about the package.

In due time, too, the Iranians apparently managed to convert their newfound informational access into the physical kind. The American embargo not only led them to buy spare parts in the black market, but also to study the F-14's design and reverse-engineer at least some of its components (Cordesman, 1999, p. 161). The result is that Iran appears to have an indigenous capacity to build such parts – according to US authorities, it can produce up to 15 percent of the plane's required spare parts (Theimer, 2007). And this manufacturing ability may also be applied to new technological artifacts. This could well be the case with air-to-air missiles. In 2010, Iranian media reported the country's plans to build an upgraded version of the Phoenix missile, with longer range and enhanced maneuverability (Iran Press TV, 2010).

The above should reinforce the theme that technology is very unruly towards its handlers. At any point in time, the "owners" of a specific technology will find it very difficult to control access to it. They may restrict physical access to it, but the information may still leak to third parties. Or, they may have good control over the informational access, but simply be unable to secure physical access for themselves or others. For instance, they may lack the fuel or other raw materials needed by the technology – and so, without those, all their knowledge is for naught. Further, once a technology is shared by more than one party, no subset of handlers can easily monopolize its manner of usage and future development.

Two counter-arguments against the unruliness of technology

A critic may remark that the above scenarios only apply in cases of conflict among various handlers of a technology. Surely, this critic may argue, if a technology is not being fought

over by its handlers, the above unruliness should cease to exist. To test this counter-argument, let us assume the most optimistic of scenarios. Consider a technology with only one handler. Its user is also its creator, and naturally shares all access to the technology "with himself." In other words, he does not forget previous insights about the technology, and is the only source for any developments. Does this powerful creator-user truly rule this technology? Unfortunately, he also cannot claim to truly rule it – that is, not unless we sacrifice some fundamental premises about knowledge and time.

Let us briefly discuss the role of knowledge. Recall that informational access to any technology is more than just knowing how to operate and maintain the artifact-in-question. It also means knowing the multiple functions of the artifact in realms other than the more obvious ones. For instance, this comprehensive access would mean that the Iranians should know the implications of owning Tomcats to the balance of power in the region (see p. 73). So, if our hypothetical lone owner of the technology is to truly be its ruler, he would also need to know the full spectrum of its functions across realms. This is impossible for humans to accomplish, even with the most comprehensive of testing. Simply, no one person or institution has garnered enough interdisciplinary knowledge to exhaustively explore the causal implications of a new technology. Based on this alone, the notion of technological rule seems very hard, if not impossible, to attain.

Of course, we can argue back. Perhaps as time passes, our lone handler will discover more and more of the significant effects of his technology. This is true, assuming a sufficiently enterprising and competent handler of the technology. But if we accept that possibility, then we must also accept that, at any one point in time, the lone handler is likely to know *less* than he will in the future. In other words, his present informational access is always curtailed to some extent

(otherwise he could not possibly enhance it in the future).

To this, we could still argue that, at some point, it may be possible for the lone handler to garner all *significant* knowledge about the technology's spectrum of functions – and that any leftover knowledge is probably not bound to be of much value. So for all practical purposes, it may be possible to rule a technology with enough effort. This hopeful reply, though, hinges on an assumption that is too optimistic. Namely, it supposes that the lone handler can ascertain when the well-of-knowledge about his technology is nearly tapped out. In other words, at some point in his learning, this handler would know that there is not much else to learn. But this is likely to be a logical impossibility – since whatever is still left in that well-of-knowledge is, by implication, strictly *unknown* to the lone handler. So if something is unknown, how can he or anyone else know its remaining quantity? Further, even if the lone handler was unable to find anything new about the technology for decades, this would merely constitute an absence of discovery. It would never guarantee an absence of things to be discovered.

In sum, technological unruliness is persistent even if there is no conflict whatsoever among the handlers of a technology. In particular, informational access seems subject to two possibilities. It may just be impossible to exhaust. Or, if such access is somehow exhaustible, it is impossible to even verify such exhaustion.[52] This quandary may seem like an intellectual dead-end. After all, if all technology is just unruly, what is there to figure out?

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[52] Note that we omitted discussion of whether physical access to a technology is indeed fully attainable by a monopolistic handler. This was done to save space, and to focus instead on the limitations to full informational access (which seems to be more interesting and pernicious). But this does not mean that physical access is without difficulties even for a monopolistic handler. He will need to have enough resources to secure all the supplies, spare parts, and other accessories to fully access the features of a given technology. Needless to say, this is rarely an easy task.

There is plenty left to discover. Even if unruliness is a constant feature of technologies, we can examine the various ways in which it manifests itself. Learning from the case of the Iranian F-14's, we should ask the following questions when encountering any new technology:

Who are the handlers of the technology? Do they comprise one monolithic group, or can they be classified into distinct sets?

What are the interests and capabilities of these handlers?

Do they all have equal access (physical and informational) to the technology, or not? Is one group of handlers able to access some features or knowledge that others cannot?

Are there inherent limitations to the access that *all* handlers may have?

Can any handlers control the access to the technology, in either positive or negative terms?

Finally, given all the recognized handlers and their characteristics, is it possible to expect a certain pattern in the technology – say, in its usage or development?

Let us now turn to the technology of nationalism, and examine its unruliness.

Who controls nationalism?

Here we can follow a similar pattern as with the case of the Tomcats and Phoenix missiles. That is, first we ought to identify the handlers of the technology. In the case of nationalism, we can identify two major subsets of handlers: the elites and the masses. For our purposes, we can define the elite as the portion of a country's population distinguished by three broad characteristics:

1) Elites should possess some form of capital (human, financial, or social) that distinguishes them markedly from any other elite group, and certainly from the average

member of the masses. Thus we can qualify as "elite" such groups as the military, industrialists, the media, and the intelligentsia.

2) Any elite group should represent a minority, even if barely, of the total population. This assumes that societies are overwhelmingly characterized by an uneven distribution of capital (in its various forms) across the population. So, it will routinely be the case that the few own more capital than the many.

3) The elite should regularly act politically as a group. That is, they should be able to voice their interests in a cohesive and logically-consistent way, and use their joint influence in pursuit of said interests. For instance, an industrial elite may pool funds to support the political campaigns of friendly politicians. Or, a group of intellectuals may publish a series of manifestos, which are mutually-reinforcing and express a clear political preference.

Note, however, that the elite's cohesion must not be confused with either its perfect unison or complete distinction. We consider each in turn. An elite group need not be perfectly united in any and all matters. Its members certainly can disagree on a great many things – but it is the scope and character of these disagreements, not their mere number, that matters. For instance, the military elite may disagree on whether to purchase weaponry that is predominantly offensive or defensive, on whether a professional army is preferable over conscription, or on which of two opposing countries presents the greatest threat. But these disagreements will rarely breach certain boundaries. As a rule, the military will not internally debate whether it is truly needed to the country, whether its size should be preserved, or whether the country deserves to be defended by it. All these things seem obvious to the casual observer, but should not be taken for granted. They represent steady preferences on the part of many elites, which make it easier to theorize their

behavior under many conditions.

Also, we should not smuggle the added assumption that the elite's interests are totally distinguishable from those of the mass or general population. The interests of the elite and the mass may not only be characterized by a lack of conflict, but they can also enjoy a great deal of overlap. Elite industrialists may prefer an economy with little volatility in growth and employment, much like the general public. Or the intelligentsia may prefer more government investment in primary education, which the mass is doubtful to oppose. Of course, this is not to say that such overlap will be wide or persistent – but it is certainly not out of the question. The elite's interests are simply free to coincide, or not, with those of the general public. So we should not exclude either possibility in any future theorizing.

Let us now turn to the other subset of the population. The mass is defined by the absence of all but one of the above characteristics. That is, they do not hold any sizable capital, both in absolute terms and relative to the elite (with one exception, which we discuss below). The "mass" also does not earn its name by constituting a minority. Their numbers will always surpass that of the elite, and may even swamp it in societies with a very skewed distribution of capital.

The mass, however, does share the third characteristic of elites. Its members have the ability to act as a domestic political entity, and so can express their joint preferences in unison. Note that this ability requires the mass to have a minimum of social capital, or else it would be plain difficult for it to gather and derive a coherent set of preferences. Still, the same two admonitions apply as with the elite. The mass, too, can disagree internally (and heartedly) on many matters. For instance, artisans may disagree with farmers on certain economic policies like trade liberalization. And the mass is free to want much of the same as the elite (or not). But again, we must not presuppose that the two groups will be at odds with each other.

Let us know consider the relevant interests of each group. Of course, these will easily span many issue-areas, too many and too varied for our discussion. So, for the sake of brevity and relevance, we can focus on the area of security. Here, both the elite and the mass can be said to share the same broad concerns. The two groups will seek the security of the nation-state, especially when it comes to its territory. They will prefer that its borders are respected, and that any neighboring threats are kept contained – and perhaps neutralized, if altogether possible. This commonality of interests can be assumed to persist even if we allow for diverging interests in other issue-areas. For instance, imagine that a military-capitalist elite wishes to profit financially from war against an outside threat. Perhaps they want war to sell more weapons and supplies to the government. If so, this greedy elite will still share the same concerns as above. That is, they will still prefer for any war profiteering to happen while the state's borders stay unbroken by any enemy advances, and while the outside threat is nonetheless kept contained. The reason is simple. Any deep breaches into home territory could seriously threaten their profiteering hopes. At best, the economy will falter as factories are seized by the enemy; and at worst, the flow of government funds will freeze as the state itself is dismantled by the occupier. Thus, territorial security is usually in everyone's interest – even if "everyone" includes some pretty selfish groups.

Having established the main handlers of nationalism, we can turn to the issue of access. We begin with its physical form, which requires that we first answer a preliminary question: where does nationalism reside physically? After all, without knowing its location, we cannot begin to decipher who has physical access to it. Here we are clued by the main focus of this work – the role of nationalism in conflict. This focus implies that we are concerned primarily with the nationalism that drives men to join and fight in armies, which in turn requires for the love of

country to reside somewhere "inside" these men. So, if we have to pinpoint a physical location for nationalism (or what comes closest to such location), we have to turn to the affective make-up of the mass, not the elite – since it is the first group, not the second, that provides the bulk of soldiers for war. By deciding on this location, we can tell much about relative access to nationalism.

For instance, we can easily tell that any elite has no *direct* physical access to the technology. So it cannot simply rule nationalism at will. Instead, the elite requires an intermediary, which naturally must be the mass. Only the latter has such direct access. Only the mass can tap into their love of country and feel compelled to risk their lives for its safety. Needless to say, this is a direct contradiction of the stereotype commonly held about elites and nationalism. The elite may use the people's sense of nationalism to pursue grand schemes, but not by turning the mass into a passive party in the process. Instead, the mass is a very active participant. It is the only one that can operate the technology.

Note, of course, this says nothing about whether the mass actually *knows* much about nationalism or its best uses. The nationalists "own" the sentiment, but they lack answers to many questions – Why do we have it? What created it in the first place? How can it be used to best defend the motherland? Such kind of knowledge is firmly in the realm of informational access, irrespective of the mass's intimate physical access. On the other hand, the elite shares the ignorance of the mass – but only up to a point. It too does not know the inner workings of nationalism, so it ignores how to create it "from scratch."[53] That said, the elite has more than a

[53] This is an important point commonly neglected by scholars, who often ignore the results of their own work. Simply put, as of the turn of the 21st century, there is no definitive scholarly work that has "cracked" the mystery of how nationalism emerges. Why scholars would ever expect elites to possess this knowledge, or act as if they possessed it, is another mystery itself. A more sensible approach is to assume that elites, especially those in previous centuries, had equal or lesser knowledge than we have today. So, any elite attempts to promote nationalism cannot be seen as guided by any special knowledge – instead, those efforts were only tentative (and partly uninformed) tries to foster the development of the technology.

few inklings about how to increase the likelihood that nationalism will emerge – by teaching a common language at schools, or promoting uniform cultural practices. These practices are not guaranteed, but they seemed helpful in several cases, from the French to the American.

Further, the elite holds better informational access in the areas of both derivative and complementary knowledge. It may only know halfway about the creation of nationalism, but it knows plenty more about its employment. Unlike the mass, the elite can devise formalized systems of recruitment, and organize the newly enlisted into a fighting force. It also knows the ways of war, at least relative to the mass – this includes the array of strategies and tactics to be employed in combat, as well as the political dimensions of negotiating concessions and ending hostilities. Some of this knowledge is not strictly about nationalism, but it is partially derived from its emergence. For instance, the "invention" of the nationalist soldier opened doors of possibilities that were previously closed to tacticians in pre-nationalist times. Consider the role of the skirmisher – a soldier who fought on his own, far from friendly troop formations, and was tasked with harassing enemy troops. Without nationalism, the skirmishers were few in number – alone in the field, there was a concern that they would simply desert their armies altogether. But with nationalism, the skirmishers became a more trusted, and effective, element. So militaries were able to develop more sophisticated tactics for their employment, as well as increase their number in the field (Esdaile, 1995, pp. 57-58).

On the other hand, another portion of the elite's knowledge is of a complementary nature. That is, to employ nationalism effectively, the elite brings together needed knowledge from independent fields of expertise – like logistics, strategy, and even engineering. These fields have existed without nationalism, but added to that technology, they simply enhance its use. For instance, knowledge of engineering is helpful in building roads and bridges that will

accommodate the transit of the new mass armies, or in designing weaponry that is produced both cheaply and quickly to field those armies. In sum, both the elite and the mass have their own form of access to nationalism. The issue, of course, is that neither party enjoys complete access – to operate the technology effectively, they need each other's participation.

It is fair to question whether this is truly the case. Must nationalism always be subject to the divided rule of its handlers? Or, can either the elite or mass simply acquire the other's access? Note these are questions about control-of-access. Let us first consider the positive variant of that control, or the ability to grant access to oneself or others. The mass has physical access, but it is not clear how it can give the same access to the elite – even if it wanted. Simply, the mass cannot detach itself from nationalism, and leave an ethereal version of the technology in the hands of the elite. Nationalism is physically embedded in their hearts and minds. Sure, a compliant mass may at times seem like a throng of automatons, but each nationalist citizen has engaged (implicitly or explicitly) in the act of consent. And as long as people have wills, such consent is always open to their re-evaluation. This has been the historical norm, and nationalists have made their participation contingent on a host of factors – from the ethnicity of the elite, to whether the war is offensive or defensive.

Turning to informational access, can it also be neither given nor gained? It is clear that knowledge can be acquired – after all, that is how the elite procured it, through learning. But consider the degree to which the mass can hope to rival the elite's informational access. Much of this access depends on specialized human capital, which by definition, the mass just lacks. Some members of the mass may hope to acquire some of this knowledge, but their disadvantages are many. To employ nationalism effectively, one needs the most developed knowledge, but this kind also requires an adequate conceptual foundation. For instance, engineering requires a grasp of

physics and mathematics – so a full-fledged member of the mass cannot hope to become a good engineer by simply picking up an engineering textbook. This person would need long exposure to an educational environment that offered such foundational knowledge. Naturally, such exposure requires a significant investment of capital, which is precisely what the mass is lacking. Further, even if this complementary knowledge is acquired by exceptional members of the mass, these will find it very hard to spread it across their cohort. Such diffusion requires scores of well-trained educators, and plenty of learning places. The sum of these difficulties is clear: even with the best of efforts, the average informational access of the mass will tend to lag behind the elite's.[54]

[54] One may wonder if the elite cannot invest enough of *their* capital to boost the mass's informational access to nationalism, and thus let it equal their own. The challenge to this prospect is simple. This option requires for the elite to stop caring about their privileged place in society, and spend their capital for the benefit of the mass – even if they care about the country as a whole, such suspension of selfishness is far-fetched. To my knowledge, there are no such cases of self-sacrificing elites. What is possible is for the elite to invest in the general education of the mass, but the relative gap in knowledge will always prevail.

Table 2. Elite and mass control over the technology of nationalism

Form of access	
physical	informational
Elite: poor or none; cannot directly access the nationalism of the population, and so any access requires an intermediary; nonetheless, it may have feelings of nationalism among its own members, but it is unclear whether those feelings are articulated in the same manner as by the mass. *Mass:* full; can tap into the emotions of nationalism to produce individual commitment toward large-scale social projects. Neither party can "reverse-engineer" nationalism with certainty of success; one may secure physical access to a nationalist, perhaps to ask him questions about what drives his nationalism, but this does not guarantee knowledge of how to fully engender nationalism in others.	*Elite:* moderate; does not know how to create nationalism "from scratch", but knows two things: how to increase the likelihood of fostering nationalism (by spreading phenotypes that may trigger matching), and how to use the mass of nationalists in organized social projects (like forming and operating an army). *Mass:* poor or none; lacks knowledge of how nationalism arose in its members, or of how to best employ it in ways that are organized and systematic; lacks human capital to improve such informational access to the level of the elite.. Neither party can outright "create" nationalism by converting informational access into physical access – although the elite can make informed attempts (see above).
Control-of-access for each form above	
+	
Elite: none; it cannot give itself access to the population's nationalism (see "physical access" above), and much less hope to grant physical access to anyone else. *Mass:* none; it cannot grant direct physical access to the elite, because nationalism must reside inside its own members and cannot be extracted; so, the general population must always act as intermediaries between their nationalism and the elite's intentions.	*Elite:* limited; it cannot transfer its already-curtailed knowledge of nationalism to the mass, because the latter does not have the complimentary human capital to process it; however, one elite can spread its know-how to other elites, which in turn can attempt to foster nationalism among their own masses. *Mass:* none; it cannot grant access to knowledge it lacks itself.
–	
Elite: none; it cannot restrict the masses from tapping into their own nationalism. *Mass:* full, with respect to the elite; it can withdraw consent to the elite's project proposals, and thus curtail the latter from accessing nationalism.	*Elite:* limited; the elite cannot restrict very well its knowledge of how to help foster nationalism, or use it in social endeavors. Such knowledge is "leaky" because it is often spread through print literature to multiple agents of the state, and because its implementation is very visible. *Mass:* none; it cannot restrict or tamper with the elite's knowledge of nationalism.

In sum, neither the elite nor the mass have positive control-of-access over nationalism. What each has, it cannot fully share with the other. Next, let us consider the possibility of *negative* control-of-access, or the ability of a party to deny access to another. From the above discussion we can infer that each party is in the position to deny its own form of access to the other. For instance, the mass always "stands" in between the elite and nationalism, so it cannot help but prevent the latter from gaining physical access to the technology. As to the elite, it can simply keep restrictions over the mass's informational access by not sharing its knowledge. This is fairly easy to do. It can refuse to build libraries for the masses, or prohibit non-elites from attending its specialized schools.

Negative control-of-access, however, does not pertain only to how the elite may prevent the mass from gaining informational access – or how the mass does the same to the elite's physical access. The concept also covers how either party may (or not) be able to scale back the other's existing access niche. For example, can the mass eliminate the elite's informational access? This is also important to consider, because if such kind of negative control-of-access is possible, it might be possible for one party to leave another with no access whatsoever. The result would be the former party's clear, albeit relative, dominance over the technology of nationalism.

However, such kind of access-negation is not possible either. On the one hand, the mass cannot force the elite to simply "forget" all it knows about nationalism. Simply put, knowledge is very sticky. Recall a similar thing happened between the United States and Iran – once the US had decided to teach Iranian pilots how to fly the Tomcat and shoot Phoenix missiles, it could not simply recall the imparted knowledge. On the other hand, the elite also cannot remove nationalism from the hearts and minds of the mass. Certainly it cannot "erase" the mass's

existing allegiances. The elite, however, can try to replace those allegiances – but again, the same issue arises as with its attempts to institute nationalism. Sometimes the new allegiances do take hold, and sometimes they do not. Moreover, when those allegiance-replacement efforts are occasionally successful, the reasons for such success are largely unknown to both the elite and outside observers.

In sum, nationalism also preserves its technological unruliness in terms of control-of-access. It consistently thwarts the efforts of any party to control the access of others, just like it does not let anyone gain both complete physical and informational access. The operational implication is clear. To achieve any effectiveness in the use of nationalism, both the elite and the mass must agree to complement their forms of access. This raises the issue of conditionality. That is, under what conditions is the mass more willing to cooperate with the elite, and so give it indirect access to nationalism? Further, how does this conditionality affect the relationship between countries, especially the outcome of conflict between them?

To answer the first question, recall the earlier discussions in this study. In chapter X, we defined nationalism-as-technology as imbuing a citizen with concern for his nation's security. Further, we understood that defensive operations are linked to national security with less uncertainty than offensive operations – a point that is hard to argue against. Thus, if we accept that elites cannot single-handedly operate the technology of nationalism, and need an agreement with the mass for fuller access, then defensive operations will be more likely to secure such agreement. That reasoning leads us to the following proposition:

Proposition 2.1: A nationalistic army will perform better in warfare that is strategically defensive as opposed to offensive

Note the proposition only pertains to the strategy of war, not necessarily to any tactical actions. For instance, if the enemy invades the motherland, a strategy of defense may involve several tactical offensives. The nationalist army may need to launch counter-attacks to weaken the enemy flanks, or drive deep into its rear to cut-off the invader's flow of supplies. These actions are not purely defensive, but they form part of fighting meant to dislodge enemy forces from national territory, which is a broadly defensive plan. Similarly, a war of conquest may involve repeated defensives to fend off the occasional attacks by the invaded, but it is unlikely that such war would be seen as defensive in nature. At any rate, it bears emphasizing why this offense-defense distinction is theoretically important – because nationalism is a technology with divided access. If that was not the case, the elite could simply appropriate the mass's nationalism, and trustingly send the troops to any war irrespective of goal.

At the same time, we should avoid an undue simplification of the proposition. It does not say that nationalistic armies will be completely lousy at strategically-offensive war. Given the preceding discussions, there is nothing to justify such an extreme position. Instead, if the proposition holds, it should be possible to see a *performance differential* at play. A nationalistic army simply ought to perform much better when defending the nation, as opposed to attacking its neighbors – but we have not theorized how big this difference should be, nor what are the absolute levels of offensive and defensive advantage conferred by nationalism. Still, from the bulk of the previous discussions, we should expect nationalism to endow armies with *some* advantages that can still be applied offensively. One clear case is irredentist offensives, in which a nation seeks to "liberate" territory occupied by its members in a neighboring state (see them discussed more in-depth in chapters X and X). But even naked offensives can enjoy a limited

bonus from nationalism. For instance, an army could wait for many years of successful recruitment before launching an offensive. So, when the war is launched, the leadership does not need to worry about having enough initial troops. Further, leaders can restrict the flow of information to prevent troops from knowing the true offensive nature of the conflict. Of course, information is leaky, and sooner or later the troops are bound to re-evaluate the strategic goals of the war – especially if it involves conquests of far-off lands, or prolongs itself after the main enemies have been defeated. In short, the usage of nationalism becomes more uncertain and risky during offensive warfare, but we should not conclude there is no offensive bonus from owning the technology. Simply, this bonus should always lag behind a corresponding defensive one.

We can deduce one more proposition from this line of reasoning. If nationalism confers a performance bonus to an army (albeit a highly variable one), then we should expect its repeated employment to yield certain outcomes in military conflict. This leads to the following:

> *Proposition 2.2: All else aside,, a nationalistic army will defeat armies that are either non-nationalistic, or less nationalistic than it.*

Of course, nationalism is not the only determinant of victory in war. Perhaps it is not the most important one, either. Certainly this was so before the 18th and 19th centuries, when the technology was not widely employed by states. And maybe it will be so in the far future, when robots and other such "hard" technologies play a larger role in war. But even in the wars of the 19th and 20th centuries, in which nationalism appeared to play a serious role, any empirical testing ought to account for confounding factors. That is the basis for the proposition's qualification that it applies "all else aside."

Notice this is not necessarily the same as "all else being equal." One implies the other, but not vice versa. When we keep all else equal, either by the careful choice of cases or through experimental control, we are aiming to keep "all else aside" by reducing the variability of any confounders – so that only our variable-of-interest is responsible for any findings. For instance, we can find wars in which confounders (e.g., industrial production, population size) vary little across the combatants, and then turn to see if these parties exhibited different levels of nationalism.

But there is another way for all else to be set aside, and it does not involve controlling the variability of confounders. One can look for cases in which the confounders may vary at face value, but they are mitigated or rendered irrelevant by conditions particular to the chosen cases. For example, we may deem industrial production to greatly contribute to military victory, but may find a war in which two large countries vary widely in that measure. Yet, both of those countries' industrial production may be large in absolute terms, as well as above the threshold for which they can easily fulfill their needs for military hardware. Thus it matters little that their industry production varies – its effect is rendered irrelevant by each country's comparable ability to field weaponry. Conversely, we may find a case in which two undeveloped countries also vary widely in their industrial production figures, but neither has attained even the basic manufacturing ability to build weaponry. (Perhaps their industries can only produce consumer goods for export, and not much else.) Granted, this sort of detailed evaluation of confounders is hard to conduct across a great many cases. But it will inform the choice of case study in the following chapter, and thus complement any large-n quantitative testing.

At any rate, this second proposition serves as a needed counterweight to the first. Recall the first proposition tells us that the performance of nationalism in battle is "tricky" and

dependent on a country's ability to unify its access over the technology. Meanwhile, the second puts this trickiness in perspective – yes, the technology does not work well under all circumstances, but it should still exhibit enough absolute advantages to contribute to war victories across the board. Perhaps it even helped attackers in a few offensive wars of short duration. Of course, this speculation must yield to an empirical verdict. We turn to produce one, albeit in provisional form, in the next two chapters. Unlike the testing in the previous section, the research here will transcend the boundaries of just one country. Among other things, we will look at the battles waged by a small Italian kingdom against a great European power, at a failed colonial adventure in Africa, and at what statistics has to say about nationalism and victory in 200+ years of military conflicts.

Chapter 3

Nationalism at war – an empirical test of its defensive bias

This chapter will test proposition 2.1. To recall, it states the following:

Proposition 2.1: A nationalistic army will perform better in warfare that is strategically defensive as opposed to offensive

Here the goal is to offer two cases that illustrate how nationalism has such a defensive bias. The two cases are selected carefully, but they are not what political scientists call "hard cases." Nor they should be so. Instead, they are illustrative cases stemming from a plausibility probe, and for good reason. But to explain this reasoning, let us first examine the logic and consequences of hard cases in political science, as these reveal some problems which set the stage for an alternative approach to case selection.

The trouble with undue hardness

The promotion of the "hard case" is a widespread tendency among contemporary political scientists who delve in qualitative research. The hard case can be construed as one that is least likely, or very unlikely, to confirm a given hypothesis. Its rationale is as follows:

> The least-likely case study relies on what Jack Levy has labeled the "Sinatra inference": If the theory can make it here, it can make it anywhere. Least-likely cases follow a Bayesian logic: The more surprising an outcome is relative to extant theories, the more we increase our confidence in the theory or theories that are consistent with that outcome.

> In the strongest instance of such logic, if a theory of interest predicts one outcome in a case, if the variables of that theory are not at extreme levels that strongly push toward that outcome, and if all of the alternative hypotheses predict a different outcome in that case, this is a least-likely case for the theory of interest. *There are few examples of a theory surviving such a perfectly least-likely case*, but the Bayesian logic underlying this kind of inference applies as well to a case that, although not difficult on every dimension, is nevertheless hard enough to constitute a tough test (Bennett & Elman, 2007, p. 173, my emphasis).

Note the italicized phrase above – few of the very hard cases are ever confirmatory. This should come as no surprise. We live in a complex social world with a myriad of interacting and contesting forces – for any of these forces to singly determine an outcome, and overwhelm the effect of all other forces, is rarely (if ever?) seen.[55] But in political science, an irony happens: the practitioners of "hard cases" themselves comprise a hard case. That is, despite the conceivable rarity of any hypothesis surviving very hard cases, there is a surprising amount of *confirmatory* hard cases in the literature. In fact, a very clear pattern emerges:

> …the researcher tells the reader that one or more of the cases selected for narrative exposition are, in fact, "hard cases" for her theory. It is then argued that received theories predict that the causal mechanism advanced by the author would be especially unlikely to be found in these "hard cases." *Invariably*, however, the historical narrative shows that the author's proposed causal mechanism is at play or that it trumps other factors stressed by existing theories ("surprisingly")…the reader can also be confident that the researcher would not present a developed "hard case" narrative unless it could be rendered in a way that seemed to support the claims of the researcher's preferred causal mechanism. So readers may be forgiven for thinking that talk of "hard cases" may be as much a rhetorical as a defensible methodological strategy (Fearon & Laitin, 2008, pp. 761-762, my emphasis).

The authors meaning of "invariably" above deserves mention, even though they keep it to a footnote:

> Though they may exist, we are not aware of any published paper or book in which the

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55 See Jervis (1998) for examples of complexity in social science, and international relations in particular.

> author asserts that X is a hard case for the preferred theory, and then finds that the case does not support the theory (p. 761, 8n).

Effectively, then, political science is littered with "hard cases" that just happened to pan out. This raises two possibilities. The first, and more cynical, is that political scientists are conveniently selecting cases that confirm their hypotheses. In other words, they exhibit a worrisome form of selection bias. The steps can be seen as the same for each of the suspects. A pool of confirmatory cases is first considered, consciously or not, and those which seem the "hardest" are selected for study. Thus, researchers do get to consider the merits of their cases – for instance, they will gauge the fitness of surrounding conditions, as well as the apparent value of confounding variables. But the *sequencing* of criteria evaluation makes all the difference. As their first criterion, researchers select on the (already known) outcome of the case.[56] All other criteria follow and are amply justified in the written study, but the selection bias has already taken place.

The other possibility is that political scientists are not biased (or not all the time), and do perform legitimate hard cases. But if so, this has a probabilistic implication. Somewhere, there simply has to be a population of *disconfirmatory* hard cases. Yet these do not see the light of day. Why? Perhaps the distribution channel for political scientists is biased itself. That is, journal editors may prefer only confirmatory studies of hard cases. This puts political scientists in a bind. They must routinely seek very hard cases for their theories, but when the cases are consistently disconfirmatory, their choices are limited. That is, they can only dismiss their current theory, and pick another one that offers a chance of passing a hard case. Questioning the very premise of

[56] To my knowledge, there are no major case studies in international relations that take advantage of our inability to see the future clearly. That is, there are not many studies that select a case based on the fitness of its existing conditions, and then waits for its outcome to emerge in the future. Notice I refer to case studies, not to *experimental* ones, which presumably do rely on uncertainty about the future for honest testing.

selecting "hard case" is not considered.[57] [58]

This is not the place to discern which is these two possibilities is more likely or prevalent. It is also not necessary: either possibility reflects badly on the "hard case" as a suitable criterion for case selection. Either it engenders selection bias by political scientists that eagerly want to see their work published, or it results in scientists who prematurely disregard (if not altogether dismiss) theories that do not pass the hardest of trials. This suggests that the criterion of hard cases be replaced with another one. We can instead select "fair" cases.

What is a "fair" case? The term lends itself to debate, as well it should. But here I consider a fair case to be one that takes into account the *maturity* of a hypothesis or its parent theory. For instance, two measures of maturity are how finely-grained a hypothesis is, and how many tests it has already passed. So, a very precise hypothesis is more mature than a vague or overly general one, and one that has passed a battery of tests is also more mature than an untested or "virgin" hypothesis. In general, the more mature a hypothesis is, the more demanding or harder that its tests should be. At first, a virgin hypothesis should face very easy tests. These tests are akin to plausibility probes, and they are critical. If a theory or hypothesis does not pass these fairly "easy" challenges, we can feel more confident about shifting our efforts to testing other theories instead (Posen, 1993, p. 86). But if a hypothesis passes these easy tests, it qualifies for more extended testing. Its cases thus progressively get harder, and may eventually reach the status of "hard cases." Note this progression will extend the systematic "reach" of a hypothesis – and so, hypotheses that apply across the board, in both easy and hard cases, will then be assumed to be

[57] Also consider that disconfirmatory hard cases, if they were published, would result in an obvious (and reasonable) counter by advocates of the disconfirmed theory. Namely, the latter would complain that the "test was just too hard." Here I suggest a case-selection approach that avoids this problem.

[58] Concerns about publication bias also happen in clinical research, where they appear to receive greater awareness than in social science. General surveys of this problem are found in Hopewell et al (2009) and Easterbrook et al (1991); for a survey of one subfield, gastroenterology, see Shaheen et al (2000). In large-n clinical studies, the bias tends to favor findings with statistical significance.

more mature than those which do not. But the case selection is consistently "fair" in considering tests that are just hard enough for the hypothesis's maturity stage.

There are two advantages to an emphasis on fair cases that consider hypothesis-maturity, over simply hard ones that expect least-likely outcomes. First, the new emphasis would increase the number of prospective cases for selection. Second, this would in turn increase the number of available cases for analysis. Consider the implications. Clearly, we would increase the data available to draw conclusions from. If each case study is akin to a data point, we augment their pool by having "easy" and "moderately hard" cases along "very hard" ones. *This can validate hypotheses that otherwise seem to fail.* For example, suppose there was a pharmaceutical study of a cancer-fighting drug. If such study only chose very hard cases to test the drug, we would pick only patients with the most advanced stages of the disease. Evidently, the drug may then seem to perform very poorly – few drugs can do much against a fully-spread cancer. But those cases were simply too hard, and we risk dismissing a potentially-helpful drug. On the other hand, if instead we selected patients in which the cancer has barely spread, perhaps the drug would perform much better. The researchers could then expand the study to progressively harder cases, until the drug meets cases that unfortunately are beyond its power.[59] At the end, this would give us the "performance envelope" of the drug.

Note, too, the benefits that result even if the hard cases *do* prove confirmatory. In the above example of the cancer-fighting drug, it is better to know its entire performance envelope than to know that it simply beats the worst cancers. For example, the whole performance envelope may

[59] This can be put this in graphical terms. Suppose a diagram in which each case is a data point, the X-axis is the severity of cancer in a patient case, and the Y-axis is the survival rate. One curve tells us the survival rates without the drug, and another curve tells the rate by applying the experimental drug. By evaluating easy, medium, and very hard cases, we can trace a greater length of the curve. But by only emphasizing very hard cases, we are truncating the sample to the highest stages of cancer (say, III or IV). If the drug fails to improve survival rates of late-stage cancer patients, we may be (wrongly) discouraged to see if it can save the lives of earlier-stage patients.

reveal things that an exclusive focus on hard cases do not reveal. Perhaps the drug is of benefit in late-stage cancers, but it is actually counterproductive in earlier stages (the latter of which are captured in the "easier" cases). This could be because late-stage cancers exhibit different properties than early-stages ones, and the drug identifies and capitalizes on those properties. Say, against an early-stage cancer, the drug may not "see" its target, and may instead attack healthy cells and incur harmful side-effects for little benefit. This suggests that the performance envelope lets the researchers transcend the one-dimensional concern over hardness in case selection. Instead, they can examine the shape of the envelope's curve, and possibly create new theories and explanations to account for any oddities found.

Let us return now to the needs of this study. Clearly the theory of nationalism-as-technology is relatively immature – after all, this is its first introduction. Consequently, it makes sense to begin with tests that do not unduly challenge the performance envelope of nationalism-as-technology. Instead, any tests should see if such performance envelope exists in the first place. Note, too, how this coincides with a certain technological logic. If engineers would use a new theory to build some "hard" or material technology (say, a new kind of airplane), the prototype must be shown to fly before it is ever taken through its aeronautical paces. It is just as sensible to apply the same rationale here.

Testing the defensive bias of nationalism

Because of the theory's immaturity, then, the basic approach will be to conduct a plausibility probe of Proposition 2.1. The probe's goal is to showcase cases that effectively illustrate the viability of the concept – that show it "can fly" at all. But note that such probe is actually a two-

pronged affair. In other words, the expectation in proposition requires us to look not for a single outcome, but for a dual one. That is, we should be able to see the performance of a nationalist country in, at the very least, two conflicts – one being defensive, and the other offensive. If the proposition holds, these conflicts should also experience different outcomes. When the nation defends itself, it should do somewhat better than when it launches an offensive. In turn, this dual testing suggests a series of choices that must be made.

The first choice is whether the selected "case" must really be comprised of two conflicts – or can, say, consist of dividing a single war into defensive and offensive phases. I opt for the first path, as the second one runs into at least one major problem. Simply, it is very hard to disentangle a war into neat offensive and defensive tactical phases. For example, suppose that country A attacks country B to conquer its territory. Country B thus would be the defender in this conflict. But suppose that its defensive strategy is comprised of two steps: to remove country A's forces from its own territory, followed by a limited offensive inside A's territory to occupy a limited buffer of land. (Perhaps this territorial buffer is sought to reduce A's future ability to launch surprise attacks in the future.) Can we confidently divide this conflict into defensive and offensive phases that are clearly contrasted? Not necessarily, especially if the two phases happen one right after the other – and certainly if they happen simultaneously (e.g., should country B decide to fend off A's attack while also launching a flanking counterattack into the latter's territory). In terms of relative ease, then, it is better to select two independent wars and focus on the broad strategic intent of the combatants.

The second decision is how to strictly control for the capabilities of the combatants in the two conflicts to be compared. Three options appear. First, we can require that the combatants be equal (or nearly so) in many respects except the variable-of-interest. Second, we can require that

the conflicts involve inequalities that work against the success of the hypothesis (which amounts to choosing very hard cases). And finally, we can allow for a range of conditions that allows both equalities and inequalities in the capabilities of the combatants. I choose the third alternative and explain why.

It is clear that the first choice would be unduly strict towards the range of acceptable conditions. For instance, if this was an experiment in physics or chemistry, it would be ideal (and often possible) to control for a host of confounding variables – from the purity of the air in the lab, to its humidity, as well as the presence of any solid particles on surfaces. But in social science, any historical cases do not happen in a sterile vacuum, and confounders are usually the norm. Thus, picking cases involves a trade-off between strict variable control and case availability – the more strictly we want variables to be controlled for in our cases, the less of such historical cases that will be available. The approach chosen here is intended to find an optimal balance between those two concerns. I do not avoid the "messiness" of historical cases, but instead aim to pre-select the desired range of any interfering confounders, and to pick any case within that larger pool of candidates.

Already we noted that two wars will be sought. Since the objective is to evaluate Proposition 2.1, an ideal confirming outcome would involve one defensive war in which nationalism contributed heavily to victory, and one offensive war in which it actually failed to secure such victory. Since we reject the "laboratory" mentality of offsetting the variability of confounders, we need not limit our candidate selection to pairs of war in which the combatants were equal in all possible respects, and in which at least one combatant was endowed with nationalism.[60] Instead, there are acceptable ranges of cases with uneven balances, but what is less obvious is

[60] It would be fine if the relative levels of nationalism for the two combatants is the same, but the *absolute* level of nationalism must be sufficiently high to conclude that at least one combatant is indeed endowed with the technology of nationalism. Otherwise, we may be simply evaluating a war in which two countries fought largely without any nationalism, even though they exhibited the same (low) level of it.

that the *direction* of such ranges changes from defensive to offensive conflicts.

If a nationalist country A defends itself against an attacker B, we can accept the following: cases in which A has either equal *or* weaker overall capabilities than B. The reason is simple. If nationalism indeed is a very helpful technology for defense, then we should expect it to matter even when A would be at a disadvantage against B. Of course, the greater the relative disadvantage suffered by A, the more impressive would be its victory against B. At the same time, though, we do not strictly require a very lopsided balance of power against A. In fact, such a severe imbalance may even constitute a case too "hard" for nationalism to crack. Nothing so far has hinted that nationalism is an omnipotent technology, and it is assumed to always compete with other technologies of war (especially hard ones, like armored vehicles and artillery). So in picking a very hard case in which the odds are stacked sky-high against A, we may not even be able to discover if the technology of nationalism worked as Proposition 2.1 suggests.[61] We would simply disconfirm the idea that nationalism is all-powerful, which never formed part of our theory-building in the first place.

This valid concern of avoiding *undue hardness* in testing, though, must tackle an equally valid question in this study on nationalism: just how hard of a case is "too hard"?[62] The answer

[61] An admittedly extreme case is helpful here. Imagine that country A is very nationalistic, while B is not. The latter country knows this, and deduces that it will lose an offensive war against A. Country B may then decide to enhance its capabilities in ways that seriously upset the balance of power between the two countries – for instance, it may acquire several nuclear weapons. If country B then decides to attack A with those powerful weapons, we may be witnesses to a short, bloody, and one-sided conflict in which A capitulates. On paper, a naïve researcher may conclude that this loss by A constitutes falsifying evidence of the role of nationalism as a defensive technology. After all, A's nationalism could not resist country's B much superior capabilities. But he would have simply selected a case that fell squarely outside the "performance envelope" of nationalism, as well as many other technologies. So it is helpful to not carried away with a wish for very hard cases that could short-circuit research into new theories and hypotheses.

[62] In determining what kind of a case is "too hard", we must also fight a looming temptation – to check for the outcome of a conflict. That is, a disconfirmatory outcome would presumably be a clear sign that the case was too hard. But delving into outcomes would only take us back to the problem of selection bias in hard cases (see p. x). Of course, it is difficult to dismiss outcomes in famous wars (as we already know what happened). But in lesser-known conflicts, we often have the benefit of approaching them from a position of ignorance, and this is an asset. It gives us the freedom to select on the initial conditions of the conflicts, and focus on those conditions over the final outcome – which, if the conflict is very unfamiliar to us, will be largely unclear at the time of case

cannot be precise, especially since we lack knowledge of the power of nationalism relative to other technologies. Without that, we simply cannot pick cases in which nationalism should be able to overwhelm other technologies or not. In fact, social science is hard-pressed to even describe the *absolute* power of nationalism in security. But what can be said is that we can exclude wars with obvious and gross imbalances of power among combatants. For example, we should be skeptical about picking a case in which a small nationalist country defends itself against an industrial behemoth, and in which the latter wields an army, say, ten times bigger than the defender. If the small country is unsuccessful in its defense, we would be hard-pressed to blame nationalism for failing to counter such an onslaught.

On the other hand, consider those cases in which the balance of power is pretty even among combatants. Of course, such cases free us from much worry about confounders, and let us focus on just nationalism. But to reiterate a point made above, their issue may well be availability. It may be just too difficult to find a war with a perfect balance of capabilities among its participants, and in which one combatant clearly employs nationalism in a distinct offensive or defensive manner. Instead, we can enlarge the pool of candidate cases by taking advantage of the fact that wars with power imbalances are also fair game – just as long as the imbalance against the defending country is not extreme.

Turning to the other case to be selected, one in which the nationalist country shifts to the offensive, we also can entertain a range of candidates. But here the range shifts in the *opposite* direction – we should consider wars in which an aggressor country A, endowed with nationalism, has equal or *stronger* capabilities than another country B. The reasoning is the same as with picking a defensive nationalist war. If a nationalist country A is more powerful than its opponent B, but its nationalism cannot be engaged successfully in the offensive, then we have some

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selection.

evidence that nationalism is relatively ineffective in attacking others. On the other hand, if country A was simply weaker than B in overall capabilities, a losing offensive war may *not* be justifiably blamed on nationalism. It may be blamed on, say, B's large industrial capacity or superior military weaponry – which allowed it to overcome anything that A was able to throw at it.

Such range seems like a manageable requirement. But again, we should consider the negative implications of picking a case that approaches a severe imbalance of power (i.e., a war in which a nationalist aggressor A is much more powerful than country B). A parallel can be drawn with the above range for acceptable defensive wars. Recall that in picking a defensive war, we want to ensure that the balance of power is not so lopsided against a defender A that nationalism is not given a "fair" chance at working effectively. Likewise (but perhaps more counter-intuitively), in picking an offensive war, we should avoid any gross imbalance of power that does not give A's nationalism a fair chance to *fail*. For example, if A was a titanic nationalist and industrial power, and B was simply a tiny and undeveloped country, we could not be sure that any victory by A is to be pinned on its nationalism.[63] Perhaps A just had an overwhelming strength in numbers, so its victory may have had little to do with nationalism. In sum, the recognition that a range of candidates is acceptable must also be coupled with the recognition that fair judgment is also required. We are clear that any nationalist aggressor A *cannot* be weaker than a country B, which is the easier thing to figure out. (We can compare the two countries' armed forces, their industrial production, population size, and so on.) But on the other hand, it is harder to identify the point at which A has become "too" strong relative to B – which in principle is acceptable, but could easily plant doubts on future findings. At any rate, the

[63] A good example would be the US invasion of Grenada in 1983. Also applicable would be the two Persian Gulf wars waged by the US against Iraq in 1991 and 2003, although the imbalance between combatants is much less than in Grenada's case.

solution, as with the selection of a defensive nationalist conflict, is to avoid any gross imbalance of power between a nationalist attacker A and its weaker counterpart B.[64]

Moving beyond the combatants' capabilities, a third decision pertains the other variables of concern: the identity of the nationalist combatant(s), its (their) level of nationalism, the clarity of any war outcomes, and the time periods under consideration. Again, we can opt to control or select strictly for those variables, or allow for inequalities or variability across the two cases. Here my choice is strictness, on the basis of relative ease of implementation. That is, unlike the capabilities of combatants, which are several and hard to control, it should be easier to limit the variability of three factors across the two cases. Below I cover the implications of controlling each of the above variables, and then discuss how the case selection accomplished such controls.

In terms of identity, the nationalist country should ideally be the same that fights defensively in the first chosen war, and offensively in the second. By choosing the same country, we promise to control for some domestic variables, like the country's military traditions and its military-civil relations. (Note, of course, that this is a promise and not a guarantee.) Thus, the study of the two wars should involve either two or three countries: the nationalist country-of-interest, plus either the same combatant across the two wars, or a different combatant for each war.

We also want to select a country that evidently has harnessed the technology of nationalism. This means two things. It must have a sufficiently high level of nationalism, so that we should readily recognize its signs – adequate levels of military recruitment (either through volunteerism or conscription with low absentee levels), and popular support for national security goals (at least for defensive ones). Further, we want the level of nationalism to stay within a

[64] Recall too that cases must be ideally chosen without looking at their outcome, so as to avoid selection bias. So, we must concern ourselves only with the conditions of the combatants, and not to any hindsight knowledge of their conflict's end.

certain range from one conflict to the next. That is, the country's nationalism may well fluctuate, but only one direction of fluctuation is acceptable from one case to the other. It is fine if the country's nationalism is at a relatively lower level during its defensive war than during its offensive one, but not the other way around. For instance, suppose a country was able to defend itself against a more powerful opponent with only a decent level of nationalism. But, once its nationalism grew to a *higher* level, this same country was unable to win an offensive war against a weaker opponent. This sort of finding would support Proposition 2.1, which argues that nationalism is less effective in the offensive. On the other hand, suppose we selected wars with the opposite fluctuation of nationalism levels for the same country. That is, if a country with high nationalism wins in the defense, but then loses in the offense with low nationalism, we could not confidently say that nationalism was deficient in the offense. It could simply be argued that the country's nationalism had declined by the time of the offensive war, and that such decline is to blame for the military defeat – but not the technology of nationalism itself. Thus, we can accept steady levels of nationalism for our prospective country-of-interest, or a change in the direction of higher nationalism during its offensive conflict than the defensive one.[65]

Next, we also would like the chosen wars to result in clearly discernable military outcomes. The nationalist country should unambiguously win or lose its conflicts. Otherwise, the risk is continuous post-research debate on the values of the dependent variable, which would only compound the debate to surround the values of the main independent variable, nationalism. So, it is better to seek clarity in this choice. In military outcomes, it can come in a variety of

[65] It is also common knowledge that, for any given combatant, other things tend to change in switching from offensive to defensive warfare. For example, when defending its own territory, a defender can usually rely on more intimate knowledge of the terrain, on any fortifications built (including those that take advantage of the aforementioned terrain), and on tighter supply lines. These confounders could pose a problem if we see a combatant winning a defensive war but losing an offensive one – is it because of nationalism having a defensive bias, or because of the above advantages conferred by being on defense? To address this, some of these confounding variables are controlled or otherwise negated in the case studies to follow.

ways. We can look for numerical measures – such as land taken or casualties inflicted by one party versus another. Or, we can also look for measures that depend on the mutual recognition of the combatants. Peace treaties are the most obvious examples, since they can help distinguish winners and losers by their explicit terms. Thus, it would be ideal to select two wars that translated their final outcomes into formal peace treaties.

Finally, we can help control for both known and unknown confounders by carefully choosing the two time periods for the wars. Ideally, these time periods should be fairly close to one another. The reason is that such proximity would help give the confounders little room to vary drastically. This is certainly no guarantee, but it is a sensible measure nonetheless. For example, if two wars happened ten years apart, we can more easily count on a country's industrial production to have changed less than if the same wars were fifty or sixty years apart. This evidently applies to many other variables, like a country's own level of nationalism. At the same time, there is an evident risk in seeking wars that are simply *too* close to one another, so that the immediate effects of one war will spill over into the next. Let us entertain a hypothetical scenario. If a nationalist country A wins a defensive war in year t, but then goes on to lose an offensive war in year t+1, can we confidently blame this loss on the relative ineffectiveness of nationalism for the offense? Not as easily as if the wars had happened further apart. A host of effects, all related to the first conflict, may be at play. Perhaps the first war had sapped the combat readiness of the country's military – so that, even if its army seemed unchanged on paper, it could not easily wage a second war so close in time. Or, perhaps the first defensive war had resulted in a staunch defensive doctrine, and so the military was not able to properly retrain its forces for the second offensive war. Thus, what again seems sensible is to exercise judgment. It is preferable to have two conflicts, with the same country, that occurred close to each other in

time – but not so close that we must worry about the spill-over effects. As with the discussion of what makes for "extreme" power imbalances, there is no easy guide for this. But at the very least, it requires that we avoid obvious cases of immediately-successive wars. Or, in the case that we do select wars happening very close to one another, it should be explicitly justified why this closeness is not worrisome.

The consideration of time periods also involves fairly obvious restrictions. We must select time periods in which nationalism has patently fostered, so any choices before the turn of the 19th century would be tricky. We must also select periods for which there is ample historical evidence. It may be thought that this favors recent periods, but only up to a point. For instance, many nationalist conflicts in the late 20th century often involved an undeveloped country and/or one of the two superpowers (e.g., the Vietnam War). In the case of the former combatant, it may not have converted its war experiences to a format that is readily accessible for research. And in the case of the latter, the superpowers simply may not have disclosed much information about those conflicts – at least not relative to older and forgotten conflicts of the pre-Cold War era.[66] Turning to post-Cold War conflicts, they are afflicted by similar problems. They may just be too fresh, and information about them has not had the chance to be as "distilled" by independent parties as conflicts in previous centuries. For instance, consider the 2008 South Ossetia war between Russia and Georgia. Can Russia be expected to make its records of that war amenable to researchers? And even if it did, how many years of basic research would need to be performed before a clear picture emerges? Certainly, time and effort is better spent in earlier conflicts that are not likely to meet the censoring of any live parties. This justifies favoring conflicts that

[66] The reader may be skeptical about data availability of the 19th versus the 20th centuries. But consider the recent case of a researcher working on the Cuban Missile Crisis, who "was nevertheless surprised to discover that many US government archives dealing with the crisis –including records of the Strategic Air Command, the Joint Chiefs of Staff, and the Defense Intelligence Agency- remain largely off-limits to researchers." He found Soviet and Cuban archives to also be closed. Apparently, nearly 50 years has not been enough time to declassify records pertaining to that event (Dobbs, 2009, p. 355).

occurred before the mid- to late-20th century, and for which the available data had the chance to "settle" and be further removed from the polemics of the times.

Let us bring together the decisions to be taken for case selection. Two wars are to be chosen, in which the same nationalistic combatant fights offensively in one, and defensively in the other. In the defensive war, the combatant's opponent must have about the same capabilities, or be stronger. In the offensive war, the opponent must have the same capabilities, or be weaker. Also, the wars are to happen fairly close in time, but not so close that one spills over into the next. Next we discuss two wars that fit this bill.

Chosen cases

For this study, we will discuss the Second Italian War of Reunification (also known as the Austro-Sardinian war) of 1859, and the Italo-Ethiopian war of 1895-96. Immediately it can be seen how this pair meets several of the above case requirements. Most obviously, the conflicts share an Italian state in both conflicts (the kingdom of Sardinia-Piedmont in 1859, and its immediate political successor, the kingdom of Italy in 1895). It is safe to argue that the former "morphed" into the latter by way of annexations – so that we are not dealing with two wholly independent political entities. Instead, despite the name changes, the chosen combatant can be construed as a single state which grew territorially during the 19th century. In fact, the Correlates of War project does just this. It treats Italy as Sardinia's succesor in the international system after the former was founded (Singer & Small, 1993).

This combatant also fulfills a crucial attribute that is not necessarily the case for all 19th century states – in terms of nationalism, it can be safely said that Sardinia/Italy has exhibited a

healthy level of it throughout the second half of that century. For instance, even before the unification of Italy, its future citizens were active in rioting for freedom from their Austrian-backed rulers. And later on, during the actual wars of peninsular unification, Italians volunteered in significant numbers to fight against their northern neighbor. Further, after unification, the Italian kingdom did not experience the civil wars that plague those states which try to encompass diverse nationalities. Even though they experienced economic and political tribulations, the Italians never attempted a Balkan-like breakup. Instead they voiced their interests by joining political parties, the armed forces, and taking part in public demonstrations. None of those actions speak of secessionism or conflicting identities. But they speak of a binding sense of Italian nationalism.

Choosing Sardinia/Italy as a combatant in both wars also helps to control for domestic variables – or at least keep them within bounds. This is also helped by choosing two Italian wars that happened only a few decades apart. Ironically, one major criticism of the Italian military during this time is that it just did not progress much (Gooch, 1989, p. 171). But this lack of progress can also be seen as a *constancy* that helps control for the strategic competence of the Italians – as such, we need not worry much that victory in one war was due to strategic acumen, whereas defeat in the other happened due to a lack of it. Simply, the Italian case promises this variable and others to vary little during the late 19th century.

Other requirements are also met glaringly. The wars happened after nationalism spread throughout Europe, so that social technology can be potentially responsible for any military outcomes. And enough time has arguably passed for both wars to be aptly documented and analyzed, as opposed to the nationalist conflicts in today's headlines. But perhaps most importantly, the wars fulfill the requirement concerning the strategic goal of the combatant-of-

interest, and the balance of power among combatants. That is, the Austro-Sardinian war was a defensive war on the part of Sardinia, while the Italo-Ethiopian war was an offensive war by its successor state.[67] And although this will be more thoroughly discussed below, each war also matches the desired direction of any imbalances in forces. During the Second War of Reunification, the Italian kingdom of Sardinia defended itself against a preventive war waged by the stronger Austrian Empire – albeit with help from a western neighbor. And during the Italo-Ethiopian war, Italians waged an offensive against a kingdom that was easily seen as the weaker party. At the same time, though, neither the Austrians nor Ethiopians experienced a completely lopsided power imbalance vis-à-vis Italy – and so we avoid the problems associated with choosing unduly hard cases (see p. X).

Of course, the above is not an exhaustive description of the chosen pair of wars. It is still necessary to detail the ways in which Austrians and Ethiopians matched up against Italians in a variety of military capabilities – including nationalism. It is also necessary to consider the available evidence, and whether it is enough to form even a tentative conclusion that is supportive of Proposition 2.1 (or not). And finally, it is also necessary to consider extraneous evidence or additional factors that somehow must be accounted for. An example is the role of France in aiding Sardinia during the Austro-Sardinian war, which must be incorporated in the analysis. But these are concerns that can only be handled by going deep into each case. Still, here it can be said that both cases *seem* like suitable candidates. Let us now explore the Austro-Sardinian war, and see how Italian nationalism performed in a defensive capacity.

The Austro-Sardinian War (1859)

[67] Note the Austro-Sardinian war of 1859 was itself a defensive war by Sardinia, but it was part of an overall campaign of Italian unification which can be considered an irredentist offensive. See this discussed on page 131.

This war pitted the Austrian empire against the Italian kingdom of Piedmont-Sardinia and its ally France. The Austrians initiated the war by invading Piedmont on April 29, 1859, after Sardinian Prime Minister Cavour rejected their ultimatum to demobilize his entire army. (It should be mentioned that Cavour helped instigate the Austrian attack by planning military maneuvers near the Austrian border.) Austria's overall strategic goal was to break, or at least forestall, the Sardinian efforts at Italian unification. France joined Sardinia soon after war was declared – as both countries had previously signed a secret protection pact that promised French intervention in case of an Austrian attack.

We begin by discussing the capabilities of the combatants in this conflict. Recall that as a defensive war by Sardinia, this war should ideally depict combatants who are evenly-matched or with a moderate imbalance that favors the attacker against the nationalistic defender. This is crucial for confirming the suitability of the case – and also recall that we need not discuss the outcome of the war just yet, since a case's outcome is neither a necessary nor proper criterion for case selection. We first look at gross measures of capabilities, as they correspond to the three combatants of the war: France, Austria, and Sardinia. Further, two years are looked at: the actual year of the war, 1859, and the previous year, for the sake of confirming any patterns that show in 1859.

Table 3. Capability statistics of Austria, France, and Sardinia, 1858 and 1859

	Country	Percentage of world's capabilities	Military personnel (1000's)	Military expendi-tures	Energy cons.	Iron/ steel prod.	Total urban pop. (1000's)	Total pop. (1000's)	Net dem. score
1858	FRANCE	0.131425	427	19967	12941	872	2451	36340	-8
	AUSTRIA	0.079993	403	12835	1979	373	1044	37459	-6
	SARDINIA	0.010522	51	1641	140	20	247	5042	-7
1859	FRANCE	0.138715	465	32307	13081	864	2592	36500	-8
	AUSTRIA	0.082245	355	22828	2174	318	1074	37579	-6
	SARDINIA	0.014791	53	5716	193	20	248	5054	-7

Sources: Jaggers and Gurr (1995), Singer and Small (1993)

It is clear from the table that Austria, the attacker, enjoyed a sizable advantage against Sardinia, its opponent in the immediate vicinity. In 1858, Austria's armed forces were eight times larger than Sardinia's (403,000 strong versus 51,000). The gap changes little in 1859, and is similarly large in other measures. Austria vastly outpaces Sardinia in military expenditures, energy consumption, iron/steel production, urban population size, and total population size. And since they are both established monarchies, these states are also quite autocratic, as evidenced by their negative democracy scores. The latter is important given evidence that democracy may lead states to victory in conflict (Reiter & Stam, 1998a, 1998b). As a whole, too, Austria garners about 8% of the world's total capabilities in either 1858 or 1859. Sardinia only musters 1%.

On the other hand, Austria met a stronger match in France. As a whole, this is shown by the latter's share of global capabilities – 13-14% versus Austria's 8%. This margin of advantage appears mostly in energy and iron/steel production, and in urban population size. For example, in the year of the war, 1859, France was producing 864,000 tons of iron and steel to Austria's 318,000. So, it can be easily concluded that France's industry was larger and more vigorous than its opponent. However, the gap between both states is narrower in military expenditures, and almost negligible in the size of their armies and total populations. Consider that in 1858, France's armed forces had only 24,000 more personnel than Austria's (427,000 versus 403,000). On the other hand, Austria had about a million more subjects than France, as evidence by their total population sizes – which presumably gave it somewhat more potential troops to enlist.

In sum, looking at the bilateral relationships among opponents, the imbalances go both ways. In gross terms, Austria was weaker than France, but also stronger than Sardinia. When we stack the capabilities of the warring sides, though, it is clear that Austria was facing a stronger contingent. Certainly, this could challenge the suitability of the case – after all, we wish for the nationalistic defender (Sardinia) to face an equal or stronger opponent, not a somewhat weaker one. Thus, we must look at other measures to confirm or disconfirm this apparent imbalance. In particular, if this imbalance is truly consequential, it should have carried over to the battlefield. Do the military forces show it? We turn to this next.

In terms of weapon technology and training, there was surprising parity among the combatants. That is, either the combatants were fairly matched in one category – or when one exhibited a clear advantage, the other offset it in another way. Consider the French, whose rifles were "smooth-bore muskets [or] Minié rifles which were markedly inferior to the Austrian Lorenz rifle in range and accuracy" (Gooch, 1980, pp. 84-85).[68] Yet, this Austrian advantage was

[68] Not all agree that the Lorenz rifle conferred such a "marked" advantage as Gooch suggests, though. Holmes and

lost due to the combatants' training and tactics. On the one hand,

> [t]he Austrian army, operating according to field regulations first issued in 1806, were cautious and defensive; their poorly trained troops opened fire at ranges which were too great and wasted their ammunition.

And on the other hand, there was French adaptation to their limitations:

> Recognizing that his troops could not hope to compete with the enemy in a fire-fight at long range, Napoleon III determined that they must get to close quarters as soon as possible. This they did, advancing on their opponents in two lines of battalions *en masse*, preceded by skirmishers…[In fact,] French successes…led many military observers to believe that the defensive had been overrated and bayonet-charges rapidly became the order of the day in Austria and the south German states, and even in Prussia…(pp. 84-85).

In terms of artillery, the tables turned, but the outcome of (rough) parity still prevailed. Here, "the rifled French guns far outranged the Austrian artillery and inflicted heavy losses on [their] tight formations" (Rothenberg, 1999, p. 54). But again, another element came into play that minimized this advantage. It was, again, training. Napoleon III had only ordered the "Lahitte system" of rifled cannons on 1858, a year before the war (Wise, 1915, p. 30). Probably due to this reason, his troops were very unfamiliar with their new long-ranged cannons – and it showed. At the battle of Magenta, the French artillery was too exposed, and was actually overrun by the Austrians, who even captured one of the guns (Marder, 2005). A similar thing happened later, at the final battle at Solferino, where Austrian musket and cannon were able to close in quickly. In fact, among the battle casualties was the French's own general of artillery, "mortally wounded by

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Evans, for instance, consider the Lorenz to just represent a "slight advantage in infantry weapons" (2006, p. 103).

a…cannonball, fired by an artillery piece with not even a third the range of a Lahitte rifled four-pounded" (ft.29). This is not to say the French lacked an advantage per se – but it seemed not to be a decisive one, just as with the Austrians and their longer-ranged rifles.

Turning to logistical support, both the French and Austrians enjoyed the same level – a very low one. For instance,

> [t]he military geography of the ground on which the [Austro-Sardinian war] was fought centered on the presence of a spider's web of rivers and a large number of fortified towns in [the northern Italian peninsula]. The first essentials for conducting the campaign were therefore bridging materials and a siege train of some sixty batteries. The French possessed neither of these assets, even though the war had been a distinct possibility since 1856. Nor did they possess a supply system, nor a medical service worth the name. [Further,] [t]heir command system was characterized by confusion and a lack of communication with headquarters…" (Gooch, 1980, p. 84)

Things were little different for the Austrian army, which "went to war unprepared. Logistic and supply services were inefficient and corrupt and the troops lacked engineering stores, rations, and clothing" (Rothenberg, 1999, p. 53).

As for the Sardinians, they seemed to have been equipped either as well or just slightly less so than the other two combatants. Their line infantry "used a mixture of their own and French smoothbore weapons, and British rifles bought in the months before the war." Tactically, they also followed the French model of close combat, even if "they rarely succeeded in massing their forces as the French did" (Brooks & Dennis, 2009, p. 14). Also, their logistics and supplies seemed to be in as poor condition as the French or Austrians. Consider the preparation of the Sardinian army went the war broke out: "despite reforms in the artillery, engineers, and transport services during the previous decade, the army took the field lacking horses, maps of Lombardy, bridging equipment and siege artillery" (Gooch, 1989, p. 8). In sum, the Sardinians definitely did not show signs of much greater battlefield capabilities than the Austrians, and this contributes to an important requirement for case suitability: namely, for the defensive nationalist state to *not* be

stronger than its attacker.

The above is not confirmation of the initial imbalance that appeared when looking at the gross capabilities of Austria vis-à-vis France and Sardinia. Instead it suggests a subtler balance of battlefield capabilities. The combatants were equipped either very similarly, or when not so, they found effective ways to nullify each other's advantages. Yet to gain a fuller picture, it pays to look at the actual combat performance of each side in the conflict. What emerges is simple and clear. There was a very close level of performance between the two sides, which bodes well for case suitability and prods us to see what role was played by nationalism in deciding the conflict. Consider the following table, which looks at combatants' ability to inflict casualties on each other.

Table 4. Some conflict statistics, Austro-Sardinian War, 1859

	Austria	Sardinia and France	Sardinia	France
Troops fielded	198035	184000	56000	128000
Total Casualties (killed or wounded)*	21607	24085	4263	15823
Casualty rate	11%	13%	8%	12%
Ratio of Austrian forces to opposing forces		1.08	3.54	1.55
Casualty-infliction ratios:				
Ratio of enemy casualties to troops fielded	0.12	0.12	0.39	0.17
Ratio of enemy casualties to own casualties	1.11	0.90	5.07	1.37

The sources for each statistic are as follows: troops fielded, Clodfelter (2002, p. 204); casualties, mainly Clodfelter, but also Encyclopedia Britannica ("impressment", 2012), and Tucker (2009). The casualties are obtained from Clodfelter's total per battle, not his own totals for the entire war (which undercount the added totals per battle). The battles with counted casualties are these: Montebello (5/20/1859), Magenta (6/4/1859), Melegnano (6/8/1859), and Solferino (6/24/1859). The only exceptions for using Clodfelter are the battles of Solferino and Melegnano. Since he only gives overall total losses for these battles, I used figures given by Tucker (2009) as well as the Encyclopedia Britannica ("impressment", 2012).

It can be seen that Austria and the Sardinian-French contingent ("the allies") fielded a very close number of troops. The allies did suffer slightly more total casualties than the Austrians in the main battles of the Austro-Sardinian war. Yet, the two warring sides suffered a very approximate casualty rate – 11% for the Austrians, and 13% for the allies. Arguably, then, each side performed roughly the same in one task that is conducive to victory – the infliction of enemy casualties.

This view is further confirmed if we analyze two ratios. The first is the ratio of enemy

casualties to troops fielded. In principle, an army would like this ratio to be as high as possible. In other words, if one's soldiers are a very costly investment in manpower, each should result in as many enemy casualties as possible – and ideally more casualties than those inflicted by each enemy soldier. In this war, though, the ratios for the combatants are actually identical. Each derived 0.12 casualties for troop fielded. A similar thing happens when comparing the ratio of enemy casualties to one's own. The allies lost about one troop for each casualty of the enemy, for a ratio of 0.90. The Austrians were slightly more effective, but not much, at 1.11.

This clear balance tells us that actual battlefield performance gives little indication for who would have won the Austro-Sardinian war. Neither side enjoyed material capabilities that truly translated into marked (or unsurmountable) advantages in combat.[69] For instance, whatever larger industry the French may have had, they did not use it to field a longer-ranged rifle than the Austrians' Lorenz. (Instead, as mentioned, they turned to low-tech bayonet attacks.) So, at this point we can reach a conclusion about the war as a case study. Simply, it is suitable as it depicts two evenly-matched sides. Yet by looking at their "hard" or material capabilities alone, the war does not offer an obvious explanation for which side should have won. It thus seems appropriate to resort to the theory of nationalism-as-technology and see if it helps explain the war's outcome.

What was the role of nationalism in the conflict? Recall that it may have two – one at the the battlefield, and another beyond it. The first role, however, is often hard to discern because it may co-exist with a combat unit's own sense of cohesion.[70] Further, as already mentioned, in this

[69] The first Gulf War (1991) is a good example of how material capabilities translate into virtually unsurmountable advantages for one side over another. By just comparing the equipment of the United States and its allies against Iraq's before the war, we gain a good picture of which side had favorable odds in that conflict.

[70] A popular study on small-unit cohesion is by Shils and Janowitz (1948). Among other sources, it reviewed frontline interrogations of German prisoners of wars during World War II, and concluded that these soldiers fought mainly on behalf of their immediate military group. Their findings also challenge the impact of nationalist appeals, as "attempts to modify [soldier] behavior by means of symbols referring to events or values outside the focus of attention and concern would be given an indifferent response by the vast majority of the German soldiers" (p. 315). Yet we must be skeptical to overemphasize the power of small-unit cohesion from their study; after all, World War II German POW's would have been eager to depoliticize themselves in front of their

conflict we are hard-pressed to find much difference in the overall battlefield performance of the combatants. Many possibilities could account for this equality. Perhaps all troops exhibited an equal level of small-unit cohesion, which swamped other factors and led to equal performance. Or, say, the Sardinians' nationalism was a stronger motivator than the Austrians', but it was offset by the latter's more developed sense of cohesion – presumably as a result of more extended Austrian militarism, which led to more hours of training per man, and thus bonding between them. Still, it is difficult to discern among these speculations. So, a neater approach is to accept the conclusion that the combatants' combat performance was essentially tied – and that any decisive role for nationalism must be found beyond the battlefield.

Here, we find clues in the termination of the war. After the battle of Solferino, on July 11, Napoleon III met with his Austrian counterpart at Villafranca to negotiate an end to the hostilities. The terms agreed upon were as follows:

> (1) The creation of an Italian Confederation under the honorary presidency of the Pope;
>
> (2) The cession to France, and the transfer by France to Sardinia, of the province of Lombardy;
>
> (3) The inclusion of Venetia in the Italian Confederation, as a province, however, under the Crown of Austria;
>
> (4) The restoration of the Grand Duke of Tuscany and the Duke of Modena to their respective states, whence they had just been driven by popular uprisings (Hazen, 1910, p. 226)

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interrogators. For them, a safer strategy was to appear as pure "grunts" uninvolved with the extreme politics of the time (although many such German grunts ought to have existed indeed). Also, we should not disregard the baseline nationalism that prompts soldiers to enlist in the first place and/or obey draft orders. This baseline nationalism may not result in variations in performance during individual battles or even campaigns, but it is arguably conducive to honest participation by fighting soldiers. Just consider the effects of *not* having nationalist troops. Lacking in national loyalty to their warring side, such troops may be prone to desert – as the Austrian army found to be the case during World War I.

Of these, only terms #2 and #3 were of consequence. That is, #2 granted to Sardinia the province of Lombardy, with a population of nearly three million – while with #3, Austria kept control over Venetia, with a population of two and a half million (Mackenzie, 1878, p. 65). On the other hand, #1 and #4 mattered little. The honorary presidency of the Pope simply amounted to a symbolic gesture, while the rulers of Tuscany and Modena were never put back in power.

Yet the specific terms of Villafranca must share our attention with another crucial feature of the treaty – the total *absence* of Sardinia at the bargaining table. History tells us that the Sardinians were surprised to learn of Villafranca, and felt betrayed by Napoleon III (Albrecht-Carrié, 1973, p. 102). But this sense of betrayal was despite a treaty that was not unkind to Sardinia at all. Just consider the population gains from Lombardy, and the lack of commitment by either France or Austria to press for the restoration of the ousted dukes of Tuscany and Modena. An alternative settlement, for instance, could have given Tuscany and Modena a deadline for restoring their monarchies – which, if broken, could have given Austria explicit permission to intervene there militarily.

So, Villafranca presents an odd and puzzling scenario. Two European powers agree to settle their differences in a war that was barely over two months old. And their settlement happens to greatly favor an absent, and materially weaker, third party. Why did they end the war so early on? And why was Sardinia not simply given diplomatic bread crumbs, instead of one of the biggest slices of the pie?

The answers to these questions are best answered by involving nationalism – and the power it gave to the only party able to employ it defensively in the war, Sardinia. Let us first consider the eagerness of both France and Austria in settling the dispute early on. Each was experiencing the troubles of putting nationals on extended wars beyond their borders. The case

was milder with France – it was first able to mobilize its forces and send them to the Italian peninsula without much trouble. However, Napoleon III began to feel increased pressure from the French public after Solferino and its high loss of life (Gooch, 1980, p. 85). The French anti-war argument, however, had been articulated since before the war began – "why…should thousands of French lives and millions of French francs be spent in fighting disinterestedly for a people too weak to fight for themselves?" (Thayer, 1888, p. 659). At its core, notice this is a nationalist argument – the nation is shedding blood and losing treasury in an act of hopeless charity for foreigners. In addition to this, Napoleon faced steady opposition from French Catholics, who were concerned about "the position of the pope once deprived of Austrian support", and of the threat of Prussian mobilization in support of Austria (although that threat was distant, as Prussians troops "never left their cantonments") (Gooch, 1980, p. 85).

Things were more troublesome for Austria, were the threat for a continued offensive actually took on revolutionary implications. This was the price paid for decades of staunch anti-nationalism by the Habsburg crown, which nonetheless failed to sway its diverse ethnic populations. The rise of nationalism was especially problematic among Hungarians:

> Mobilization and deployment of Austria's army had been delayed [in 1859] because of the fear of internal revolts, and throughout the war Austrian strategy was inhibited by internal considerations. During the summer of 1859, some units had to be diverted to Hungary and Croatia to guard against uprisings, while [Sardinian Prime Minister] Cavour as well as Napoleon III played on these fears. In Turin, the exiled [Hungarian nationalist leader] Louis Kossuth was encouraged to plan another great insurrection in Hungary and this time he hoped to obtain support on the discontented Military Border. At the same time, Napoleon had plans for a landing on the Dalmatian coast, also supported by [Austria's own Southern Slav] *Grenzer* [troops], and followed by a national rising in Hungary. Perhaps these plans were farfetched, but the threat contributed to Francis Joseph's decision to end an unpopular war (Rothenberg, 1999, p. 54).

On the other hand, compare the position of Sardinia. Only it had a population with a direct stake in pushing back the Austrian offensive from their lands, and only it stood to gain the most from continued fighting. Thus the population's resolve to fight appeared to be greater. One

manifestation was in their willingness to enlist. When Austria threatened Sardinia, this nationalistic expression was so despite the Sardinian state's own inability to pay for more troops. Consider the financial troubles of Sardinia in training troops just before the war, offset by the popular reaction once the war began:

> [In 1857, Sardinia passed] the 'Blood Law'…under which all those previously exempted from call-up were to become second-category reservists. However, this was little more than a cosmetic gesture, for when the state already spent 28 per cent of its budget on the military there was little opportunity to train larger numbers. Of 18,000 selected for the *leva* in 1859, 5000 served for the five-year term, 4000 did 40 days, and the remainder were sent home. Financial and political considerations combined to create the impression that Piedmont did not greatly value popular participation in the military adventures which were about to befall her. Nevertheless, as a second round with Austria grew imminent some 20,000 volunteers swarmed into Piedmont from Lombardy, Modena, Tuscany, the Romagna and elsewhere…Eventually, in March 1859 [,a month before the war began,] it was agreed that they should form a special corps, the *Cacciatori delle Alpi*, under [Giuseppe] Garibaldi's command (Gooch, 1989, p. 7).[71]

Note how different this scenario is from that of France and Austria. The former enters the war already with domestic misgivings, while the latter actually delays mobilization for fear of revolts (and later had to recall troops from Italy to prevent them).

Further, the defensive bias of nationalism also seems to account for the members present at Villafranca, and for the contents of the settlement. In large part, Sardinia may have been excluded from the negotiations because the other powers correctly surmised that it had the *least* incentive to stop fighting. After all, it was fighting in its "home" territory, and enjoyed the steady nationalist support of the local population. (Unlike the case of Austria, for instance, I found no reports of brewing revolts in Sardinia, or of mass desertions of disillusioned Italians.) Further, the advantages of employing nationalism defensively also explains why Sardinia, despite being

[71] In this study of the Austro-Sardinian war, scant attention is paid to Garibaldi's campaign in 1859. The reason is strict relevance to the discussion, not broad relevance to the conflict as a whole. Here, we examined the casualty-infliction ratios of the major forces in the conflict across the most noteworthy battles. Garibaldi's actions were mainly those of guerrilla warfare, with limited casualties, and so he does not contribute directly to the statistics shown. But he is credited with tying up Austrian forces, and also with scoring victories against Austrian general Urban at Varese and San Fermo (Paoletti, 2008, p. 107).

absent at the table, was reserved a large plate of bounty in the form of Lombardy. Simply put, without a large preemptive concession by Austria, there was no chance of satisfying a Sardinia made powerful by nationalism. Both parties at Villafrance arguably knew this, and tailored the deal accordingly.

In short, the outcome of the Austro-Sardinian war makes a strong case for the defensive bias of nationalism. All three of its participants were endowed with nationalism – but only one could employ it in a defensive manner. And this country, Sardinia, was not only one of the victors, but that which gained the most in the long-term. On the other hand, Austria had nationalism among its subject populations, but rejected it. In the face of an offensive war, this meant desertions at the front, and revolts at the rear. Finally, France also had nationalism, and actually harnessed it in its troops. But again, there was pressure against using those nationalistic troops on an extended war beyond home territory. After the costly losses of Solferino, Napoleon III would seek peace. As a whole, then, the Austro-Sardinian war suggests that it is bad to reject nationalism altogether in waging an offensive war, that it is better to embrace it to use offensively, but that it is best to simply defend oneself with it. This is corroborating evidence of nationalism's defensive usefulness.

Still, are we justified in seeing the above as evidence of nationalism's defensive *bias*? After all, perhaps nationalism may be useful in the defense, but it could also work fine in the offense. The French experience in 1859 seems to cast doubt on that, but we cannot make a perfect comparison. Just because Sardinia used nationalism well in the defense, and the French used it cautiously in the offense, it does not mean that nationalism has a defensive bias. Other possibilities exist. Perhaps the French made limited use of nationalism on the offense *and* the defense, but the war simply did not give them an opportunity to employ it defensively. Or, there

is the obvious Sardinian alternative – it could have been able to use Italian nationalism well, no matter the strategic goal. Thus, at this point, we should stay with the more conservative conclusion – that the Austro-Sardinian war showed Sardinia using nationalism well on the defensive. This is only one piece of the evidence needed to show a defensive bias.

The second piece is to show the same nationalism being used badly on the offensive. That is, if Sardinia/Italy can be shown to perform lousily when attacking, it would give us corroborating evidence of nationalism's defensive bias. Let us consider how that can be done. Certainly the whole process of Italian unification can be seen as a grand offensive by Sardinia, even though the 1859 war was strictly initiated by Austria after provocations by Cavour. But even if so, the grand campaign of Italian unification amounts to an *irredentist* offensive – one in which a state "rescues" its nationals from a "foreign" ruler. Such wars are a hybrid of offensive and defensive features. For instance, they may involve a physical invasion by an initiating state A of a state B, which holds the irredentist population. This is a fairly offensive action by state A. On the other hand, the irredentist population in state B often sees itself as pushing off a longstanding (and illegitimate) occupier – which is not the attacking state A, but the defending state B itself. As such, this population will often mount a pseudo-defensive campaign against state B, while supporting the latest occupier, state A. We will later discuss how such irredentist offensives can appear as the technology of nationalism spreads across regions. But in this case, the choice of an irredentist offensive war could muddy the case that nationalism has a marked defensive bias. What is needed is a clear or "naked" offensive war.

This particular need disqualifies the irredentist wars of Italian unification, but we can opt to look for future wars waged by Sardinia's political successor. Certainly the comparison will not be perfect, but it is arguably better than comparing Sardinia's defense during the Austro-

Sardinian war to France's offensive in the same war. Further, an Italian offensive will tend to still share many of the characteristics held by Sardinia in 1859. The next section thus selects a "naked" offensive in Italy's history, and makes the case for its suitability to assess nationalism's defensive bias.

The first Italo-Ethiopian War (1895-96)

This war pitted a fairly young Italian kingdom against the Ethiopian monarchy of King Menelik II. It was initiated by Italy, which entered Ethiopian territory in December 1894 after Menelik refused to recognize terms of the recently-signed treaty of Wuchale. Apparently the treaty's Italian version pronounced Ethiopia as an Italian protectorate, while the Amharic version did not (it simply remarked that Menelik could consult Italy on foreign affairs at his will).

As with the Austro-Sardinian war, here we are also first concerned about the suitability of the case (without resorting to any discussion of its final outcome). More specifically, in the case of an offensive war by a nationalist state, recall we are interested in a case where the state attacks an equal or weaker rival – yet any power imbalance, if it exists, ought *not* to be glaringly excessive. Does the Italo-Ethiopian war fit this bill?

It is certainly easy to see how the first part of the requirement is met. At least from the 19th century onwards, the larger European states have held several advantages over their African counterparts – they had more developed technologies, industries, organized armed forces, and compliant (if not always cooperative) populations across wider swaths of territory. This seems to apply to even such a young country as Italy in the second half of the 1800s. In fact, by the time of its war with Ethiopia in 1896, Italy held a number of important distinctions. It had the 9th largest total population in the world and the 6th largest urban population – this last being larger than that of the neighboring Austrian-Hungarian empire, and of then-rising Japan. Italy also had the 8th largest armed forces in the world, and was the 10th largest consumer of energy. It is no small achievement that this was accomplished by a nation-state only 36-years-old at the time. (Consider, for instance, that many states in Latin America were much "older" by 1896, and did

not rival Italy in the above statistics) (see Singer & Small, 1993, for the above data).

At the same time, though, it is important to select a case in which Italy's lead over Ethiopia is not *too* large. Otherwise, any signs of Italian success over Ethiopia cannot be used to disconfirm the thesis that nationalism is defensively-oriented. Quite simply, we would not know if Italian successes were due to nationalism working well offensively, or if they were due to its vast superiority over Ethiopia in all respects. In this case, however, those concerns are assuaged in part. Let us begin with a basic assessment of gross capabilities. Through the Correlates of War and Polity projects, only three are available to compare Ethiopia with Italy during the 1890s, as the following table shows:

Table 5. Military personnel, total population, democracy scores, and power status of selected countries, 1896*

Country	Military personnel (1000's)	Total population (1000's)	Net democracy score	Major power status
RUSSIA	928	125100	-10	Yes
FRANCE	613	38550	7	Yes
GERMANY	602	52753	1	Yes
UNITED KINGDOM	315	39599	7	Yes
AUSTRIA-HUNGARY	305	44908	-4	Yes
ITALY	**226**	**31510**	**-4**	**Yes**
ETHIOPIA*	**150**	**7666**	**4**	**No**
SPAIN	149	18240	4	No
JAPAN	103	41992	1	Yes
SWEDEN	62	7070	-4	No
ROMANIA	61	5670	-7	No
BELGIUM	48	6496	6	No
UNITED STATES	42	70885	10	No
BRAZIL	36	16346	-3	No
MEXICO	35	12822	-9	No
NETHERLANDS	29	4890	-2	No
GREECE	25	2434	10	No
ARGENTINA	19	4013	1	No
DENMARK	12	2310	-3	No
HAITI	5	1146	-3	No
VENEZUELA	4	2390	-3	No
DOMINICAN REPUBLIC	1	540	-3	No

* Ethiopia's figures are for the year 1898, the earliest available year of capability measures for that country.

Sources: Singer and Small (1993); Gurr and Jaggers (1995)

As can be seen, Italy and Ethiopia are close in one important measure of military capability – the size of their armies. Ethiopia is literally right behind Italy in this regard, with 150,000 troops versus Italy's 226,000. (In fact, so close are those figures that, of all the countries for which data is available in the Correlates of War dataset, there is no country with an army size between that

of Italy and Ethiopia for the years mentioned.) Further, Ethiopia's army size is also respectable compared to other armed forces of the era. It is seen above how its army is about the same size as Spain's, larger than Japan's, and larger than several small European states (Romania, Belgium, the Netherlands, and Greece). In fact, a surprising fact is that Ethiopia's army is seen to be about three times larger than the United States' own armed forces. At the very least, and notwithstanding the quality of their training and equipment, this number of military personnel is respectable for the era.

Of course, the reader should still bear in mind, as the table already indicated, that Ethiopia's figures are two years older than Italy's due to data availability. 1898 is the earliest year for which Ethiopian statistics were easily found – but the 150,000 figure for Ethiopia's army does not seem too far-fetched an approximation of that army's size in years prior. As will be seen below, in 1896, King Menelik of Ethiopia was able to amass a 100,000-men army to fight Italians at Adowa in 1896. So, if we consider that he did not manage to summon all available troops in his domain, a figure between 100,000 and 150,000 seems like a reasonable guess of Ethiopia's army size in 1896. Such range still leaves Ethiopia in close proximity of Italy's overall number of military personnel.

Not all statistics are supportive, though. In total population size, Ethiopia lags considerably behind Italy – the former is closer in size to Sweden and Belgium, while Italy's population is closely behind that of established powers like France and the United Kingdom. In addition, by 1898, Ethiopia still had negligible or no industry to speak of – as evidence by its absence of measurable energy consumption and iron/steel production (not shown above). But again, the lag is not abysmal in all statistics. Besides military personnel, Ethiopia scores surprisingly well in another measure – its democracy score. For 1898, it has a score of 4, while

Italy's is -4. These statistics are fairly important for our discussion, since democracy is a supposed predictor of victory in war (Reiter & Stam, 1998a, 1998b).

So why did 1898 Ethiopia have a higher democracy score than 1896 Italy? First, we should be reminded that the above scores are "net" democracy scores – computed by subtracting a country's autocracy score from its "gross" democracy score (Jaggers & Gurr, 1995). So it should not be concluded simply that Italy was not a democracy, and that Ethiopia (somehow) was one. That is not factually correct, since Italy at the end of the 19th century was a constitutional monarchy with an elected parliament, albeit with limited suffrage. On the other hand, Ethiopia was an absolute monarchy ruled by an emperor. But as always, details make the difference. Democracy scores rely on a host of institutional measures, and at least one of Ethiopia's allowed it to leapfrog past Italy in the scoring. In this case, the most pronounced one seems to be "constraints on the executive", which Gurr et al define as follows:

> This variable refers to the extent of institutionalized constraints on the decision-making powers of chief executives. Such constraints may derive from a legislature, a mass party –not all such parties are wholly under the control of the national leader–or some other accountability group, *including the military*. A seven-category scale is used[to assess this variable, from "1" denoting unlimited authority by the executive, to "7" denoting executive parity or subordination to other groups] (Gurr, Jaggers, & Moore, 1990, p. 80; my emphasis).

Note this measure does *not* measure democracy per se. As is hinted by the quote's emphasis in italics, even a very intrusive military can result in a high score of executive constraints. To put this in historical context, if data were somehow available, we could code these scores for kingdoms, fiefdoms, empires and other assorted autocracies before modern times – and we

probably would find ample variation in their scores, even though none were very much democratic. Nonetheless, this measure is a large component of both the democracy and autocracy scores under the Polity system, and so it affects the final measures found (pp. 84-85).

As it turns out, in the category of executive constraints, Italy and Ethiopia are far apart. The former has a score of 3, which means "slight to moderate limitations on executive authority". But Ethiopia has a score of 7, so that King Menelik was seriously constrained in most areas of policymaking. Was this truly so? Consider that in the late 19th century, Italy's King Umberto I had to share power with his current prime minister, and that the latter in turn was subject to pressure from parliament (as will be seen below, when discussing Italy's colonial campaign in Ethiopia). But King Menelik of Ethiopia experienced constraints that did not pale in comparison. Certainly he was the titular monarch, and had no parliament to bother him. But be mindful that Menelik ruled an empire comprised of distinct tribes, and a court with personalities not bound to the procedural traditions of modern Western states. As such, Menelik's decisionmaking faced constraints, which entailed penalties if violated. And he did face such penalties on more than one occasion. In 1892, Menelik faced revolts in his northern territories – the insurgents were apparently provoked by an extension of the *asrat*, a 10% tax on agriculture and commerce. And at the same time that year, the king also faced an abortive palace coup – among the culprits was one of his own cousins, and a displeased palace adviser (Marcus, 1975, p. 144). It is almost an understatement to consider these as evidence of "executive constraints." Clearly, if a ruler cannot impose 10% taxes, or fail to promote a palace adviser, without risking revolts and coups, he cannot be said to enjoy absolute autocratic power in his realm.

In addition, the above should not be taken to be exceptional incidents in Menelik's otherwise "unquestioned" rule over Ethiopia. Instead, these events may be exceptional in another

sense – they represent some of the few times in which Menelik challenged his own constraints. In fact, it seems his rule faced few troubles as long as he granted sufficient autonomy to other members of the empire. Consider Menelik's laissez-faire rule over his southern territories:

> Although the southern empire was nominally governed from [the imperial capital of] Addis Ababa, local officials actually enjoyed almost total autonomy. Once the emperor entrusted a province to one of his officials or generals, he ceased to concern himself directly with the construction or establishment of the area's administration except, perhaps, for occasional advice, *which was often ignored*. A newly appointed governor would appoint his own men to all key positions…
> Broadly speaking, provincial, regional, and local officials had greater latitude for action and, consequently, for thwarting the will of Addis Ababa…In the absence of a consistently watchful eye…the system functioned within its own provincial, regional, or local terms, in a way that European diplomats in the capital would never comprehend… (pp. 194-195; my emphasis)[72]

Thus, Menelik seemed cognizant of the constraints faced by his central rule, and of the unavoidable leeway that had to be afforded to subordinates.[73] [74]

All this said, it should not be concluded that the Ethiopian king was just a weak ruler. Menelik did centralize the Ethiopian state to a greater degree than his predecessors. During his rule, regional leadership was indeed reduced – for instance, by the institution of a ministerial government, the employment of foreign advisers, and a truly centralized diplomatic body that

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[72] Note that the author quoted, Marcus (1975), has the curious tendency to reach some conclusions about Menelik that contradict his own evidence. For instance, in the same paragraphs as the ones quoted above, he nonetheless writes that "the orders of a strong ruler like Menelik were always respected and obeyed" (p. 195). How this conclusion can be reconciled with his statement that officials "had great latitude for…thwarting the will of Addis Ababa" is a mystery to me. So, I accept Marcus' more nuanced assessment of local and regional conditions in Ethiopia, but otherwise ignore many of his overarching conclusions about Menelik's leadership.

[73] Consider, too, that Menelik's limited power vis-à-vis regional rulers also stemmed from the pre-modernity of his empire. Even though Menelik began to centralize power, he did not enjoy a full-fledged centralized bureaucracy that was able to quickly dispatch representatives to all imperial corners. Part of this happened because of technological limitations. Consider the use of trains. The Jibuti-Addis Ababa railway only began construction after the end of the 1896 Italo-Ethiopian war, and was beset by significant delays for many years (see a history of this in Marcus, 1975, pp. 201-213). Part of the reason for the late construction was Menelik himself – as early as 1879, he refused to consider even a preliminary study of railway transportation for Ethiopia. The reason seemed to be security, as Menelik recalled "that the British had used a small railway to move troops during their Magdala expedition" and so "the king considered it unwise…to build a strategically dangerous communication link unassisted and without having sufficient force to repulse possible foreign encroachment by its use" (p. 152).

[74] Menelik's need to compromise and balance among various tribes and regions is not unique in Ethiopian history. For an overview of this long history, from before Menelik's rule to the 20th century, see Young (1998, p. 192 covers Menelik's period).

spoke with one voice in international dealings (see p. 3 for this and other accomplishments). But interestingly, the 1896 war with Italy marked a turning point in Menelik's autocratic drive:

> His tendency towards autocracy became more pronounced after 1896. Whereas previously he had rarely made decisions without the advice of his major *makwanent*, [or upper nobles], after the Battle of Adwa he acted independently. He alone was the Ethiopian state (p. 214).

From all of the above, we can conclude the following. Ethiopia's democracy measurements reveal executive constraints by 1898, or two years after Menelik's war against Italy took place. We also have evidence that such constraints existed, and that trouble ensued (i.e., revolts and a coup) for Menelik when he disregarded them. And we know from the above quote that Menelik was *less* autocratic before the 1896 war – so that, all else equal, its democracy score for 1896 should have been at least the same (if not likely higher) as that for 1898 (when he decidedly turned more autocratic). And so, we can conservatively say that 1896 Ethiopia was decidedly *not* a very autocratic state. It may surpass Italy's own democracy score at the time, if we take the Polity data seriously. But even if we take the data with a grain of salt, we cannot say that Italy's level of democracy was markedly higher than Ethiopia's. (Again, this is important because democracy levels could arguably predict victory in combat.) In sum, the relative democracy levels of Italy and Ethiopia are either very close, or somewhat in favor of the latter. This is ideal for the purposes of case selection, since we do not want a nationalist state (Italy) facing a tremendously weak opponent in an offensive war. Instead, we prefer an opponent whose capabilities are in the same neighborhood as Italy, or is somewhat weaker than it. So far, Ethiopia fits the bill.

The above measures –size of the military, and democracy- are some of the few that are

available for both 19th century Italy and Ethiopia, given the pre-modern condition of the latter at the time. Yet they are only gross measures. Like with the case of the Austro-Sardinian war, it is preferable to flesh out other aspects of military capability at the time. Below we briefly mention three: the quality of military equipment, the employment of geography, and the sense of social cohesion.

When it comes to hardware, it is tempting to grant superiority to 1896 Italy over its Ethiopian counterpart. After all, the Italians enjoyed a great degree of industrial development, and had the transportation capability to project their force over 4,500 kilometers into another continent, both of which the Ethiopians lacked. As for the weapons fielded in Ethiopia, a sample is provided by the troops of General Oreste Baratieri, the governor of the Italian colony at Eritrea. His army, comprised of Italian troops and African allies (*ascaris*), would fight at Adowa, the most important battle of the conflict:

> Baratieri's Italian infantry carried new Vetterli magazine-fed repeating rifles, while the *ascaris*, like indigenous troops in all the European armies, were equipped with the cast-off weapons of the national army, in this case single-shot Vetterli breechloaders. The Italian force fielded 56 artillery pieces, almost all of them slow-firing mountain guns (Vandervort, 1998, p. 160).

The Italians were reasonably equipped for the period. Let us now look at the Ethiopians and draw some comparisons. Again we take as a sample those who would fight at Adowa, and see that the temptation to favor the Italians by default is wrong-headed – the Ethiopians also had access to many of the weapons available to European armies:

> Menelik's army…far outnumbered the Italian force [of just over 20,000], with at least 100,000 men, some 70,000 of whom carried repeating rifles, many of them bought from

> the French. The rest comprised a force straight out of the Middle Ages, armed with swords, spears, and buffalo-hide shields. Menelik had 46 cannons, fewer than the Italians, but most of them were quick-firing Hotchkiss guns, again provided by the French. Some of the Ethiopian cannons were served by Russian artillerymen…[m]ost, however, were served by gunners from the kingdom's own artillery corps, which had been functioning since the 1870s…Menelik's army also fielded a number of machine guns (p. 160).

While I have not found a comprehensive tally of Ethiopia's military hardware during the late 19th century, this glimpse does allow some conservative conclusions. Both armies used modern repeating rifles, although the Ethiopians suffered from fielding only melee weapons to many of their troops. As for artillery, the Ethiopians have the advantage of quicker-firing cannons, although it is unclear if they had the training to fully maximize this advantage. Thus, in terms of military hardware, it seems sensible to grant Italy only a reduced or limited superiority over the Ethiopians. The two sides are not equal, but any differences appear to be narrow.

Turning to geography, we are interested more in its relative employment by each side than in the inherent features of the Ethiopian lands. Simply, since both sides are fighting in the same geography, what counts is how each employs it. For instance, can we ascertain that any Ethiopian successes were due to their ability to employ terrain defensively? A number of scholars have pondered this already. Vandervort summarizes their progression of thought:

> Ethiopian survival used to be explained largely as a function of the country's rugged topography. This view, dear to [economic historian] Arnold Toynbee among others, emphasized "the virtual impregnability of the highland-fastness" as the principal factor in "the survival of [Ethiopia's] political independence in the midst of an Africa under European domination, the survival of her Monophysite Christianity in the borderland between Islam and paganism". This line of argument has few supporters today. While accepting that Ethiopia's rugged terrain favours the defence, more recent scholars have made the interesting observation that this has had surprisingly little influence on the development of the Ethiopian style of warfare, which has been overwhelmingly attack-oriented. "Because of the element of chivalry in their military traditions, the Ethiopians

> did not normally engage in guerrilla warfare", notes Rubenson, nor did they show much interest in building the kinds of fortification that might have turned their difficult topography into a real advantage. In any case, the notion that the mountainous terrain ever really functioned as a barrier to invading armies appears, upon closer examination, to be a myth. The rugged landscape failed to stop Muslim armies from conquering over half of the Ethiopian kingdom in the sixteenth century; it failed to hold up the British invasion of 1868; and the Italian army traversed some of Ethiopia's most mountainous country on its way to the battle of Adowa (p. 157).

So, Ethiopians were not defensively-oriented fighters that held strictly to the geographic imperatives of their terrain. In fact, at the battle of Adowa, they basically employed swarm tactics to overwhelm the Italian and *ascari* positions – which is evidently not a tactically-defensive move (p. 163). If anything, it was the Italians who showed abidance to a defensive employment of terrain. They tried to position their forces on hills at Adowa, and had created defensive positions in neighboring Eritrea – the latter of which seemed to keep King Menelik, after Adowa, warily at bay (see p. XX). Thus, the Italo-Ethiopian war is not the story of an offensively-oriented colonial power against defensively-oriented natives who cleverly exploited their geography. Both sides seemed to enjoy significant freedom from those stereotypes, and so geography did not inherently favor either side.

Finally, we turn to social cohesion. Obviously, this present work places a lot of importance on it, as such cohesion (whether it comes from nationalism or another mechanism) can facilitate everything from recruiting to warfighting. As for Italy, by 1896, its nationalism did not seem to be on the wane at all. Consider irredentism, which by the late 19th century, was still going strong in northern Italy:

> The dominant political passion in the north was irredentism, the desire to obtain the Italian-speaking provinces of Austria that they missed in 1861-6…[For instance,] [t]he irredentist riots which were such a sore trial to Cairoli and Depretis from 1876 to 1882… started on the anniversary of the battle of Legnano (, waged in 1176 by Lombards against the Holy Roman Empire to the north)…This basic anti-Austrian feeling in the north was a serious handicap to anyone trying to conduct Italian foreign policy. Even the best of times it made relations with Austria difficult, as no one could predict when an outbreak would

> come. Italian statesmen from Victor Emmanuel II and Umberto I downwards were generally well disposed towards Austria, as Vienna recognised, and did their best to keep irredentism within reasonable bounds...But nobody could alter the fact, as [Italian foreign minister] Di San Giuliano pointed out in 1913, that in the long run Italy was governed by 'the unanimous feeling of the Nation, which in Italy is sovereign' (Lowe & Marzari, 2002, pp. 11-12).

Irredentism stems from nationalism. And so, the above suggests the technology of Italian nationalism was thriving and even at the risk of "running amok", at least if left unsupervised – in much the same way that nuclear reactors require a constant watch to forestall meltdowns. Yet irredentism is only one piece of evidence that Italian nationalism was fairly healthy in the late 19th century. If we take seriously the association of nationalism with industry (Gellner, 1983), then Italy was much more nationalistic by 1896 than in mid-century. After all, it is by 1896 that its economy had grown to support the large urban population and energy consumption levels that were already mentioned, and not before. The Italian army, too, had grown from its days fighting for unification – from 53,000 during the Austro-Sardinian war, to 226,000 by 1896 (Singer & Small, 1993). If we believe that mass armies either stem from or help contribute to national unity, then this appreciable size also indicates a healthy nationalism. Finally, we should not discount the "absent" clues – the things that never happened, but could have if nationalism had actually been threatened. 1896 did not witness a separatist movement in Italy, say, such as one led by southern elements against their richer neighbors to the north. Much less did it experience anything resembling royalism, or widespread nostalgia for the Austrian-backed rulers of old. Despite the daily political friction of democracy, Italy held together, and this suggests the technology of nationalism was running well.

How did the Ethiopians compare? For starters, their level of social cohesion cannot be said to be greater than Italy's – at least by conventional indicators. Recall the above mention of Gellner's (1983) linkage of nationalism with industrial growth. Simply, Ethiopia's economy was

smaller than Italy's, and also effectively non-industrial, so we should predict low nationalism. The country also lacked an effective form of democracy, and democracy is deemed to often go hand-in-hand with nationalism. (Recall that its Polity score was higher than Italy's, but largely due to executive constraints on Menelik.) Note, however, that all this bodes well for case suitability. It is desirable for the stronger nationalist power that we seek to evaluate (Italy) to confront a weaker opponent in most respects – including in terms of nationalism, as we assume that social technology to also be a capability.

Yet, also recall that we prefer a case that is not lopsided in favor of the nationalist attacker. We do not wish for a case that is patently "too hard". So, do Ethiopians show signs of cohesion that are nonetheless respectable? Yes. Simply, the Ethiopians did not constitute dispersed tribes to be picked off by the Italians. There was significant social cohesion that seemed to resemble the nationalisms of Europe – we could even call this a prototypical technology, a "proto-nationalism". This cohesion seemed to come from Ethiopia's sense of cultural identity, and seemed to have historical and religious sources:

> [It] had been nurtured over centuries by the [Ethiopians'] struggle to preserve their Orthodox Christian faith against Muslim invaders from the Sudan and the Red Sea coast enclaves held by, first, the Turks, and later the Egyptians.
> As well as this sense of [religious] identity, Ethiopians had a well-developed feeling of cultural solidarity. This translated into something that more closely approximated to European-style nationalism than anything found elsewhere in Africa. This…found its highest expression in the country's ancient Christian monarchy, an institution which had been recognized by the European powers since the Middle Ages (Vandervort, 1998, pp. 157-158).

Supporting evidence of this cohesion also comes from the size of Ethiopia's mass army. Surely it was somewhat smaller than Italy's, but this relative disadvantage hides its opposite. In terms of the *percentage* of the total population that each combatant had managed to enlist, Ethiopia was superior to Italy. The former's armed forces were 150,000 strong, out of a population of 7.7

million – or 2% of the population. Italy, on the other hand, did not break the 1% mark – its armed forces only represented 0.7% of the population. Again, if we take seriously that mass armies are an outgrowth –and possibly even reinforce- nationalism, then Ethiopia's superior ability to make its army more appealing for enlistment should be recognized. One could be skeptical if Ethiopia actually had the economic resources to coerce (or pay) its population to fight. But it simply lacked the economic might of modern states, and could not be counted to finance any far-flung state apparatus to simply extract or hire recruits whenever it wanted. This economic poverty makes Ethiopia's recruiting success all the more respectable.[75] In short, the evidence suggests that Ethiopia does not lag much behind Italy in terms of wide social cohesion.

At this point, we can recap the comparisons of capabilities. They point to an overall advantage by Italy – but importantly, this lead is not vast. Ethiopia's economy is dwarfed by Italy's. But in the size of its army, Ethiopians are right behind Italians. And in some measures, like democracy scores and their ability to enlist soldiers, the African state seemed to outpace Italy. All this points to a suitable case, in order to see if nationalism is deficient on the offense, even against an opponent that is weaker (but not too weak). But just like in the Austro-Sardinian war, it is also useful to see if battlefield performance reveals any imbalances that threaten the case's suitability. For this purpose, we can focus on the battle of Adowa, which was the only large-scale confrontation of the war (unlike the Austro-Sardinian war, which had several large battles). Below we examine each side's number of troops fielded at Adowa, and their ability to inflict casualties on their opponents:

[75] Later, we use this intuition to build a new quantitative measure of nationalism.

Table 6. Some battle statistics, Battle of Adowa, 1 March 1896

	Ethiopia	Italy and allies	Italy only	Ascaris (Italian allies)
Troops fielded	100000	20000	10600	9400
Killed	7000	6889	4889	2000
Wounded	10000*	1500	500	1000
Total Casualties	17000	8389	5389	3000
Captured		2900	1900	1000
Casualty rate	17%	42%	51%	32%
Ratio of Ethiopian forces to opposing forces		5.00	9.43	10.64
Casualty-infliction ratios:				
Ratio of enemy casualties to troops fielded	0.08	0.85	1.60	1.81
Ratio of enemy casualties to own casualties	0.49	2.03	3.15	5.67

Source: Vandevort (1998, pp. 163-164; those pages are only missing the total number of Ascaris; see p.160 to obtain the number of total Italy-led troops, and subtract the Italian troops to get the Ascaris fielded)

* - Note that Ethiopia's wounded-to-killed ratio is much higher than any combination of its opponents. One possibility is that the Ethiopians were able to kill many of the already-wounded Italians and Ascaris. But I did not encounter narrations of Ethiopians killing scores of enemy wounded. Another possibility, more sound to me, is that the Ethiopians' numerical superiority did allow them to overwhelm the opposition in such a way to turn most casualties into deaths. After all, consider that the overwhelmed Italians and Ascaris may have only been able to wound Ethiopians that were swarming them, and could not concentrate enough force to produce more enemy deaths.

Later we will discuss this table at more length, but immediately we see one disparity that puts the case in peril: the Ethiopians had a numerical superiority of 5-to-1 over the Italians and their allies (which greatly contributed to their victory at Adowa). Recall this superiority goes in the opposite

direction from the desired one – in an offensive war waged by a nationalist state (here being Italy), we want its opponent to be equal or *weaker*, not stronger. So, an Ethiopian preponderance of force in the theater-of-war seems a great risk to the suitability of the case. But does this risk pan out?

The concern is diminished once we remember that battle and war victories are not one and the same. That is, whatever was accomplished by the Ethiopians at Adowa, the path to a favorable diplomatic settlement was not a foregone conclusion. After all, Italy did have more troops than Ethiopia at its disposal – even if the bulk of those troops were still in the Continent. Thus, the European power could have simply shipped more soldiers to Ethiopia, evened the scales, and pursued either victory or less favorable terms for Ethiopia. If this argument is correct, then the case is still suitable for analysis. Simply, despite Adowa, Italy remained materially superior to Ethiopia, and so the Italo-Ethiopian war was still one of advantagous capability on the side of the offensive nationalist state.

To corroborate this argument, we can offer historical proof – Italy actually *was* able, and very close to, reinforcing its contingent after the battle of Adowa. Just two weeks after the defeat, the British periodical *The Spectator* commented on such plans:

> …It is ascertained [in Italy] that the defeat before Adowa was due to the incompetence of the General in command, and that the soldiers and officers fought bravely and died hard…the people permit the departure of the troops, who will soon raise the force under General Baldissera to thirty thousand men. With this army he can, he reports, hold the triangle to which [the Ethiopian city of] Massowah is the entrance, and keep back the Abyssinians, who will be slow to quit the shelter of their hills. He waits, however, for more artillery…[The Sudanese city of] Kassala is not yet abandoned, and General Baldissera, an old Piedmontese soldier of the regularly trained type, will give up nothing he can help, though he will not move forward a yard till he is ready…
> [Italy's] King Humbert has been determined all through, [and has appointed new ministers of foreign affairs and war]…They are all opposed to "adventure" in Africa, but all agree that before peace can be made King Menelek must be defeated. They have decided, therefore, to ask for a loan, to raise the army in Africa to forty thousand men, and after the rains to commence a second and, they hope, more successful campaign

("News of the Week", 1896).

Notice, too, the methodical nature of the Italians' plan. The Italian general Baldissera will not launch a knee-jerk or impulsive offensive – he is described to gather troops but also "waits…for more artillery" before any offensives. The political leadership, too, understands the need to account for their finances (in deciding to "ask for a loan") and of the need for judicious timing (in launching a campaign only "after the rains"). The above does not seem like the empty threats of an embarrassed power. Instead it speaks of the step-by-step planning by a serious actor.

Further, there were signs that Italy could have defeated the Ethiopian military, or at least seriously damaged it. They come, of all places, from the battlefield performance at Adowa. Briefly return to the table shown, and consider both the ratios of troops fielded and casualty-infliction. For their victory, recall the Ethiopians relied on a numerical advantage of five troops for every Italian or Ascari soldier. But compare this ratio to what the Ethiopians managed to accomplish with it. The Ethiopians inflicted 8389 Italian/Ascari casualties, while suffering 17,000 of their own. This casualty-infliction ratio boils down to 0.49. In other words, despite a 5-to-1 advantage, the Ethiopians paid with two of their soldiers for every enemy soldier killed or wounded. If we look at each side's ability to inflict casualties per soldier fielded, a similar figure emerges. For every soldier it sent to battle (whether he lived or died), the Italian side was able to derive 0.85 enemy casualties, or almost one Ethiopian soldier. The Ethiopians could only muster 0.08 Italian/Ascari casualties for each soldier fielded. Comparing these two ratios, 0.85 and 0.08, we can argue that the Italian side was about 10 times more effective in its use of force.

Let us now put these ratios in the context of Italian plans to field 30,000 to 40,000 troops in Ethiopia after the Adowa debacle. Such a number of combat troops would have been enough to inflict 25,500 to 34,000 Ethiopian casualties. This range comes if we count only the ratio of

Ethiopian casualties to Italian and Italian-allied fielded troops at Adowa (equal to 0.85). If instead we consider the ratio of casualties borne by each side at Adowa (equal to 2.03), the range of Ethiopian casualties becomes even greater. The implication is a favorable outcome even under the worst of circumstances. In other words, if Italy would have sent those reinforcements, and somehow they were *all* lost in combat, the Ethiopians would have themselves lost 60,900 to 81,200 of their troops. If we consider that Menelik's army, which fought at Adowa, was comprised of about 100,000 troops, this estimated range of casualties would have had a crippling effect on Ethiopia. And again, it seemed well within the material capabilities of Italy at the time.[76]

The case becomes even more favorable for Italy if we consider two more things. First, the combat ratios from Adowa were obtained from Italian troops that fought with about a 5-to-1

[76] We should also briefly consider a potential counter-argument involving international politics. Perhaps an Italian surge was materially possible, but forestalled by worry about the other European powers. For instance, Austria could have taken advantage of Italy's distraction in Africa to try and recover territory lost during the wars of unification. But as plausible as this concern seemed, it apparently did not play a role in 1896. *The Spectator* confirms as follows, soon after the Adowa defeat:

> Assurances have been received from Berlin and Vienna that Italy shall be protected while hostilities [with Ethiopia] last, and even the French…profess friendliness "now that [Italian prime minister] Crispi has fallen." Even the Pope, we are told, was bitterly moved by the disaster [at Adowa], and suspended a Te Deum which had been ordered, while the Sicilians displayed a transport of grief…

And even a longstanding colonial power did not see Italy's defeat as an opportunity to take advantage of her:

> The British Government is not sorry to find that it can help Italy and itself at the same time. In threatening [the Sudanese city of] Kassala the Dervishes are threatening at once Italy and [the British *de facto* protectorate of] Egypt, and it has therefore, according to a telegram from Cairo, been decided to push forward the main body of the Egyptian garrison into [the northern Sudanese city of] Dongola… Dongola is the [Sudanese ruler] Mahdi's storehouse on which his forces depend and an invasion will so threaten his power that his forces must retreat from Kassala. It seems clear that the Italian defeat before Adowa has greatly increased the hopes of the Mahdi's adherents…and that if that disaster is not repaired Egypt may be seriously threatened. The movement resolved on seems to be necessary, but before it begins the [British] Government would be wise to add a regiment or two of Sikhs or Ghoorkas to the garrison of Egypt ("News of the Week", 1896).

In sum, the Italian defeat at Adowa was seen not as an opening for other powers to exploit, but as a crack in a system of colonialism which promised something for every European power that participated. As such, it seemed that Italy did not have to worry about other powers worsening the size of this crack. This is why Italy's deliberations on its Ethiopian adventure did not seem to include much worry of intrusions by other European parties. And this assumption panned out. Two months after Adowa, Italy renewed its membership in the Triple Alliance, where its role essentially remained unchanged (as that of the junior third partner). And by 1898, it improved its relations with France by way of a commercial treaty that, among other things, ended a ten-year old tariff war (Albrecht-Carrié, 1973, pp. 223, 233). So, it appears that "no other Great Power [was] seriously anxious to take over the Italian role" in Africa by actively exploiting the setback at Adowa (Bosworth, 1996, p. 103).

numerical *disadvantage*. This suggests the effectiveness ratios of Italian soldiers would have been much greater with a fairer balance of forces. (This takes us back to the general principle of combat, already mentioned, that massed troops have a relative advantage over their sparser opponents – and so, that equal masses of soldiers negate any such numerical advantage.) Thus, 30,000 to 40,000 Italian troops may have been able to inflict even more casualties than the 25,500 to 81,200 estimated above. Second, consider that the Italians likely would not have fought all by themselves – with more financing, they could have recruited a greater number of native troops, and thus threatened Ethiopia's King Menelik with greater casualties. In addition, with more financing, the Italians could have bought off some of the tribes or advisors on King Menelik's side. Ethiopians may have been bounded by a sense of cultural solidarity, but with the right incentives, perhaps some could have splintered – or at any rate, Italy could have well tried. After all, recall that Menelik's kingdom was not immune to palace intrigues and tribal revolts, and that Italy had already been successful in hiring the services of other natives – its Ascari allies.

In sum, Adowa is a battle of two tales. The first seemed to put the case's suitability in peril. It is the popular perception of this Ethiopian victory:

> No textbook on modern European history, and certainly none on African history, fails to note that the first victory won by less-developed, coloured peoples over the armies of a Western power was the Ethiopian defeat of an Italian army at Adowa in 1896…The rout of the Italians demonstrated to Africans and other colonized peoples that Western soldiers were not invincible…Baratiere's army suffered 50 per cent casualties, far higher than those suffered by participants in any other major battle of the nineteenth century (Vandervort, 1998, pp. 158, 164).

But as we saw, there is another tale – largely undiscussed by past and present observers. It speaks of an Italy able to inflict serious damage on Ethiopia, both in terms of gross capabilities and battlefield performance (if we seriously consider the battlefield ratios at Adowa). And the further we move away from the popular hype about Adowa, the more sensible this second tale becomes. By doing so, we can also validate the Italo-Ethiopian war as a suitable case for analysis. But the war also presents a mystery, and this is where its outcome becomes relevant: *Italy did lose its war with Ethiopia*. Even when its "hard techs" were all in working order. Even when they were mostly superior to the enemy's. At the risk of oversimplifying, all that Italy had to do was send its planned reinforcements after Adowa. This would have promised a better resolution to the war.

But sending those reinforcements was precisely the problem – and it was a question of soft technology, not of the hard ones. It seems that Italy's military preparations were undercut not by the absence of nationalism, but by its very presence. History remembers the riots that plagued Italy after Adowa, and as we will discuss below, certain features of them are particularly revealing of a nationalist bent. But less known, and no less revealing, are the articulations of Italian sentiment at the time. First in line are Italian politicians, many of whom had already opposed the war before Adowa. Consider the words of Italian senator Garelli, as part of a 1896 speech delivered in a commemoration of those lost at Adowa, in the city of Perugia:

> It is right that the nation gives recognition to these valorous pioneers of civilisation in Africa. It is absolutely right to pay tribute and to admire the glorious dead of the war in Africa especially because their death is due to a criminal and totally mad set of policies.

The senator is clearly able to separate the soldiers' patriotic sacrifice from any hare-brained policies that might have prompted their loss of life. Garelli's point of view is both confirmed and extended by another invited speaker in the same ceremony:

> As for Africa I can say that I too am absolutely against any attempt at vengeance or *expansion* from which we could expect only new disasters and new occasions for mourning (Finaldi, 2002, p. 90; emphasis added).

Here, not only was the current policy seen as the culprit, but more subtly, also the continuation of its strategically *offensive* character – hence the guest's emphasis against "expansion." Thus, Ethiopia was seen not as a crucial struggle for national security. Instead these politicians hinted at Italian colonialism (at least in Ethiopia) as actually antithetical to the Italian national interest, and hence to nationalism. To heed the temptations of the former one was to ignore the imperatives of the latter two.[77] [78]

Of course, politicians' statements are not enough proof of widespread dissatisfaction with Italian colonialism. But they do offer insight into the path taken by such dissatisfaction – as one away from the current regime in power, but not away from a citizen attachment to the Italian nation. For the most salient evidence of popular dissatisfaction, though, we need to recount the riots that plagued Italy in 1896. These all took place immediately after the battle of Adowa:

> In Milan riots led to the bayoneting of a nineteen-year-old student; in Pavia the

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[77] Recall the discussion of nationalism being most clearly associated with the promotion of obvious national interests like protection of the homeland. On the other hand, it is less clear how the nation is necessarily furthered by interests like the expansion of colonies in far-off lands.

[78] It was not only politicians who managed to articulate the popular sentiment against Italian colonialism. Popular Italian literature, too, expressed similar distinctions between nationalism, colonialism, and the strategically offensive character of the latter. Consider the below excerpt, from a short story about Adowa. In it, a soldier reflects on the war in Ethiopia while sailing into the Red Sea:

> "As the sun rises out of the sea like a slow-moving bullet we all remained dumb…the sky's colour of blood reminded me of…all the battles fought for the independence of our beloved fatherland, but suddenly I could see the horror of the battlefield…[I felt] in [my] conscience that it is not right to fight against these natives who cannot see in us but invaders in the same way that our fathers saw foreigners who oppressed our fatherland…" (Finaldi, 2002, pp. 89-90)

Notice the soldier's reluctance to fight because of the offensive nature of Italian colonialism, which he contrasts to the defensive nature of previous Italian struggles (against the Austrians). In the story, this imaginary soldier still concludes that "I know I must obey a duty imposed on me" – but the same cannot be so easily said of nationalists who have not joined the Italian armed forces *yet*. Given the same degree of reluctance, were they as acceptant to contribute their bodies to a war of colonialism? As the main text shows, history already answered that question, and clearly.

> "population" led by students tore up the railway line to prevent the trains taking any more conscripts to fight in Africa. In Turin the headquarters of the pro-Crispian *Gazzetta del Popolo* was ransacked, and in Rome Crispi's house was pelted with stones. Similar episodes occurred in cities from Brescia to Benevento, from Como to Catania (p. 91).

Reading the above, a skeptic may be tempted to conclude that only or mostly students were involved. And yes, perhaps they were behind many of the more violent demonstrations, but the anti-war sentiment was not a niche preference. In fact,

> [l]arge sections of the Italian populace…made manifest their opposition to African adventures, sometimes uneasily sensing that it was unjust to try to take away land that belonged to others. Among those anxious to withdraw from the race for empire were the businessmen of Turin and Milan, the socialists…and many Catholics (Bosworth, 1996, p. 102)

At any rate, as with the politicians' speeches, here too we see subtle indication of Italian nationalism versus colonialism – and also of a particular lack of individualism. Let us return to the Italian students above, and note how they put *themselves* at risk in disabling railways to stop the flow of conscripts to Africa. The contrast is clear if we briefly consider the counterfactual: what if those Italian students had been strict individualists, as opposed to nationalists? Any true individualists would not bother with actions like these. For them, it would have been better to disappear – to avoid the call of conscription, should it ever come.[79] In fact, if anything, those hypothetical individualists would have *welcomed* the flow of conscripts to Africa, and breathed a sigh of relief – "better them than us!" – at seeing the trains pass by. Their reasoning would have been simple. If the flow of current conscripts was blocked, the Italian state may have increased

[79] Contrast the actions of protesting Italians with those of deserters and draft-evaders in Napoleonic France in Chapter X, and the first group's nationalism becomes clearer. The railroad-blocking Italians are risking themselves to delay the onset of risk for their fellow conscripted compatriots, while the French uncompliants simply removed themselves from harm's way.

its demand for conscripts to compensate for the sporadic stopages. The individualists' chances of being called up would therefore increase. So, the riots that took place were not indicative of the selfish spirit, but strongly suggestive of the nationalist one. Italians rioted to protest the state's colonial policies, and at least in one case of enterprising students, they directly intervened against the sacrifice of their soldier brethren.

With the riots, Italian prime minister Crispi was forced to resign, and the rest of the story was one of peace, quickly secured:

> The new government, believing that the public was tired of foreign adventures, opened negotiations with King Menelik. On 26 October 1896, a treaty was signed in Addis Ababa settling the boundaries of Italy's Eritrean colony and nullifying the Italian claim to a protectorate over Ethiopia, which had done so much to set the stage for the tragedy of Adowa (Vandervort, 1998, p. 164).

But again, we see signs that Italy's material position vis-à-vis Ethiopia was considerable, and could have allowed for extended conflict. The Ethiopians apparently seemed to think so. Consider two actions by King Menelik.

First, right after Adowa, he did not exploit the victory by mounting an extended offensive against Italian forces in neighboring Eritrea. One of his generals, Ras Alula, is clear in his complaint – "I asked the king to give me his cavalry…and if he had, I would have driven the Italians into the sea." The reasons are subject of historical debate, but they all point to Menelik's lack of a decisive military superiority in the area. For example, "Menelik knew that Eritrea was still heavily garrisoned, with 16,700 [Italian] troops guarding well-fortified positions; he had humiliated Italian arms [at Adowa], but if he pressed forward this garrison might be reinforced" (McLachlan & Ruggeri, 2011, p. 24). Added to this, Menelik's army at Adowa was vast in size,

but limited in logistics and supplies. It simply could not be provisioned locally, and needed soldiers to often forage long distances away from the main force (Vandervort, 1998, p. 160). In sum, after his victory at Adowa, Menelik was simply "short of provisions…Eritrea was suffering a famine, and the region lay beyond his line of food depots" (McLachlan & Ruggeri, p. 24).

The second hint of Menelik's strategic weakness after Adowa comes from the peace negotiations themselves. A superficial look at their outcome is that the Italians ended up renouncing their influence in Ethiopia. But outcome is not all – the *process* of the negotiations is very revealing. In particular, there is Menelik's bargaining position during the hastened negotiations. It was remarkable in its consistency:

> On 23 August 1896 the Italian envoy [to Ethiopia], Count Nerazzi, was told that Menelik had only two pre-conditions: the abolition of the Treaty of Wichale [which surreptitously declared Ethiopia to be an Italian protectorate], and recognition of Ethiopia's unqualified independence. Astonishingly he was only asking for the restoration of the status quo. The government of di Rudini hastened to oblige. Within two months a peace treaty was signed…" (Pakenham, 1992, p. 486)

It is odd to make limited demands if one indeed has an overwhelming advantage over an opponent. (To put this oddity in modern context, it would be as if the Allies refrained from occupying Germany and Japan after World War II, and merely asked for the territorial status quo before 1939.) But this puzzle is simply not so if we accept Ethiopia's shaky position in its own region, and Italy's sizable military superiority over it. Thus, it seemed sensible for Menelik to close a deal while the Italians were still dazed from Adowa, and secure Ethiopian independence before the former's war machine could recover. To sum up, in the way by which peace was secured, we get confirmation of the material balance of forces between Italy and Ethiopia – but

we also get further confirmation of the important role played by Italian nationalism. Simply, if the Italian people had not protested their further sacrifice for colonial gains, would the peace negotiations have taken so little time to resolve? Or, would they have even begun so soon after Adowa?

To more clearly see the defensively-biased role of nationalism, let us briefly consider a counterfactual. Suppose that Italian nationalism was *offensively*-oriented, or that it was intertwined with colonialism. If so, the aftermath of Adowa would have resulted in vigorous public support for a renewed offensive. Instead of students blocking trains of conscripts, they would have been *flocking* to join them. And the Italian government would not have concluded negotiations immediately after Adowa. It may have begun them to gain time while more Italian troops crossed the Red Sea – but once those reinforcements had arrived in Eritrea, the Italians could have begun a hardball bargaining process. Their goal would have been to extract the most concessions from an exhausted Menelik. Perhaps this would have meant a peace treaty that guaranteed Ethiopian freedom to negotiate treaties in some areas of diplomacy, but not others. Or, Menelik would have guaranteed Italian veto power over his policies – so Ethiopia could take all the diplomatic initiatives it wished, as long as Italy could review and abort them at will. And, of course, there is the non-diplomatic scenario. Further Italian reinforcements could have simply destroyed Menelik's army, assuming they mustered even better casualty-infliction ratios than the impressive ones at Adowa. If so, any peace negotiations would have meant little in the way of Italian concessions.

Of course, none of the above happened, and there is scant or no evidence that Italians wholly pushed for a renewed offensive after Adowa. Only its leaders did, but they met the nation's reproach. And like the Austro-Sardinian war, the Italo-Ethiopian war also showed that "hard

technologies" were unable to account for the war's outcome. On the other hand, the social technology of nationalism is a fair explanation for success in one case, and defeat in the other. The two cases thus show Proposition 2.1 to be a very plausible one. Nationalism appeared both to foment and limit a state's conflict "stamina".[80]

That is, while the role of nationalism may still be unclear during the actual moments of fighting,

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[80] Although the hypotheses in this chapter only pertain to the general defensive bias of nationalism, a future extension of the study would do well to explore the nature of the irredentist offensive. Since this chapter covers the wars involving Italy, here we can briefly explore the requirements and implications of such a study by discussing an obvious case, the Third Italian War of Independence in 1866. As the reader recalls, properly construed, the hypothesis for irredentist offensives is as follows:

A nationalist army should perform significantly better in an irredentist offensive than in an non-irredentist one.

Notice the above is a relatively "weaker" variant of the irredentist-advantage hypothesis. In the stronger variant, the nationalist army would be able to actually *win* its irredentist offensives; whereas in the weaker variant, combat performance is higher under irredentist offensives than non-irredentist ones, but the former kind still does not logically necessitate a strategic, or even tactical, victory. Certainly, the stronger variant holds the most hypothetical promise, and is the easiest to test, since one can look for clear victories on the part of the irredentist offenders. Yet, the stronger variant may also be more difficult to corroborate empirically, if we take seriously the role of confounders in the real world. And so, it seems judicious to stick with the "weaker" but more prudent variant of the irredentist-advantage hypothesis.

However, when we conduct a preliminary assessment of the Third Italian War of Independence, there are certain challenges to the suitability of this case for testing the offensive-irredentist bias of nationalism. Recall that in this chapter, a similar preliminary test of other conflicts is performed, and subsequent analysis is conducted only after such preliminary tests indicate the suitability of the cases. The issues with the case here are generally of two kinds.

The first problem with adopting the Third Italian War of Independence is that it does not meet the requirement laid out for a suitable case earlier in this study. That is, to show how nationalism confers an advantage to a combatant, it is best if that combatant is facing an opponent that is either equal or stronger overall. In the Third Italian War of Independence, the Italians faced an Austria that was combating Prussia on another front. In fact, this is generally acknowledged as the very reason why Italy chose to go to war against Austria - because the latter was already facing the strongest continental power at the time. For verification, let us look at the below statistics, similar in manner to those appearing in the preliminary assessments done in other parts of this study.

Capabilities of combatants in 1866

Country	% of global capabilities	Milit. Personnel	Urban pop.	Iron/steel production
Prussia	6.48	216K	1020K	988
Austria	4.38	300K	1086K	292
Italy	5.00	233K	1639K	20

Sources: Jaggers and Gurr (1995), Singer and Small (1993)

Here we can see that, in line with the common historical view, Austria in 1866 was facing a powerful Prussia. In terms of military personnel, Austria seemed to hold a lead over Prussia - it held 300,000 troops to the latter's 216,000. Their urban populations, on the other hand, were fairly matched, with both countries having over a million each. It is in industrial power, however, that Prussia's capability overwhelms Austria's - in fact, by more than a factor of 3. Overall, when considering the gross percentage of capabilities held by states in the world at

it seems to contribute heavily to the flow of citizens from civilian life to the armed forces.

In fact, we can easily depict that flow as akin to water pouring from a faucet. Just recall your common bathroom faucet, which is controlled by "hot" and "cold" water knobs. If Proposition 2.1 holds, the technology of nationalism acts as a faucet with two knobs of its own – one "offensive" and another "defensive". From them, there is a flow of fresh troops, but with a

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the time, Prussia's capabilities are relatively larger than Austria's. Around 1866, Prussia held 6.5% of the world's aggregated capabilities, compared to Austria's 4.4%. In sum, we can consider Austria to be overmatched by Prussia in general at the time – and perhaps more markedly than shown by statistics alone, if we also consider Prussia's qualitative advantages in fomenting greater nationalism from its people and instituting better military training.

Seeing the balance of power between Prussia and Austria, it is here that Italy's role simply tilts the table. Around the time of the Seven Weeks' War, and so also the Third Italian War of Independence, Italy held about 5% of the world's capabilities – this alone is greater than Austria's 4.4%, and amounts to an overwhelmed Austria when we also account for Prussia's capabilities facing it. The other statistics corroborate this picture, with one exception. That is, Italy's military personnel comprised of 233,000 people against Austria's 300,000; but the former's urban population was larger, with 1.6 million versus Austria's 1.1 million. This second difference matters when we assume that urban populations are within easier access of the state to recruit men for war. Finally, Italy's industry was less than a tenth of Austria's size circa 1866, although this statistic is more than counterbalanced by Prussia's wide advantage over Austria in industry.

In short, Austria was already facing a troublesome foe in Prussia when the Seven Weeks' War began, and when counting Italy as an additional opponent, it is clear that the former was not the superior party in the conflict. As such, it cannot easily be said that the requirement set out above is met. That is, the combatant adopting nationalism, and using it in an irredentive offensive, is not facing a stronger opponent. Italy appeared to have the advantage of nationalism technology and also a powerful ally.

It is helpful to nonetheless imagine what could have made the Third Italian War of Independence a more suitable case for analysis. To answer this question, compare the Third Italian War of Independence with the Austro-Sardinian war of 1859. In that case, Austria faced Sardinia and a select subset of the French army, not the entire French military. If the Third Italian War of Independence would have featured a limited engagement by Prussia, the argument would have been stronger for a suitable case study of an irredentist offensive. Or, if the Seven Weeks' War and the Third Italian War of Independence had happened sequentially instead or simultaneously, it could be argued that Austrian forces were fairly matched against the Italians. This could have even been the case if Austria faced Italy after facing Prussia, although the case would have been much stronger if Austria faced Italy *first* - since Austrian forces arguably would have been depleted after encountering the Prussians first. Neither of these scenarios, however, was the case.

Another indictment to be considered against using the Third Italian War of Independence as a case study is that it seems not to offer a viable and *complete* test of the irredentist-offensive hypothesis. It seems, as we shall see and depending on one's rigor, to be either half or one-quarter of what is required for such a test. Recall that in this study, to evaluate the defensive bias of nationalism, we needed two (2) case studies to juxtapose - in one, the Italians go on the defensive against Austria, while they go on the offensive against Ethiopians. A similar thing is required for the irredentist offensive, since in its evaluation, we really are testing the irredentist-offensive *bias* of nationalism under such conditions. That is, nationalism should be better on the offense when the stakes of combat involve occupying territory inhabited by co-nationals. So, at least two sets of tests would be adequate to assess this:

a) Assessing the performance of a country A's nationalistic army in a *non*-irredentist offensive against a country B, and comparing it to the former's performance in an irredentist offensive against ideally the same country or an appropriate substitute. Thus, here one can assess that, having a nationalist army, its performance improves when put on an irredentist offensive rather than a non-irredentist one. For example, in this kind of test, the 1866 war would have been suitable if the Italian armies attempted to also occupy a string of lands that could not be

catch. The “offensive” knob does not work as well as the “defensive” one. It may not open up all the way, or its flow may run out before long. So, a country’s leadership can always count on a ready *initial* stream of troops from the faucet of nationalism – but the longevity and intensity of such stream will depend on the savvy with which those knobs are operated. Like any other technology, nationalism depends on the user’s knowledge of its intrinsic limitations.

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considered "Italian" in any significant fashion - i.e., whose inhabitants do not hold an Italian or proto-Italian identity.

b) Assessing the performance of a country A's *non-nationalistic* army in an irredentist offensive against a country B, and comparing it to a comparable *nationalistic* army in a similar irredentist offensive against a country B. A "comparable" nationalistic army can be the same country A's army, perhaps at a time before it gained nationalist technology (or even intriguingly, after it somehow lost it). In this kind of test, we could see if possessing nationalism grants a country an increase in performance when fighting an irredentist offensive.

Certainly, though, each of the above tests leaves an open question that is complemented by the other. In test a) above, just because a country A's nationalistic army performs better in an irredentist offensive than in a non-irredentist one, it does not necessarily mean than a *non*-nationalistic army won't also experience a similar increase in performance. At first this may seem theoretically implausible, if we hold strictly to the assumptions and reasoning discussed in this study. But let us not do that. Consider other premises - what if people in a territory are unhappy of being ruled by a foreign party, and wish for liberation? In that case, they may welcome and even support an invading "army of liberation", regardless of whether these soldiers are of their same nationality or not. Such a war may not be strictly "irredentist" if the occupying soldiers and the occupied inhabitants are not of the same nationality. But perhaps the latter are of a nationality that approximates that of the occupying country's own inhabitants or rulers, independently of the soldiers' nationalities. In such cases, then, we may also see non-nationalistic armies perform better in wars that are coded as either irredentist offensives or wars of liberation.

A similar problem may occur with test b). Suppose that we indeed find that a country loses an irredentist offensive with the use of a non-nationalistic army (perhaps one with mercenaries or simply people who are loyal to their provinces and not the nation-state). However, after it gains nationalism, the same country is able to win a comparable irredentist offensive. In such case, we may be tempted to conclude that nationalism matters in contributing to victory during an irredentist offensive. Yet, other possibilities may account for the victory, in particular those related to the irredentist character of the conflict. Perhaps nationalism facilitates victory during *all* sorts of conflicts - not only irredentist offensives, but also non-irredentist ones, and especially in defensive conflicts. What then? Our initial finding above may give some corroboration to the irredentist hypothesis, but we still would not be supporting the entire spirit of the hypothesis. The irredentist offensive is supposed to be an *exceptional* advantage conferred by nationalist technology, not something that merely emerges from a *general* advantage to engage in *all* kinds of conflicts.

However, when test a) is conducted alongside test b), these open questions can be satisfactorily closed. For example, a nationalist army may win an irredentist war while a non-nationalist counterpart does not (test b). But instead of concluding that nationalism confers a general advantage in all conflicts, we can juxtapose the findings from test b) with those of a possible test a). In that case, with the corroborating results from test a), we could see that a nationalistic army also does much better in an irredentist offensive than a non-irredentist one, and so, it is not the case that nationalism confers an equal advantage to all sorts of conflict. Of course, this is an idealized scenario comprising cases without confounders. The more confounders we have, the more pressing the need for more cases to control for their role, which ultimately opens the door to large-n studies.

Certainly the above problem can be ameliorated to some degree, if we juxtapose the Third Italian War of Independence with the Italo-Ethiopian war, already discussed elsewhere in this study. If that is done, we have a valid basis to claim a comparison of how a country's army performs in irredentist versus non-irredentist offensives. However, this possible approach is also difficult to exercise because it does not account for the first problem discussed above - that, in an offensive, the nationalist army should face an opponent that is at least

Still, this section has only tackled one of the propositions stemming from the theme that technology has no single master. The other proposition pertains to the overall effectiveness of the technology. We turn to testing it in the next chapter.

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equal or stronger than itself. In that respect, the Third Italian War of Independence cannot provide a suitable case for analysis, since Austria effectively faced the militaries of both Prussia and Italy combined.

All told, the above concerns do not mean this conflict in Italy's history is lacking in relevant findings, or even supportive signs that irredentism can motivate a successful offensive. A few of these findings can be discussed here. The first occurred during the conflict, and it is the success of Italian commander Cialdini in taking a string of towns in fast succession. For instance, after crossing the Po, it is noted that Cialdini's forces occupied Rovigo, Padua, Treviso, San Donà di Piave, Valdobbiadene and Oderzo, Vicenza, and Udine from July 11 to July 22, 1866 - only 11 days, a feat apparent in significance. Further, the historical record notes the character of these prompt occupations. For instance, writing just a year after the war, W. J. Wyatt notes how Cialdini simply "occupied Padua *without resistance*" (52, my emphasis). Arguably, these occupations would have been more costly if Cialdini would have encountered residents who either did not feel Italian or harbored a competing loyalty towards another nationality.

Yet, it is hard to reconcile this evidence with others. Consider George P. Marsh's account of the conflict, as the first US ambassador to Italy. In a letter dated July 31, 1866, written to William H. Seward from Florence, he discusses the degree of success encountered by Garibaldi in recruiting in the Tyrol:

> ...Garibaldi's attempt to invade and excite a rebellion in the Tyrol was a most difficult and desperate enterprise. The public has never been informed of any Tyrolese of position having joined him; and that the materials which he had at his command were totally inadequate to subdue such a race of men as the hardy mountaineers of the Tyrol, *renowned for their loyalty towards their Emperor*, and the heroic resistance they have offered to every invader of their humble and happy homes (2012: 79; my emphasis).

So, it is not a foregone conclusion that the Italian incursions in 1866 constituted a “clean” irredentist offensive whereby the enemy territory was inhabited by members to the Italian nationalist cause.

Perhaps, though, we may argue that the Italian soldierly itself was motivated by irredentism to press on. In this, the pendulum appears to swing back to support the irredentist-advantage hypothesis. Here is Marsh again, discussing this motivation in the same letter as above:

> the gallantry manifested by [Italian] soldiers and sailors in the late battles abundantly show that, commanded by officers of any ability, they would prove formidable antagonists...[t]he volunteers have [also] proved very efficient, considering how very inadequately they were supplied with material means. All they have accomplished has been effected by the bayonet, for fire-arms, properly speaking, they have had none (98, 100).

In making this assessment, Marsh also adds another that has prevailed about the Italian leadership during the conflict - that it was "utterly unfit" (93). This implies that Italian achievements during the conflict were arguably done despite problems in the leadership. At the same time, though, Austrian successes ought to be similarly gauged. After all, they were done while fighting a two-front war against two formidable opponents who overmatched Austria's capabilities at the time.

Finally, to this evidence of soldierly motivation we have to counterbalance the following, which returns again to the supporters in the occupied territories. Namely, while Venetians may have been largely happy about a convenient Italian occupation that removed Austrian rule, there are signs of their having an identity that was (and is) somewhat independent of the Italian one. This is the topic of Venetian nationalism, and of Venetians who, "with their long and separate history, often see the Italian government as a 'foreign' presence in their homeland". These conflicts have a long history and manifested themselves, although not very openly, after 1866:

> The new Italian kingdom adopted a Tuscan dialect spoken around Florence as its national language. The dialect, very unlike the Venetian dialect, was generally rejected in Veneto. Linguistic nationalism increased

Chapter 4

Technological theme #2: Technology always surprises

Rare is the technology that dutifully abides by our expectations. Large and by, technologies will either work against or beyond the hopes of their designers and users. And if nationalism is to be treated as another technology, it pays to examine just how it may also surprise its handlers. Such task, though, requires us to delve into the theme of technological surprise. Below we explore several forms of surprise in technology, with two goals in mind. The first is to show the prevalence of the theme in various functioning technologies. The second is to identify the main elements that contribute to many of those surprises. This is particularly important for theory-building. Any technology may act surprisingly to its immediate observers – but that does not mean it is wholly immune to prediction. So, if we recognize the elements and processes common to many technological surprises, it may be possible to offer testable propositions about the surprises of nationalism as it is adopted by states across an entire region. However, let us first familiarize ourselves with surprise as it happens in more obvious technologies.

Many surprises do not make themselves wait, and show at the moment of a technology's creation or its early development. A famous example is the drug sildenafil citrate, known to the world by another name:

> The saga began in 1985 when Simon Campbell and David Roberts, two chemists at Pfizer in Sandwich, England, put together a proposal to look for hypertension and angina drugs. They proposed to find compounds that would inhibit enzymes called

as Veneto industrialized in the late nineteenth century, bringing the first immigrants from southern Italy...The first recorded incidence of violence between the migrants and anti-immigrant Venetians took place in Verona in 1889 (Minahan: 1992).
This independent nationalism muddies the already complex picture of the Third Italian War of Independence, and suggests that caution be used in the future selection of other cases involving irredentism.

> phosphodiesterases (PDEs), which break down cyclic guanosine monophosphate (cGMP), [a nucleotide associated with the widening of blood vessels (vasodilation) and increased blood flow.] At that time, little was known in the field of PDEs. One of the very few known PDE inhibitors was zaprinast…Using [it] as the starting point, the team [modified its molecules and] created UK-92480 in 1989… which would become sildenafil citrate and later Viagra…
> Unfortunately, the drug was not efficacious for treating angina, and it was logical to terminate the trials. [But] in further inquiries, some clever clinicians led by Ian Osterloh learned that the men "suffered" an unanticipated side effect, sometimes referred to in clinical trials as "unexpected benefits": the drug catalyzed their erections. The effect was especially striking for patients on high doses; 88% of them reported improved erections. However, especially at this time, a drug firm's ambition [was] to treat disease rather than to help healthy men achieve erections. Male erectile dysfunction is a serious disease, afflicting 10% of men under the age of 40 but an astonishing 52% of men over 40 years old. In 1994, Pfizer initiated limited Phase II trials for 12 patients with male erectile dysfunction; 10 of them showed dramatic improvement in their erections, and the rest is history (Li, 2006, p. 111).

Of course, similar surprises have made an impact in international politics and security. When radio research was in its infancy in the late 1880s, for example, it was soon found that radio waves not only penetrated some objects – it also bounced off others.[81] This surprise soon led to the invention of radar, a defensive technology that makes it harder to launch unexpected attacks. Facing it, any potential attacker enjoys less of a "first-strike advantage," since his moves can be more easily seen and possibly parried. The result is less temptation to attack, and arguably less wars.[82]

The surprises of birthing technologies seem to grab the most attention. Certainly they are groundbreaking, but these surprises also happened in a single event –in both cases of radio waves and Viagra, the surprise happened in an experiment. This simplicity in occurrence also makes these cases easy to write about, which explains why journalists often report them. But technology does not lose its element of surprise when it leaves the lab – well past the moment of creation, it delivers unexpected but subtler outcomes.

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[81] This finding is attributed to Heinrich Hertz in the late 1880s.

[82] On how the perception of first-move advantages can prompt wars, see Van Evera (1999, pp. 68-72).

Consider a technology once it is both mature and fully diffused across users. Sometimes, such technologies deliver an effect completely different from that of their earlier stages of adoption. For example, perhaps a technology was beneficial to users when only a few employed it, but its net effect becomes *detrimental* when it enjoys wide usage. This is a common happening in technology studies. Consider the case of the Skolt Lapps, herders of reindeer in northern Finland, who adopted a seemingly convenient technology:

> Prior to the introduction of snowmobiles, the Skolt Lapps herded semi-domesticated reindeer for their livelihood. Reindeer meat was the main food, and reindeer sleds were the principal means of transportation. Reindeer hides were used for making clothing and shoes. Surplus meat was sold at trading stores for cash to buy flour, sugar, tea, and other staples...Skolt children received a "first tooth reindeer," a "name day reindeer," and reindeer as gifts on various other occasions, including as wedding gifts, so [new households] began with a small herd of the beloved animals. The Lapps felt a special relationship with their reindeer and treated them with great care...
> In 1961, a Bombardier Ski-Doo from Canada was displayed in Rovaniemi, the capital city of Finnish Lapland…Snowmobiles soon began to be used for reindeer herding… Three snowmobiles were adopted in the second year of diffusion, five more the next year, then eight more, and sixteen in 1966-1967, the fifth year. By 1971, almost every one of the seventy-two households in [one studied village,] Sevettigärvi…had at least one snowmobile.
> …Within a few years of their initial introduction, snowmobiles completely replaced skis and reindeer sleds as a means of herding reindeer. Unfortunately, the noise and smell of the machines drove the reindeer into a wild state…Frightened running by the reindeer decreased the number of reindeer calves born each year…[A decade after introduction,] about two-thirds of the Lapp households completely dropped out of reindeer raising as a result of the snowmobile. Most could not find other work…[However,] despite the relatively high cost for [the Lapps], who lived on a subsistence income, snowmobiles were considered a household necessity…[So their purchase further] pushed the Skolt Lapps into a tailspin of cash dependency [and] debt…[The majority of] families today are unemployed and dependent on the Finnish government for subsistence payments… (Rogers, 2003, pp. 437-439)

Did the snowmobile revolution have disastrous consequences for the Skolt Lapps? In the long-run, it certainly did. But tragic outcomes are not necessarily preceded by negative processes, and the Lapps' story was not simply one of mounting misfortune. It was one that likely started off well, only to take a surprising turn as diffusion took hold.

Consider that the Lapp society arguably enjoyed a net benefit with the *partial* diffusion of snowmobiles. With only a few snowmobiles in operation, their limited noise was less likely to scare off the reindeer – thus preventing any sharp drop in their birth rate and preserving the Lapps' livelihood. Meanwhile, any lone snowmobile adopters could still enjoy their machines. This constituted an increase, on average, in the Lapps' quality of life. But more interesting is that, in the long-run, the entire Lapp community may have benefited from snowmobiles – if only their use had been kept contained. Why? Because their main advantage was faster travel, not better herding. For instance, "the round trip from Sevettigärvi to buy staple supplies in stores in Norway was reduced from three days by reindeer sled to five hours by snowmobile" (p. 438). Most Lapps could have remained herders, and saved time and effort by hiring the snowmobilers to fetch supplies from afar. The savings could have been reinvested in herding, or spent leisurely – either way the Lapp herder was better off. And the drivers would have enjoyed a steady income from the delivery business. But whether the Lapps actually ended with that division of labor, or just a selfish few enjoying their snowmobiles, the point is the same – in itself, the stage of partial diffusion did not entail negative developments. It was only when Lapp society approached full diffusion that things changed for the worst. There was a surprising turn somewhere, and that is a recurring theme in technology.

Still, if the transition from partial to full diffusion was always so bad, the theme of this section would ring hollow. Simply, there would be no element of surprise. But in other cases, the transition is actually positive, and it pays to think why. Consider a technology that is actually detrimental to users, but delivers long-term benefits with full diffusion. At first try, it is hard to conceive of such a technology, especially given the prevalence of pro-innovation bias – that is, we often assume that new technologies must be inherently beneficial (Rogers, 2003, pp. 106-

107). For example, few would deny that computers have improved our quality of life, and the newest development in computer technology is routinely welcomed as a betterment – large or small, but rarely a step backwards. Yet the computer has derived at least one technology that is decidedly harmful to its immediate user, and by design: malware software, of which the most famous variant are computer viruses. A computer virus is usually a software program whose primary function is detrimental to the interests of the computer user that triggers it. The extent and kind of damage varies, of course. Some viruses may delete great amounts of information, while others just bog down a computer's resources and slow it down. Whatever the extent of such damage, they are quintessentially harmful technology.[83]

So how can a computer virus involve benefits with full diffusion? Imagine a virus that attacks a self-contained computer network with thousands of users. This virus spreads by a common route - it appears in the victim's email inbox, masquerading itself as an attachment sent by a friend or co-worker. When the victim opens the email attachment, the virus erases a portion of his computer data, but not before emailing copies of itself to the victim's own contacts. Also, assume that the virus is first sent only to a small subset of the entire network,[84] and that it gets

[83] One may argue that computer viruses do derive a benefit to someone – their creator, who at least enjoys causing mayhem. So, it may be unfair to label viruses as necessarily "harmful" technology to all users. However, the fundamental characteristic of computer viruses is not that someone made them. Instead, it is that they harm their immediate users, the people that unwittingly activate them, by exacting very particular forms of damage in their computers. To prove this point, imagine a future scenario in which a computer -without conscious human intervention- creates and releases a harmful program into the internet. When other computers open this program, their data is wiped out. No doubt, the internet community of users would describe this program as a virus – to be more specific, perhaps they would differentiate it as a "computer-generated" virus as opposed to a "man-made" variant. Yet they would still apply the previous label of "virus" to this program, because it spreads harmful effects undesired by users. Who (or what) made this program is immaterial. Of course, a similar thing applies to biological viruses – we deem them "viruses" whether they arose in nature or in someone's lab.

[84] The reason for targeting a small initial group is to raise the odds of successful retries. If a virus is sent to everyone in the network at once, the users might notice the oddity of similar messages hitting their email inboxes. This might raise a widespread alarm and prevent the virus from spreading very far. But if only a small group is targeted at once, any suspicions are kept limited to it – and the virus is free to attempt another group if the first attack fails. (Further, even if the small group notices the virus and tries to alert the rest of the network, it will arguably take much longer than if users across the entire network try to alert each other.) Of course, this is an insurance policy on the part of the virus (or its creator). Once the virus takes hold in a small group, and spreads to the rest of the network, no more targeted re-tries are needed.

"lucky" – an unwitting user activates it, and it soon begins spreading throughout the network.

The virus next enters the stage of partial diffusion, where it exacts damage without encountering much resistance. Its victims are caught unaware, and even though users may communicate with one another, their knowledge of the virus is rudimentary at best. They may know how the virus propagates, and the extent of the damage it causes, but still ignore many crucial details – like which soft-spots in their computers are actually exploited by the virus, how to best repair the damage done, or whether the virus persists after the initial damage (and could strike the same user again). In addition to their ignorance, the bulk of users may also be *unwilling* to join forces and fight the threat. This is especially the case with the uninfected. With the virus only partially diffused, many uninfected users might not want to spend time and effort in fighting it – after all, from their vantage point, the problem seems limited in scope and not necessarily worthy of concern. Further, the uninfected may even blame the victims for their carelessness, and think themselves immune to the threat. The result is dire. Few obstacles are in the virus's path, and the list of victims grows.[85]

The above sounds like a recipe for disaster, but consider what happens as the virus achieves full diffusion (or is close to doing so). The bulk of the damage has been done, but now things have paradoxically moved in the users' favor. They have had more time to research the virus, and more observations to confirm its behavior. Just as importantly, the user community has grown more determined to tackle the problem. (In fact, as the virus spreads nonstop, even the uninfected are much less convinced of their immunity to the plague.) So, as long as the virus did

[85] This reluctance to cooperate clearly resembles the Prisoner's Dilemma in game theory (see this game briefly described in Dixit & Nalebuff, 1991, pp. 89-91). Any uninfected computer user finds that the best action is to not cooperate with others. If others cooperate without him, they may find a solution to the virus threat. Or, if others think like him and fail to cooperate, no solution is found, but at least the user did not waste effort in pursuing a solution singlehandedly. Either way, the user is acting "rationally" in not cooperating – although if everyone acts as such, the ultimate outcome is the infection of the whole network.

not prove catastrophic,[86] the subsequent developments are bound to be beneficial. Users may devise means to stop the further spread of the virus, perhaps by filtering suspicious emails from their inboxes. They may also find ways to recover some of the lost data – a few users may even specialize in data recovery if the pool of victims is large enough. More importantly, though, the users will not limit their attention to the virus-in-question only – but will likely worry about *future* viruses as well. They may update their computers to institute broad safeguards, jointly research the potential of new electronic threats, or perhaps consider an early-warning system.[87] [88] At any rate, the long-term outcome is bound to be surprising. The original virus was indeed a harmful technology, and its partial diffusion certainly hurt the user community. But the virus's full diffusion did not herald an era of recurring problems. Instead, it sparked users' reactions and yielded a safer internet environment – much safer, in fact, than before the virus ever struck.

So technology seems able to surprise again. But two legitimate doubts may come to mind from this hypothetical scenario. One is whether there is actual evidence of it. The other is its possible relevance to building a theory of nationalism-as-technology. Both doubts can be put to rest. First, the internet community of computer users has behaved remarkably in line with the above scenario. Many major improvements in anti-malware security have come *only* in the wake of widespread attacks. In November 1988, the launch of the Morris worm effectively shutdown

[86] It may seem paradoxical, but the non-catastrophic aspect of the virus is actually *a requirement* for its successful spread. A totally "lethal" virus that destroys each computer in its path will soon extinguish itself, since its victims need to be functional enough to spread it to others. So, at least in some capacity and/or for some time, the virus must allow its host computer to "survive." Of course, this window of functionality can also be exploited by either the computer user, or the computer itself, to contain the virus and repair any damage. A similar thing is well-known to happen with biological viruses - the most virulent are the least likely to propagate further, as they kill the host too soon.

[87] Of course , not all users will necessarily become computer experts, but those without expertise may help with funding.

[88] In the long-run, these joint efforts may also yield unforeseen but welcome advances in other fields. For instance, techniques to spot virus-like computer code may also spot glitches that are not virus-related, and the correction of these glitches may improve overall computer performance. And dealing with computer viruses may also give ideas to those that fight biological viruses, thus extending the benefits beyond the foresight of the original victims of the computer virus.

ARPANET, the precursor of today's Internet, as it infected an estimated 60,000 computers. [89] [90] (At the time, the network only had somewhat more than 88,000 computers connected to it.) [91] That same month, the users took action:

> The Morris worm prompted the Defense Advanced Research Projects Agency (DARPA, the new name for ARPA) to fund a computer emergency response team, now the CERT® Coordination Center, to give experts a central point for coordinating responses to network emergencies. Other teams quickly sprang up to address computer security incidents in specific organizations or geographic regions. Within a year of their formation, these incident response teams created an informal organization now known as the Forum of Incident Response and Security Teams (FIRST). These teams and the FIRST organization exist to coordinate responses to computer security incidents, assist sites in handling attacks, and educate network users about computer security threats and preventive practices (Longstaff et al., 1997, p. 234).

Of course, contrary to the hypothetical case we discussed, the concerted efforts of groups like CERT-CC and FIRST will forever meet some disappointment. Consider that in the imaginary case, the network had a fixed number of users – most of whom have both weathered the virus attack and learned lessons about fighting similar threats. These veteran users would be very receptive to collective anti-virus efforts. But in real life, the Internet is not closed off. It is continuously adding new users, whose inexperience translates into bad habits: they will neither hesitate to open unknown files, nor stay abreast of the latest safety advisories. (In fact, new users all but ignore the existence of organizations like CERT and FIRST.) Such a constant influx of imprudency all but guarantees that the Internet will be buffeted by recurring waves of attacks. And in fact, this has been the case: the Morris worm was followed by the Michelangelo virus in

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[89] A computer worm is like a virus in that it is harmful and copies itself to spread across a network. However, while viruses need to attach themselves to another program to propagate, a worm does not – it can spread without any such "host file." Popularly, though, the term "virus" is applied liberally to worms and other malware.

[90] The ARPANET network was started in 1969 by the Advanced Research Projects Agency (ARPA) of the U.S. Department of Defense. See Longstaff et al. (1997) for a brief introduction to ARPANET and its security challenges.

[91] The number of infected computers comes from Grimes (2005, p. 29); the number of ARPANET-connected computers comes from Longstaff et al. (1997, p. 234).

1991-92, the Melissa worm in 1999, the Mydoom worm in 2004, and a host of others.

Yet groups like CERT have achieved a quiet success that goes beyond the latest virus to grab headlines. Most obviously, after Morris struck ARPANET, none of the subsequent threats have been able to replicate its success – neither in the percentage of machines infected, nor in its ability to paralyze the entire network. This may be in part because the anti-malware organizations not only contain, but also prevent serious attacks. For example, in 1994, "the CERT team notified an [unnamed] archive site that their software being readied for distribution had been [surreptitiously] modified." When the archive site investigated, it discovered "that one of the machines had been broken into and a Trojan horse installed in the patched program." As a result, the site was "able to take immediate action, averting a potentially very wide distribution of the Trojan horse" (CERT, 1997).[92] So, if we consider both threats contained and prevented, it can be argued that CERT-like groups contribute to a "ceiling-effect" on malware. In other words, these groups place a ceiling or cap on how far a virus can spread, and how likely it is to cripple the Internet. That most readers of this text cannot remember a Morris-like shutdown of the Internet is, at the very least, suggestive that such a ceiling is in place.

The historical diffusion of computer viruses is certainly interesting in its own right, but its greatest value here is didactic. Its analysis gives us an uncomplicated introduction to the anatomy of a surprise. Naturally, users and other bystanders are surprised whenever technology takes a sudden turn. But we should not confuse the surprising for the spontaneous. Technological surprises never pop out of the blue – they are the culmination of processes that unite, clash, and/or reach crucial thresholds. For instance, many surprising technologies exhibit an obvious or manifest process, which is easy to observe and often the most important to concerned bystanders.

[92] In this, CERT and its cousins are like intelligence agencies – their failures may well be publicized, but when they avert disaster, it rarely makes the news.

In the case of computer viruses, this manifest process is the infection of users – expressed either as an absolute number or as a percentage of overall network users. But the reader recalls that technologies also can have latent functions or processes (see p. X), which are either not commonly observed (out of ignorance) or just not easy to observe at all.[93] They may parallel the manifest process, or move against it. They may act alone or intertwine. But when this collection of hidden forces meets a threshold unknown to users, the result just catches the latter off-guard.

Let us briefly return to the case of the computer virus. Once it strikes the network, at least three latent processes follow the infection of users: the buildup of collective resolve to fight the threat, the gathering of knowledge about it, and naturally the passage of time. The "surprise" is not produced by any of those processes alone. Rather, it emerges out of their interaction in what is actually a two-step sequence. In the first step, the processes of resolve and knowledge are positively correlated with the infection rate. But at a high enough rate of infection, these two processes meet a threshold for collective action. Here, the community of users both "had enough" of the virus, and know enough to fight it. They overcome their individual differences and mount a defense. If they are competent and lucky enough, the users' efforts will stop the virus spread and push back the infection rate.

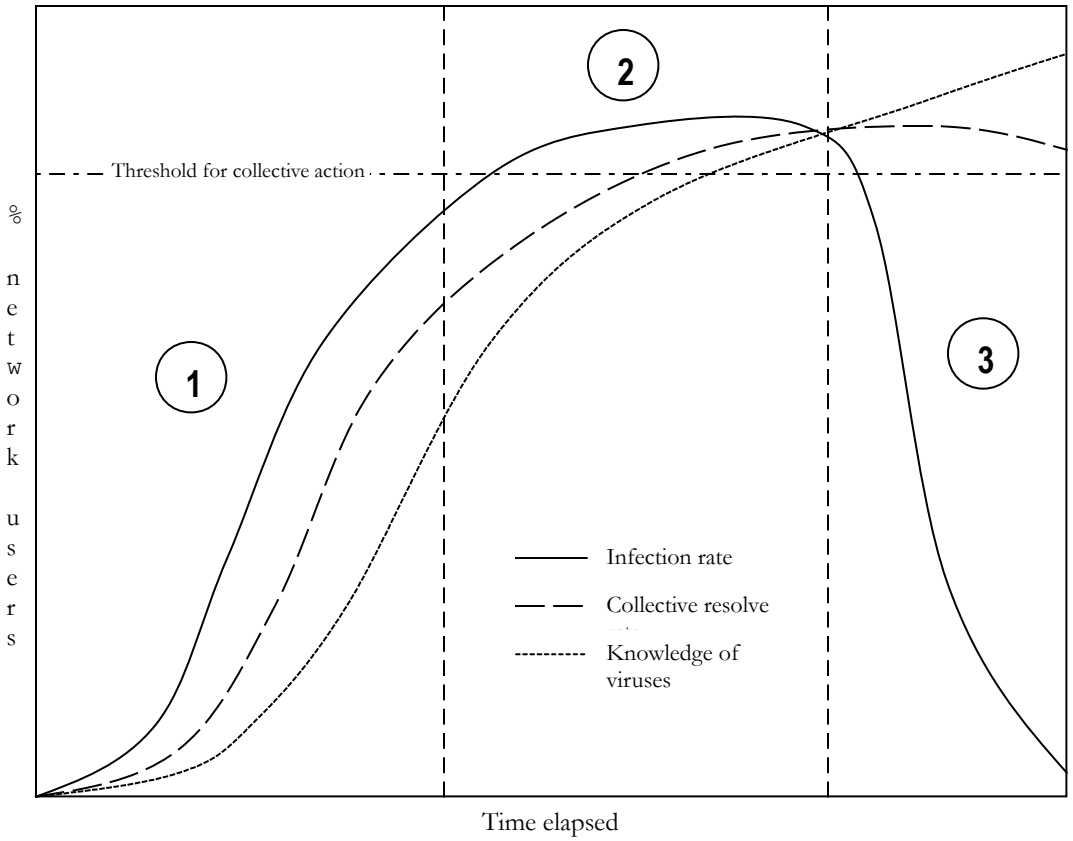
The second step begins at the moment that users begin to fight back. Things change in two fundamental ways, and the surprise unfolds. First, as the manifest process (the infection of users) dies down, its decline is not followed by *any* of the latent processes. This is obviously the case with time, but less obvious with resolve and knowledge. Both "decouple" from the manifest process. Consider that any knowledge acquired does not decline merely because the virus threat

[93] The manifest-latent dichotomy of processes is influenced by Merton's coining of "manifest" and "latent" functions in sociology. He, in turn, admits borrowing the terms from Sigmund Freud. The terms, however, have been applied to processes much earlier. Merton himself mentions that "Francis Bacon had long ago spoken of 'latent process' and 'latent configuration' in connection with processes which are below the threshold of superficial observation" (1968, p. 115). My usage of the terms arises independently from Bacon's, though, and owes more credit to Merton's.

disappears. If anything, as time progresses, the collective knowledge will *keep increasing* – as users refine their theories of viruses, test more of the historical data, and educate other users on the latest findings. The community's resolve, too, will not necessarily ebb away with the disappearance of the original virus. Users may adopt a "never again" attitude, and keep alive the memory of the virus attack. Further, that memory will be institutionalized in whatever anti-virus groups are formed – and to stay funded, these groups probably will keep reminding users that the virus threat never truly goes away.

This divergence among manifest and latent processes has unexpected implications for users. As knowledge and resolve stay high, the viral infection rate will keep dropping – this much was intended by the user community. But the users' continuous worry about viruses, and ever-rising skill against them, will go much farther than they ever expected. They will perpetuate the aforementioned "ceiling-effect" on future infection rates. Any new viruses will contend with a degree of user preparedness that the original virus never faced. As a result, their diffusion will only be a fraction of what the first virus enjoyed. So the surprise emerges. Whereas users expected the first virus attack to herald a period of persistent insecurity, their reactions yielded an even safer internet environment. The irony, of course, is that this safety comes at the expense of greater worry and readiness to combat viruses. (On the other hand, before the first virus attack, users were paradoxically both unsafe and unworried.) The figure below offers a graphical depiction of this discussion.

Figure 1. Anatomy of a surprise – Benefits from the full diffusion of a computer virus



This graph shows the paths of three processes after a computer virus strikes a network. The circled numbers correspond to three phases:
Partial diffusion: the virus begins infecting users' computers. Initially, the rate of infection rises faster than the community's resolve to combat the threat, as well as their knowledge of it.
Full diffusion: the virus has managed to infect a critical mass of users. At the same time, the latent processes of resolve and knowledge have crossed the threshold for collective action. The users decide to pool their resources, as well as any individual findings about the virus, to fight it.
Return to partial diffusion: the virus threat is first reduced, and then eliminated. Unlike phase #1, the community's resolve and knowledge are no longer coupled to the infection rate – this last follows a steep descent, but users continue to learn more about viruses, and remain committed to fighting future ones. Also, as long as this phase extends into the future, it will enjoy a lower average rate of infection than phase #1. This is because the continuous production of anti-virus knowledge, together with the steady resolve of users, will mean an array of defenses that never existed in #1. A ceiling is effectively in place against future malware attacks – a surprising benefit from the full diffusion of a single virus.

The simple case of a computer virus confirms two things. First, technology has the consistent ability to surprise – even in an "easy" case where it is widely considered to be intrinsically bad. Second, surprises do not suddenly materialize. They may be anticipated if we look at a few things: a technology's manifest and latent processes, their correlations and convergences, and their effects upon meeting significant thresholds. This is the stuff of surprises.

Now we can apply these elements to another "harmful" technology, nationalism, in the hopes of deducing its diffusive effects. But just like in the case of the computer virus, it is first necessary to provide some general assumptions about the technology's users and the setting in which they reside. First, imagine a large geographical region with several evenly-sized countries.[94] Each country in this region is defined as an expanse of land, with an evenly-distributed population of some density, and which is solely governed by a state apparatus. Each country also claims that its territory is demarcated by clear borders, no countries (initially) claim the same land, and all are aware of each other's claims. In effect, this means there are no disputed territories at the outset of this scenario. However, the same cannot be said of the countries' populations.

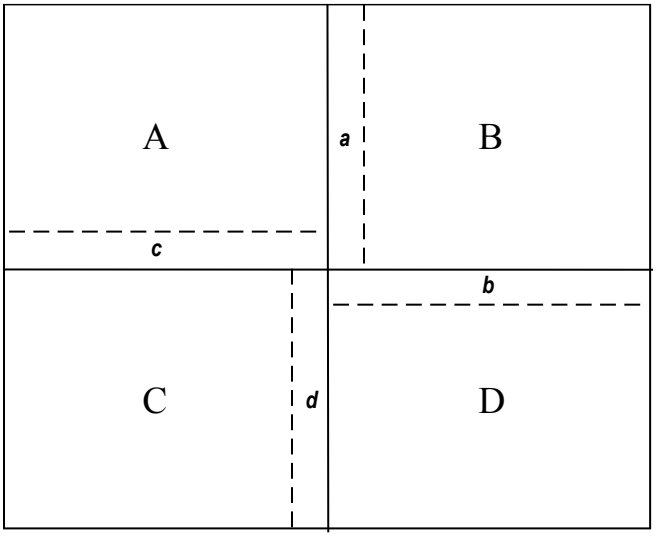
Suppose that in the above scenario, all the countries are superimposed on top of a multi-national tapestry. That is, the entire region is also broken up into populations of different *nations* that are mutually-exclusive. In this world, each inhabitant belongs to one nation only, prefers to live among members of his own nation, and cannot "convert" to another nationality (at least not with any ease). Thus, these nations are neatly parceled out, just like the arrangement of countries, and there is *almost* perfect convergence between these countries and nations. So, for instance, a country A all but occupies the same land as people of nation X – yet there is also a small slice of

[94] Later I discuss how the systemic effects are affected (or not) by having countries of different sizes.

A's territory with "foreign nationals", or people belonging to a nation other than *X*. In turn, these foreign nationals are assumed to belong to the *majority* population of a neighboring country *B*, which itself has a minority of foreign nationals, and so on. The next table depicts this scenario.

Let us now discuss the capabilities of these countries. In terms of natural resources, industry, and skill of leadership (both civilian and military), we assume that all of them are on equal footing. This simplifying assumption rarely holds in real life, but is helpful here because it lets us focus on the effects of the technology-of-interest. So, as far as nationalism is concerned, we assume that it holds the same qualities already discussed in previous chapters. That is, it produces military enlistment on the part of nationals who identify with their country of residence, and it boosts the combat effectiveness of armies (primarily in the defense, but also in irredentist offensives). However, these qualities, and how to harness them reliably, are not initially known to the countries' leaders. That is, this scenario is very similar to the case of the computer virus that we previously discussed – at the outset, there is just little or no informational access to the technology, even though some physical access may have already begun.

Figure 2. A stylized four-country scenario for the spread of nationalism



The above diagram represents a four-country region, with each country having majority and minority nationalities. Uppercase letters denote the country and national identity of its majority, and lowercase letters denote the identity of its *minority* nationality. For instance, country A has a majority population of nation *a*, and a minority of *c* nationals within its borders. The countries' mutually-recognized borders are marked by solid lines, with dotted lines showing how much territory is inhabited by nationals of the minority populations. Since any populations exist in direct proportion to their allotted areas in the diagram, the dotted lines also depict the minority status of some populations.

Given this widespread ignorance, it is reasonable to suppose that the adoption of nationalism will be (at best) a gradual process. The leadership of most countries will shy away from it, although evidence of its power may trickle in. Of course, if the elites in each country were the only parties with potential access to nationalism, and they feared its use, then such evidence would never appear. But recall that the elite leaders of a country are not the physical owners of nationalism – it is the mass that has physical access. So, even though elites do not dare to adopt nationalism, it is likely that with time, accidental events will showcase the mass's ability to use nationalism. Of course, we already assumed that the mass does not have the know-how to

employ nationalism with much finesse. But that does not preclude "blunt" uses of the technology. So we can think of myriad cases in which nationalism is employed – and the elites only discover its use afterwards. Perhaps a horde of barbarians, aligned with none of the countries, invade one of them. The nationalist populace may spontaneously mount a defensive against them, well before the leadership has time to deploy its professional military. Or, a great natural disaster may compel nationalists across a country to assist each other, in a wide-ranging display of altruism. In fact, we need not even venture far beyond the assumptions outlined in this scenario. Since each country is assumed to have a minority population of "foreign nationals", the elite leadership may already have evidence of their willingness to contribute to countrywide endeavors. For example, relative to the country's majority, this minority may be more prone to avoid paying taxes, and thus require more state intervention to push them to comply. Such comparative evidence may have already given the elite a hint about the value of nationalism.

Thus, as this evidence begins to percolate, the elites of some countries will begin to harness the new technology. These early adopters are likely to be in those countries with more direct experience of nationalism, or with better access to knowledge that will complement its use (see p.x). And the early adopters will also be in the enviable position to expand their power. Because they have adopted nationalism, even if imperfectly so, these countries can use their new national armies against their neighbors. This usage will in turn affect at least two manifest processes in the region – the incidence of war, and the re-distribution of territory.

In all likelihood, those two processes were not very active at the outset of the scenario. Recall that we assumed a rough balance of power among the countries – thus, unless the countries are risk-loving (which we have not assumed), there would be little physical conflict among them. Just consider the problems faced by any would-be conqueror. Simply, no country

will willingly yield its territory in response to the conqueror's threats of force. The only viable alternative is to wage war. But since countries are equally powerful, any defending country will at least put up a decent fight – and thus discourage the potential conqueror. Further, the frustrated conqueror cannot easily rely on allies to launch his wars of conquest. The reasons are simple. If a clear balance of power is in place (and we assume it is), few countries will want to help a conqueror. This is because the conqueror may grow too powerful from its victories, and next time, the erstwhile ally may find itself in the same conqueror's chopping block. And much of the same reasoning applies if the conqueror does manage to ally himself with a careless neighbor. Even if such an alliance emerges, all other countries in the region will work to contain it, since they also fear the consequences of letting any subset of countries grow too powerful. [add footnote, balancing behavior]

Next, consider the effect of nationalism-as-technology on war and territorial re-distribution. The early adopters of nationalism can mount two kinds of offensives – an "indiscriminate" one that neglects the issue of nationality, or an irredentist one that does not. In the first case, the attacking country would behave without regard for the nationalism of neighboring populations. It would simply harness its own nationalism, build a large mass army, and throw it at the most convenient or profitable target. But again, this would-be conqueror will face the same risk as above – plus another intrinsic to nationalism. That is, the conqueror would still meet the might of a potential alliance of its neighbors. Recall that these are already fearful of the technology of nationalism per se, and will hesitate little to join forces to contain anyone who unleashes it.[95] In addition, this same conqueror may not face the harnessed nationalism of its

[95] An early adopter of nationalism could still win against an alliance of opposing countries, but this would imply that nationalism is a kind of "super-technology" – one that allows a user to negate all other forms of military power in the hands of any number of opponents. I do not assume nationalism to be such an omnipotent technology, and there is no indication in history that it can surmount all odds. After all, even Napoleon's nationalist armies were ultimately unable to overcome the joint forces of its less nationalist neighbors. In addition, the above scenario is designed to deter nationalist adopters from challenging any alliance. Since all

neighbors – after all, in the latter, the elites are still wringing their hands about using the technology. But the aggressor will nonetheless face the nationalism of the conquered *masses*, which may already have physical access to the technology. So, any conquests will be likely to meet staunch popular resistance, and thus exhibit the same difficulties that all countries face with their minority populations of foreign nationals – little voluntary contribution by the occupied towards taxes, military recruiting needs, and any other large-scale projects by the conquering state.

In short, having nationalism does not necessarily increase the promise of indiscriminate offensives. On the other hand, the early adopter can capitalize on irredentist offensives – that is, forcible attempts to only conquer foreign territory that has a population with the same nationality as the majority living in the attacker's own lands. This kind of offensive avoids both of the problems that face indiscriminate offensives. More obviously, after winning such offensive, a nationalist adopter does not need to worry about a recalcitrant population in its newly-acquired territories. If anything, this population may well see the conquest as a "rescue" from the rule of a foreign state that did not share its nationality. But the irredentist offensive does not only lead to reduced tensions with the conquered. It also has a subtle, but dissuasive, effect on third parties. That is, countries may ally against an aggressor who threatens to expand in reckless or unrestrained fashion. But if this aggressor only limits itself to occupying territory with a minority of its own national population, the prospective allies will be less worried. After all, such selective conquest only encompasses a small territorial gain – at least in this scenario, since each state has just one other neighbor with a minority population of a nationality equal to its own. So the conqueror gains, but gains little. Still, the prospective alliance has an additional reason to worry

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countries are assumed to be evenly-matched, including in the size of their potentially nationalist populations, any early adopter will simply have a very hard time in fighting a sufficiently large alliance of concerned neighbors.

less. Not only are there limited gains to the irredentist offensive, but it also sends an important signal to any alliance about what to expect in the future. At least to the extent that the aggressor shows awareness of the rationale behind irredentist offensives, its neighbors can discount the possibility that they are dealing with a reckless country bent on total domination. This implies less likelihood of the allies jumping to hasty conclusions and, say, launching a preventive war against the irredentist conqueror.

Thus, if the above chain of reasoning holds, we can expect the sensible adopter of nationalism to lean towards irredentist offensives versus indiscriminate ones. And we would expect non-adopters of nationalism to react to such offensives with less haste to ally against the aggressor. The result would be twofold. Clearly, the aggressor could successfully consolidate his small irredentist conquests. But his success (as well as that of other early adopters) would also go beyond the redistribution of territory in the region. It would also affect the adoption rate of nationalism. The non-adopters of nationalism will observe these successful conquests, and begin implementing social programs that incorporate the nationalism of their own masses. The countries' elites will openly align themselves with the national identity in their territories, will promote the building of mass armies, and will also pursue their own easy irredentist conquests.

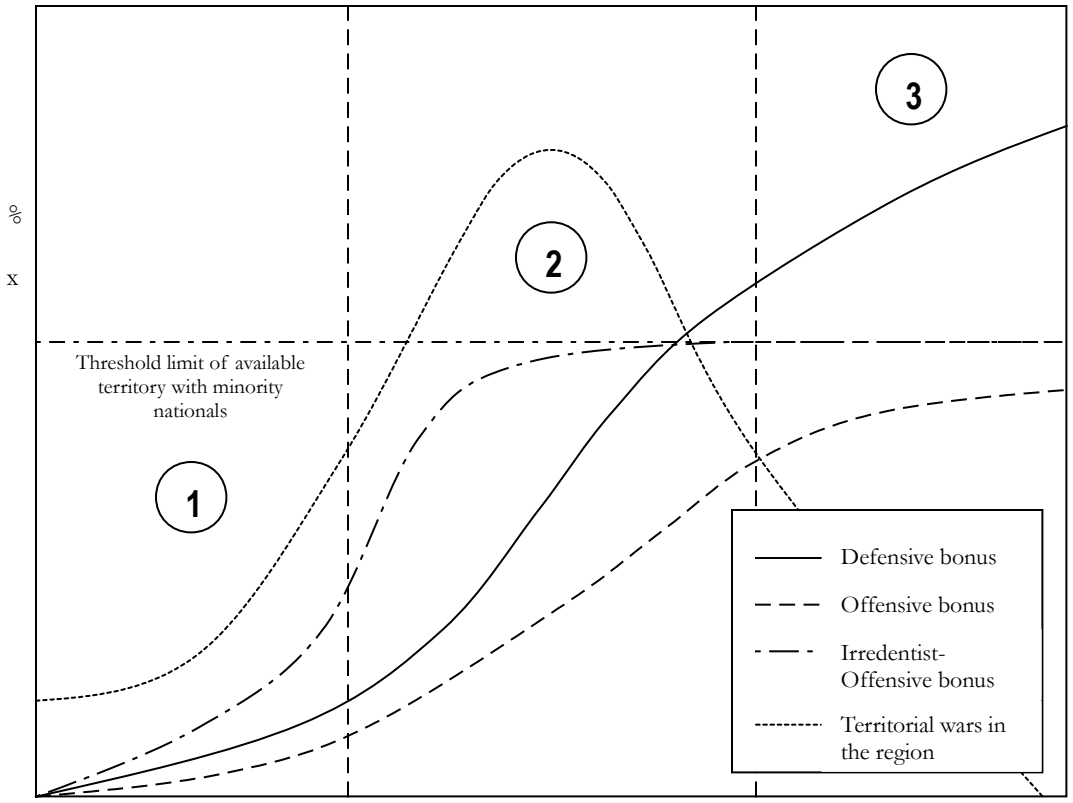
Let us consider the systemic implications of all this. First we borrow the theme of a previous section – that technologies have many functions – and derive the systemic functions of nationalism as it spreads across our hypothetical region. Clearly, the emergence of nationalism implies a defensive bonus, on average, for the countries in the region. That is, even if nationalism is present only in one country in the region, the average country's defensive bonus will necessarily increase (as that lone adopter pushes the average up). For offensives, we can distinguish two bonus functions based on the choices available to the adopter of nationalism.

There is an overall offensive bonus that also applies to the average country in the region, and which refers to the use of nationalism for any indiscriminate attack on a neighbor. Note that even if such offensive is risky for the attacker, we can still assign such a bonus for the mere adoption of nationalism. The reason is simple. With the adoption of nationalism, a country has at least one more tool for the offensive – a bigger army. So again, even if just one country adopts nationalism, and builds a mass army, the average offensive bonus of the region will increase.

Of course, the adopter of nationalism also has the choice of irredentist offensives. These can be said to correspond to an irredentist-offensive bonus, or "i-offensive" bonus for short. So the implementation of nationalism will also increase the region's average i-offensive bonus. But a clear distinction is that, for any given adoption rate of nationalism, the i-offensive bonus will increase *more* than the general offensive bonus. This differential reflects the relative advantages of the irredentist offensive versus the indiscriminate one – greater chances of a compliant population in the conquered territories, greater support for such offensive by the country's domestic population, and less chances of triggering a countervailing alliance by one's neighbors.

In sum, the adoption of nationalism involves three systemic functions - increases in the average country's defensive, offensive, and i-offensive bonuses. As more countries harness their nationalisms, each bonus will increase at its own pace, and the difference among such paces has implications for the incidence of war in the region. The result is in keeping with the theme of this chapter – see the table below and read its accompanying text:

Figure 3. Another surprise – Benefits from the full diffusion of nationalism



This graph shows the effects of nationalism being adopted by states in a region. Three phases appear:

Initial partial adoption: states are hesitant to employ nationalism. Few actually do, and their lone adoption contributes only to modest increases in the states' average fighting bonuses. Still, it is possible to see that nationalism affects each capability differently. For any given increase in the adoption of nationalism, the i-offensive and defensive bonuses climb at a faster rate than the general offensive one.

Extended partial adoption: gains come readily to the early adopters of nationalism. The boost in their i-offensive bonus allows them to conquer some of their neighbors' lands. But any sensible conquest must meet two conditions: the land taken is occupied by people of the same nation as the conqueror's majority population; and the conqueror and its victim state must not share the same primary national identity. These conditions create a threshold limit of conquerable lands, and states meet it rapidly.

Full adoption: the region settles down as war becomes rarer. States already exploited all opportunities for easy, irredentist conquest. Any further territorial expansion would hinge on the balance among the general defensive and offensive capabilities of states. But the defense is simply too favored with the further adoption of nationalism. States turn to building mass armies with loyal soldiers, who are eager to defend their homeland – but are skeptical about generic conquests. As these armies mature, the average country's defensive bonus outpaces its offensive one by a growing margin. The result is less incentive to attack others, less territorial disputes, and ultimately more peace.

The above table resembles that of the computer virus, shown previously, and so does the surprise of nationalism's diffusion. Initially, the partial adoption of this "bad" technology will result in wars of irredentism, but its full adoption leads to a steady peace among all countries. Clearly, this surprise is not expected from the conventional "wisdom" about nationalism. According to it, the more nationalism in a region, the more conflict we should see.

So, how can the above scenario be reconciled with the common negativity about nationalism? There are at least two possibilities. The first stems from the frequent human tendency to focus on events and omit non-events. That is, wars are more noticeable than periods of peace, and so it is natural that people blame nationalism for any war in which it plays some kind of role. Certainly nationalism plays a role in irredentist offensives – it actually encourages them. But the unskilled observer will neglect the long peace that may follow from the thorough adoption of the technology. In this bias, nationalism is not uniquely targeted. One need only think of the pacifist concern about weaponry in general. Whether we are discussing tanks and missiles in international affairs, or even guns in domestic life, there is a natural tendency to fixate on them as culprits of much violence, but not of much peace.

Another possible way to explain this disconnect is to insist that, yes, nationalism is overwhelmingly harmful, and that the above scenario simply depends on unrealistic assumptions that do not hold in real-life. This critique is sound in its basic conditionality, but not in the truth of its conditions. That is, it is sensible to say that *if* the scenario's assumptions do not hold empirically, then the argued peace will not manifest itself. Or, if we indeed observe peace in a region, but the assumptions do not hold, we cannot be certain that it happened because of any of the mechanisms in the scenario. For instance, the scenario assumes a halfway-period of

irredentist wars. But what if we study a region in which peace prevails after such a period of short wars, yet those wars cannot be shown to be irredentist at all? Perhaps countries clearly fought for extractive resources like oil, conquered territory regardless of nationality, and simply stopped fighting due to mutual exhaustion or another technological deterrent altogether (like nuclear weapons). So, assumptions matter empirically as well as analytically.

In the following section, we will conduct a thorough test of the empirical feasibility of the above scenario. Here it suffices to point out that none of the scenario's assumptions are outlandish at all: from a region of evenly-sized, and equally-powerful countries, to the prevalence of peace amidst such balance before nationalism, and to the existence of small national minorities inside those countries. Thus the critique cannot be that the assumptions are "unrealistic". What we can dispute is the degree to which they may apply in some regions versus others. As we will see, they apply well to some periods in modern history. But it could also be that they apply badly in other cases. Recall that irredentist wars last a short while, and do not spread, in part due to each country only having *one* neighbor from which to "rescue" a minority population of co-nationals. If we change this assumption, though, the result could well be long and protracted wars. For instance, if a country can rescue minorities of co-nationals from the entire region, it may seek a string of irredentist conquests as opposed to just one. And if that country's neighbors are risk-averse, they will strive to balance together against such threat, and

one result could be a great war with many participants.[96] [97] So, there could be historical cases in which irredentism contributed to aggressive expansionism. But if anything, such cases would not invalidate the above scenario. Instead they would lend it usefulness. The scenario gives us clear assumptions to test for, and which lead to a necessitated conclusion. Thus, if we find that war is associated with cases in which these assumptions do not hold, the scenario is giving us clues as to one possible cause of those conflicts.

Of course, any stylized scenario should prove most helpful in cases in which its assumptions *did* hold, and the hypothesized outcome dovetails with the historical one. So, we next turn to see if this is so, in a period associated with the first spread of nationalism in the modern world – 19th century Europe.

[96] Another possibility goes in the opposite direction, and means peace and not war – at least between states. Suppose the national minorities in some countries are fairly small or spread out across those countries' territories. If so, those minorities may still experience friction with their majority populations and their ruling states, but would not represent enough of a critical mass to justify an irredentist offensive by a neighbor. A similar thing could happen with national minorities that lack a foreign neighbor with an identity that is similar enough to trigger co-identification. These "orphan" minorities would also be unable to have their own irredentist liberations. If domestic friction emerges in those cases, it could may degenerate into violence, but it is also doubtful if this would mean civil war *only*. After all, if a minority is large enough to mount a civil war, then it is arguably large enough to also justify an irredentist offensive by a foreign rescuer (assuming there is one with an applicable national identity). In those cases, then, a civil war may simply be a prelude to an irredentist offensive.

[97] A similar result arises if we make it so a country can assimilate just *any* population it conquers. For a discussion of this scenario, and its implications for conventional concerns about nationalism, see the conclusion.

Chapter 5

Nationalism at peace – a regional case study

Here we test for the systemic effects of nationalism that were given in the previous chapter. Recall those effects were divided into three phases:

An initial partial adoption phase, in which few if any states are willing to adopt the new and risky technology of nationalism. No wars are seen to occur because no state has a military edge over its peers. That is, all states are assumed to be evenly balanced in their power, and all abstain from adopting the one social technology that could break such balance;

An extended partial adoption phase, in which a minority of innovators acquire the technology and use it successfully to conquer territory in short-lived irredentist wars; and

A full adoption phase, in which the rest of states become assured of nationalism's effectiveness and adopt the technology. Any irredentist wars have already been waged – so with no more nationals to liberate, the states focus on building large mass armies that deter each other. A long peace is the result.

For the evaluation of these predictions, we will focus on the relationships among the major powers in Europe between 1815 and 1914. The reason for this choice of case is twofold. First there is the relative ease of the case. That is, 19th century Europe seems like a very viable case to see if nationalism indeed matters in producing three distinct phases of conflict in its adoption by users. After all, this is the time and place in which nationalism first emerged with historical

clarity. So, if the three phases are not apparent enough after such distinct emergence of the social technology, then further research is not justified and we can spend time and effort elsewhere. If the phases *are* apparent, though, we can later develop more fine-grained tests of the theoretical predictions.

The second reason for choosing 19th century Europe is one of data availability. Consider that we can benefit from almost 100 years of research since the end of the period, with everything that is entailed – access to primary sources already unearthed by previous scholars, translation of material from several languages, ample declassification of government sources, and so on. Also, the relatively good availability of sources is perhaps a product of a longstanding Eurocentric bias in the study of international politics (Kayaoglu, 2010). But as such, we are given two general choices: to select a historical case that has been subject of the most attention by Western scholars since 1815, or opt for another case with sources that are either unpopularized or undiscovered altogether. I select the former, but do not see other regions as "unimportant" to a serious understanding of international relations. Nonetheless, the theory of nationalism-as-technology is not at the stage of maturity in which the study of understudied regions (and the extended bouts of "raw" research which they require) can be justified.

Let us now turn to the object of analysis – nationalism. Recall that in the previous chapter, we limited the discussion to a general mention of "adopting nationalism". Yet to conduct a probe of the period, we need to be more concrete. What signs will point to a willing adoption of nationalism? Here I will consider states to generally adopt nationalism when they institute two particular measures: widespread or "universal" conscription, and a large reserve (or militia force).[98] In the first, the state at once requests a swath of citizens from all demographics stripes to

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join the armed forces. To be sure, conscription is rarely (if ever) truly universal. In the case of 19th century Europe, any attempt at it has typically contained exemptions and ways for enlistees to buy their way out of service. Yet the universality of such conscription is a helpful indicator of nationalism adoption. Simply, a country that widens its conscription to encompass more of the population can be said to more willingly embrace the social technology of nationalism. Turning to the second measure, the state may allow either conscripts or volunteers to finish their military service by joining a reserve force. Typically such reserve forces have been established alongside a decrease in either of two requirements: the years of total military service of soldiers, or their years of service in the regular armed forces in particular.

Note that both conscription and reserves are meant to facilitate the use of mass armies, which themselves are commonly understood to best work with nationalism (Posen, 1993). As the 19th century progressed, those armies eventually were seen as the better alternative to smaller professional armies in which service tended to be longer-lasting. The argument, at its most simplistic, is one of quantity versus quality. Professional armies may have better trained recruits, but they are fewer and can be overwhelmed by an opposing (and much larger) nation-in-arms, as long as this last is sufficiently trained. But it is also the *consistency* of this distinction that should be borne in mind. Mass armies enjoy a size advantage versus its counterparts – and just as important, that advantage comes in a steady manner:

> The essence of the mass army is only partly its size, although it is a great deal larger than most of its predecessor. The essence of the mass army is [also] its ability to maintain its size in the face of the rigors of war: the attrition exacted by the unhealthful conditions of the campaign, the temptation of individuals to desert, and the firepower of the enemy. Its second essential quality is that it can also to a very large extent retain its "combat power."

Note there are exceptions: countries that attempt to implement these practices while clearly not embracing nationalism in their populations. The Austrian empire, as will be seen, is a good example of this (see p. X). In those exceptional cases, I probe the adoption and highlight any limitations that seemed apparent.

> Replacements can be armed, trained, and organized rapidly so that they can be maneuvered over great distances and employed in engagements (p. 83).

So, we can briefly consider how each policy leads to the formation of mass armies, in ways that are evident. Conscription, if it works, is able to give the state a sizable portion of male citizens for warfighting. These are called up to enlist, typically at once or on short notice, and ideally answer the call with compliance. Two examples are the *levée des 300,000* and *levée en masse* enacted by France in the 1790s, when the Revolution was threatened by a recurring coalition of powers. Despite problems with desertion and draft-evasion,[99] the first levy "served its primary purpose of getting a large number of men into uniform in a very short period of time", while the second levy procured "the principal fighting strength of the Republic throughout the 1790s" (Forrest, 1989, pp. 31, 34).

The logic of reserves is more elaborate and multfaceted. It encompasses not only the strict military need for more manpower, but also considers its relative efficiency and time of need. Consider the below rationale behind British army reforms in the late 19th century. Later we will discuss them in the context of that period, but they are a great encapsulation of why countries adopt reserves:

> …the 1870 Army Enlistment Act…inaugurated a short service system whereby soldiers enlisted for six years in the colours, then six in the newly-established Army Reserve. The Army Reserve would consist of trained soldiers liable to recall to the colours in emergency, but working in civilian occupations. From the government's viewpoint three main reasons stood out for the formation of this system: first, economy; secondly, to improve recruitment; and thirdly, to improve the ability of the army to fight anywhere in the world at short notice. Economy was to be achieved by short service because fewer soldiers would serve a full twenty-one years and draw prensions. Recruitment was a major problem throughout the nineteenth century: government advisers suggested that long service…was unpopular, and that the introduction of short service might stimulate recruitment. As for fighting efficiency,…the early Victorian army had to struggle to defeat even under-equipped opponents. Furthermore, it was unsupported, and once the main body of soldiers had been despatched on a campaign, the capability for

[99] See Forrest (1989, pp. 20-34) for an account of the non-compliance problems experienced during the levies of revolutionary France.

> reinforcement or even the replacement of casualties was severely limited. The Army Reserve was set up to remedy this defect (Kochanski, 1999, pp. 54-55).

At face value, we can see the independence between these two measures. After all, it is entirely possible to institute conscription without reserves, and vice versa. But note, too, how the use of reserves can be seen as an improvement upon conscription. That is, both measures are intended to facilitate a large number of soldiers. But whereas extensive conscription is meant to grant this number on very short notice, the use of reserves is a more far-sighted technique. That is, once a state decides that mass armies are desired, and war is not imminent, it can begin to extend military training to a greater proportion of its population in the form of reserves. Overtime, then, the state will accrue those trained reservists and not have to pay as much for them as it does for regular troops. And as long as the military training embedded in reservists does not decay rapidly, the state would have created for itself a large reservoir of potential manpower for military use. Because of this advantage on the part of reserves versus plain conscription, we would judge armies with reserves to be more "technologically-savvy" in their implementation of nationalism than those that just rely on short-term conscription.

Of course, in neither case, it can be said that either conscription or reserves are *necessary* effects of nationalism. A country can try to institute each without it, and rely on sheer state capacity to extract compliance from the population. But by the same token, both conscription and reserves work best with nationalism. With that social technology, a country does not need to spend as many limited resources to get its citizens to comply – they will tend to contribute to a greater degree than if nationalism was absent. Next we examine how the European powers implemented those two measures across the 19th century. We identify three periods of implementation across time, and how they coincide with the hypothesized phases.

Phase I: a time of abstinence (1815-1859)

True to the norm with new technologies, the first part of the 1800s was marked by a steady reluctance to implement nationalism. The concern was both political and military. On the one hand, the mass army would give weapons and training to a vast swath of the population, and it was conceivable that they would one day turn against their royal rulers (which then governed the majority of the powers at the time). On the other hand, it still was not entirely clear that the mass army was a definite improvement over smaller professional armies endowed with greater specialized skills. Below we begin with the better proof of this theme of abstinence – the fact that it easily applied to countries deemed to be innovators at one point during the 19th century: France, which first implemented the technology during Napoleonic and revolutionary times, and Prussia, which later improved upon it.

In France, the restoration of the Bourbon monarchy in 1815 *initially* did not seem to herald a conservative stance against nationalism. For instance, in 1818, France introduced a "modified form of conscription [whereby] [e]ach year 40,000 men were selected by ballot out of a total of 290,000 liable to service, and went on to serve six years with the colours and a further six years in the reserve" (Gooch, 1980, p. 52).[100] Yet as early as 1823, trouble arose. A French intervention in Spain showed that the new Bourbon army could perform reasonably well in short offensives abroad. But not all of the army's elements proved compliant, and France reacted:

attempts during the course of the [Spanish] campaign to mobilize the newly constituted

[100] It should be borne in mind that France's 1818 conscription law also was not truly universal, as "it was designed to be applied to only a relatively small proportion of the fit population...[and] was advertised as fair and 'national' mainly because it depended on a blind lottery." Further, it also allowed for the purchase of exemptions, which effectively helped those with enough financial means (Griffith, 1989, p. 7). Yet this should not make us dismiss France's initial relative attachment to the benefits of conscription, since the inequities of the 1818 law were also found in future French laws, as well as those of other European adopters of conscription. Simply, during the first half of the 19th century, there was much restraint and compromise in those states that gravitated towards conscription.

> reserve resulted in demonstrations against the government and, in some cases, mutinies. The lesson was quickly learned, and in 1824 France sealed her return to military conservatism with a law stipulating eight years' service in the ranks and abolishing the reserve altogether…[Finally, i]n 1827 the National Guard was disbanded as a reservoir of republicanism, and France at last had an army fully in tune with a conservative monarchy and similar in almost every respect to all the other major armies in Europe. The Napoleonic tradition seemed dead within the very nation which had brought it forth (p. 54).

Turning to Prussia, things were of a similar nature, and especially soon after the Napoleonic wars. In spite of its later reputation as a bastion of military innovation during the 19th century, Prussia had become increasingly suspicious of the new social technology of nationalism, and this feeling targeted its own reserves or Landwehr:

> The Prussian middle classes no longer wanted universal service now that the war [against Napoleon] was over. Where once they had seen an avenue to national recovery and self-respect, they now thought to discern the seeds of a militarized society. Conscriptions and military service would, they thought, lower the moral fibre of society by brutalizing the individual…as public participation in legislation and administration was whittled away, the Landwehr would stand out ever more prominently as the relic of an over-liberal past (p. 44).

To the public's apprehension about the Landwehr, we also need to mention a latent and longstanding one by the Prussian crown. In both 1808 and 1810, the king had rejected his Military Reform Commission's recommendation that "a universal obligation to undergo military service be recognized and that a militia be formed". His rationale would not have been alien to other 19th century rulers. Simply, the king just "did not want to replace his professional army with a popular one and felt that a militia would be inimical to royal authority" (p. 40).

What is more, this royal aversion had stubbornly survived the *successful* employment of the social technology. Just consider that by 1813, the king had allowed Prussia to form militias

against Napoleon,[101] and these were fairly effective – but he nonetheless withdrew his support after war's end. And things changed little in 1814, when a reformist group secured the promulgation of the Wehrgesetz. This law effectively re-established the Landwehr, and also the Landsturm, a reserve home guard to be formed from Prussians who completed their 14-year service in the former army (pp. 40, 43; also see Posen, 1993, p. 98). Yet, the king quickly found a subterfuge to undermine this legislation, which appeared when reformers questioned if the government was properly funding the Landwehr:

> [The] attack on the financial stringency of the government…provided the king with the excuse to demand a closer fusion between regular army and Landwehr, a manoeuvre which would have the effect of improving the efficiency of the latter body –which was supposedly suspect- and at the same time subjugating that part of the military forces of the crown which was the symbol of a new and more liberal relationship between sovereign and people. Once the two were yoked together the conservative regular army could destroy the Landwehr as a bastion of democratic ideas (p. 44).

Still, a skeptic could argue, it is possible that no harm came from this pseudo-Luddite stance against the social technology of nationalism and its offshot, the Landwehr. After all, the king did not disband the Landwehr. But things are not so simple. The king's "reforms" also involved the financial starving of the Landwehr, as well as the state's organizational neglect of that institution. And both steps had clearly negative consequences:

> …the natural increase in the [Prussian] population after 1815 combined with cuts in the military budget made impossible the financing of a full term of active service from every able-bodied man except at the expense of basic requirements such as barracks, uniforms, and weapons…The army therefore ended up with a system analogous to the Selective Service machinery employed in the United States from Korea through Vietnam. The principle of universal military obligation enshrined in the *Wehrgesetz* remained a principle; in practice the army frequently reduced its three-year term of service, assigned more and more untrained conscripts to the Landwehr, and left an ever-larger segment of the male population untapped….

[101] Besides its military effectiveness, Prussia initially adopted the Landwehr to surmount a very specific and historical obstacle: Napoleon. "In order to get around the limit of 42,000 troops placed on the Prussian army by Napoleon, the Prussians devised a system for the army's short-term training of civilian volunteers who were then sent into the army's reserve. The reserve had about 20,000 men by 1812" (Addington, 1994, p. 38). Napoleon was not oblivious to this development and tried to suppress it, but by 1813 Prussia was already at war with France.

> The resulting "Landwehr recruits" were often worse than useless…The recruits might [have received] some sense of group identity and of the meaning of military order. But they were destined to remain ignorant of skirmishing, fieldcraft, marksmanship, and the other essential skills that modern war and the Prussian drill regulations demanded… [Further,] in the long peace after Waterloo the Landwehr lost its novelty…The civic zeal the reformers had postulated as the basis of the Prussian military system proved difficult to sustain within a political system that even in 1813-15 had never abandoned its deep suspicion of public enthusiasm (D. Showalter, 2001, pp. 95-96).[102]

In sum, there was reluctance towards the social technology of nationalism by two of its earliest innovators. And quite understandably, we should expect even more reluctance by the laggard powers in Europe – whose social conditions often made nationalism a much riskier bet. We discuss three of these laggards below.

Let us begin with the clearest case of abstinence: Austria. It proved the most reluctant to implement any nationalistic reforms. Quite simply, its leaders "believed that only a strongly aristocratic officer corps, bound by personal ties to the dynasty, and a politically inert rank and file of long-service troops, strictly supervised and under iron discipline, could be relied upon to carry out the missing assigned to the army" (Rothenberg, 1999, p. 13). In practical terms, this meant a longstanding distrust of the Landwehr during the first half of the 19th century.

Interestingly, such distrust survived even the evidence that nationalism-as-technology could be made to work. The Austrian Landwehr had performed well in 1809, during the

[102] An earlier piece by Showalter (1971b) shifts the emphasis for Prussia's neglect of the Landwehr. Instead of the elite's political distrust leading to such neglect, the Landwehr's loss of military efficiency, as well as limited funding, contributed to making it less attractive as an investment for the Prussian state. To this, Showalter adds that any "[s]upport for the Landwehr, particularly among the military professionals, tended to be pragmatic rather than ideological" (p. 33). So, if the Landwerh did not work well, it is no wonder that it was neglected. But Showalter misses the point in mentioning that the support for the Landwehr was pragmatic and not ideological. The point of contention is not ideology, but pragmatism of a different kind - the elites of Europe had well-founded (and well-documented) fears of either arming or training popular masses for war. Further, the history of other technologies tells us that efficiency concerns are not as imperative or urgent as Showalter makes them out to be. Simply, once users adopt a certain technology, they often stick to it even though it may not be very efficient or effective. One example are light-water nuclear reactors, which are riskier and more expensive than their heavy-water counterparts. Yet, for historical reasons, the former are predominantly used. In sum, the Prussian elite could have stuck with the Landwehr, and made increased investments to improve it during the early 19th century. After all, they did have good experience with it during the Napoleonic wars, so that investment would have been justified. So, in the absence of efficiency concerns as a decisive factor, it seems fair to give weight to elite distrust of the Landwehr. Efficiency concerns existed, to be sure, but they did not dominate the decisionmaking process in any glaring way that I could appreciate.

Napoleonic wars, and even the famed general Radetzky in 1828 had "submitted a memorandum advocating the retention of such a force as the most 'valuable foundation of strength'". But this was to be of no avail – by 1831, Austria had eliminated its Landwehr after years of progressive dismantling (Gooch, 1980, p. 54; Rothenberg, 1999, p. 13). Again, the reason seemed to lie in the riskiness of this social technology. Just like nationalism could prompt Austrians to rise against French invaders, it could also make them question the monarchical rule of the Hapsburgs. Not for nothing, then, Emperor Francis "remarked that he intended as soon as possible to dissolve even the last remnants of the Landwehr", and even Radetzky experienced a change in mind once the volatility of the social technology became apparent:

> Like so many men of his generation and class, he believed that the ghost of the French Revolution had been inadequately banished, and the events of July 1830 in Paris and the Polish revolt the same year led him to change his opinion regarding the value of the Landwehr. He now believed that only the German areas of the monarchy would furnish reliable milita forces (p. 13).

So instead of tapping the new social technology, the Austrians resorted to the blunt instrument of coercive state capacity. Enlisted personnel were obtained by a system of selective conscription "which provided numerous exemptions so that in practice the rank and file were drawn from the lowest classes only" (p. 13). In 1827, the term of service was set at 14 years, while in Hungary it was for life. Further, conditions were severe for these conscripts:

> To be conscripted into the ranks was regarded as a disaster…Rations and pay were at a wretched level, lower than that of any other continental power except Russia, and soldiers often were forced to eke out a living by performing odd jobs during their off-duty hours. Enlisted men were still regarded either as potential criminals to be punished severely or

> as children whose every action should be watched. Corporal punishments, caning, flogging, running the gauntlet, tying up, and other punishments were common…(p. 14)

In a previous chapter we discussed how nationalism should let armies have reliable soldiers "on the cheap" – that is, with little in the way of 1) compensation, 2) protective equipment, or 3) coercive measures to keep them "in line". It certainly seems that the Austrian army squandered the first measure, compensation, but it did have to invest on the third, coercion, to get soldiers to comply. Yet, even the strictest of disciplines is bound to fail in actual practice. Try as it did, the Austrian army paid for its anti-nationalism and compensatory coercive measures:

> the conditions of the unfortunate enlisted men resulted in a high incidence of desertion. When units shifted stations, and this was frequent, desertion were a common occurrence, and the mountainous regions, especially Carniola and Carinthia, which lay on the route between Hungary and Italy, provided shelter for many bands of deserters who constituted an intermittent threat to the security of the civilian population (p. 14).

Still, the Austrian monarchy would not allow the Landwehr to make a return until 1868 (p. 77) – in what was arguably the third phase of nationalism's adoption in the Continent. We will discuss that phase later on.

Any discussion of laggards is right to start with Austria – it is the centerpiece of anti-nationalism in 19th century Europe. But it is wrong to end the discussion just with the kingdom of Francis Joseph. Two other countries were also considerable laggards, and merit discussion. We begin with the least surprising of the pair: Russia.

Like Austria, Russia also encountered what could described as an intrinsic aversion to the new social technology of nationalism. But there was a difference. Austria's anti-nationalism can be explained by the incompatibility between a Germanic royal family, which demanded loyalty

from its subjects, and those subjects belonging to multiple and typically non-Germanic ethnicities. On the other hand, Russia's anti-nationalism was rooted in the incompatibility between the effects of nationalism and the prevailing economic system:

> The nature of the Russian army was governed by the social characteristics of autocracy under Nicholas I, and in any case lacked any reforming impetus. It was simply impossible to implement anything approaching [widescale or universal] conscription since by law anyone entering the army ceased to be a serf, so that any attempt at the introduction of universal military service would have undermined the whole social structure of the state. The commune could send off as a recruit anyone who proved troublesome and unreliable in paying taxes, while the landowner could send any serf at his own discretion; these provisions, together with exemptions from the draft through class status[103] and bribery meant that the burden of military service fell upon the very lowest levels of Russian society (Gooch, 1980, pp. 69-70).

Notice, too, that Russia's approach was not to opt for a small and highly professional army. Instead it somewhat mimicked Austria's in opting for coercive state capacity to bend recruits to its will. And like Austria, this approach hardly produced a top-rated fighting force:

> Between 1826 and 1850 some 80,000 men were inducted a year…Once in the army, the recruits were treated with great harshness and brutality, though there was some amelioration in punishments after 1830 when the Tsar intervened to forbid the use of the knout and branding, and set a limit to 'running the gaunlet' of six times through a ring of 1,000 men. The Russian army was almost constantly in action…[and] was, on the whole, an effective instrument for internal repression, but a sorry force when confronted with a major western European foe (p. 70).

This evidence of underperformance did not make itself wait. Consider the Crimean war, where Russia saw how its "army of grey-clad automatons fought bravely but was revealed as incapable of standing up to even a third-rate European army [like Sardinia's]" (p. 70). To be sure, problems

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[103] The exemptions were widespread, but consistently erred against the serfs and state peasants. By the early 19th century, among the groups fully exempted from conscription were the clergy (although not their unordained sons), merchants, and teachers. In addition to the above groups, skilled craftsmen could pay to be released from service (Hartley, 2008, pp. 27-29).

abounded, and were not limited to a lack of nationalism. For example, Russia's disregard for its own troops extended to their equipment. In the Crimea, they could not overcome the Allies and their new Minié rifles, having at their disposal only "old, short-ranged, smoothbore muskets [that] were highly polished on the outside but often rusty inside" (Edgerton, 2000, p. 58).[104] And while Russia tried to substitute the technology of nationalism with two alternatives, "Orthodox religion and adoration of the Tsar", it continuously experienced the limitations of those alternative social technologies (Gooch, 1980, p. 70). Consider the case of the Cossacks, with whom the Russians had a relationship that was, if anything, consistently tense:

> Russian army officers had no use for the undisciplined Cossacks, whose idea of war consisted of making a profit and not having their horses shot or dying themselves, *in return for a medal and the tsar's gratitude*…In the Crimea, the Cossacks [acted] with an indifferent performance. In this largely static war, their skills as scouts had little value, and they had no intention of crossing swords with the formidable British or French cavalry…for the most part they devoted themselves to self-preservation [and] the search for plunder…(Edgerton, 2000, p. 62; my emphasis).

With this example, the reader is quickly reminded of Austria's own problems with getting its diverse ethnicities to risk themselves for war. Quite apparently, an abstinence of nationalism was not a "safe bet" – it invited its own set of troubles, which would later compel Russia to seek a new relationship with that social technology.

Turning to the third laggard in adopting nationalism, we see Great Britain. This is perhaps a surprise, since Britain is not commonly associated with the rigid conservatism that was seen from Austria or Russia. But conservative it was throughout the first half of the 19th century, and

[104] The Minié muzzle-loaded rifle was made by France for its own use, but was also given to the British, Sardinian, and Ottoman troops that fought in the war (Archer, 1890, p. 135; Arnold, 2002, p. 68; Uyar & Erickson, 2009, p. 171).

not out of ignorance, either. For instance, between 1815 and 1854, the British had formed a dozen committees on military reform – yet any fact-finding did not result in nationalism being embraced in the form of mass armies (Gooch, 1980, p. 119). Neither had Britain employed conscription at all, and it would not do so until the world wars of the next century. But its reasons for abstinence were different from the other laggards. One revolved around the traditional uses of the imperial military:

> Britain's situation in the world made it impossible for her to ape those foreign powers which had introduced large, short-service armies, for her troops had to cope with the garrison duties and the almost incessant procession of expeditions and small wars which were a part of the toll exerted upon her resources by her possession of an empire (pp. 119-120).

This points to a case of abstinence due to *needlessness* – mass armies were not obviously needed, and so the technology of nationalism was not employed in their production.

Yet another reason for British abstinence involved the longstanding relationship between the army and the people. During the early 1800s, the average British subject "maintained an image of the soldier as a rough sort and the army as a refuge for those unable to do better work or as an escape from obligations or prison". And even if that reputation was not enough to dissuade potential recruits, these still had to contemplate a life in which "conditions…were hard, service was long, pay was low, and the treatment of veterans was an occasional source of scandal" (Levi, 1997, p. 53).

Of course, some people would argue that the strained relationship between the British army and the people was not a reason to abstrain from adopting nationalism, but the opposite – it could have presented an incentive to *adopt* the social technology and allow the army to meet its

recruitment needs. This is a valid point if adopting a technology either happens in a vacuum, or if it simply "washes away" any mitigating factors like a distrustful populace. But that is never the case with technologies. Their adoption interacts with, but does not necessarily dominate, the user's environment to produce an outcome.[105] So there is always the risk of limited progress, or even backfiring, if a technology is just casually adopted. In the case of nationalism, recall that the technology cannot be tapped directly by the state elites – they can only employ it indirectly through the masses. So, if the British masses are already distrustful of military service, then the state is simply unable to access the technology on any immediate basis. Moreover, backfiring can occur if the state tries to forcibly access nationalism. For instance, if Britain tried to forcibly institute conscription, it could have faced the problems of riots, draft-evasion, and desertion – problems that were very familiar to, say, Austrian authorities seeking recruits from the kingdom's ethnic minorities.

Thus, it is not fair to brand British reluctance to adopt the technology as unsound or even "irrational." It was none of those things. Just like with the Austrians and Russians, the decision to abstain represented a sensible accounting of the challenges presented by technological adoption – and of the options still available to provide for military personnel. Not for nothing, then, the British pursued a diversified alternative to conscripted armed forces. It combined an army of (poorly) paid volunteers, a limited militia to be mobilized for home defense, a varied array of mercenaries, and sailors that either volunteered or just were impressed.[106] Yet the fact is that sensible action is no guarantee of fair (or even adequate) results, and Britain's mixed recruitment

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[105] For instance, recall how the adoption of snowmobiles led to a local people's economic downfall – as the machines interacted both with frightful reindeer that ran away from them, and with a lack of other economic opportunities for herders devoid of those reindeer.

[106] In Britain, impressment was effectively the capture of men, usually from merchant ships, to provide sailors for the navy. The practice was gradually phased out during the 19th century, in part due to its inability to meet naval needs for more manpower ("impressment", 2012; Levi, 1997, p. 53).

approach was showing its strain. For one, the British army rarely could meet its recruiting targets after 1815 and at least through the first half of the century (Levi, 1997, pp. 52-53). Thus, like the other laggards, Britain had to eventually decide between pursuing a risky new technology for war, or sticking to the faulty alternatives.

In sum, the 45-year period between 1815 and 1859 is very consistent with a predicted phase of abstinence in nationalism adoption. Further, recall that such period is predicted to be very peaceful – as long as the countries in a region are evenly balanced, none would have a clear advantage in mounting a war of conquest. This predicted peace is also borne out by the historical record. During the period, none of the major powers fought each other in the Continent. This is a remarkable change from the 45-years *preceding* the onset of this period. That is, between 1770 and 1814, Europe had experienced several wars between the powers: the war of Bavarian Succession between Austria and Prussia (1778-1779), the French Revolutionary wars (1792-1802), and the Napoleonic wars (1803-1815).[107] Something arguably fomented the post-1815 peace. And if we believe the predictions stemming from the theory of nationalism-as-technology, then the responsible factor was the coexistence of a balance-of-power alongside a reluctance to harness the one social technology that would have enabled powers to upset such balance and try conquest.

Of course, one counterargument is that the peace during this period was cause, and not effect, of the above abstinence. In other words, countries did not bother with adopting the risky technology of nationalism *because* there was peace across the region. This argument seems fair, and there is some evidence for it. For instance, as noted above, Prussia was able to relax its embrace of the Landwehr after the end of the Napoleonic wars. Arguably, this was because there

[107] This list would be longer if it included conflicts 1) that did not take place in the heart of continental Europe, but instead in its peripheries, and 2) that counted the Ottoman Empire as a major European power (which I do not). With that more relaxed criteria, I would have also included the Russo-Turkish war of 1768-1774, as well as the subsequent Russo-Turkish and Austro-Turkish wars of 1787-1792.

was no more stringent need for it, while an independent militia still posed a certain political risk. Yet this argument is not as logically compelling as its opposite. Let us restate the argument made in this chapter: if a) all countries abstain from adopting nationalism, and b) there is a balance of power in the region, then peace is bound to prevail because no country has the military upperhand. On the other hand, consider the reverse causal argument. What is the logical outcome if a) peace has prevailed in the region and b) there is a balance of power? Does it necessarily mean that countries will not adopt nationalism? Hardly. In fact, this stable scenario may even *tempt* some countries to break the balance by acquiring new technologies like nationalism. To be sure, countries are not all the same, so such adoption will be uneven and come first from the innovators. This not only makes sense, but it also made history – as it turns out, the peace of this first period was indeed broken by two European kingdoms. This brings us to the second phase predicted in the previous chapter, in which nationalism is partially adopted across the region, and innovators use it in irredentist conquests. We next turn to examine how closely the next period in European history coincides with this prediction.

Phase II: the innovators strike (1859-1871)

The middle of the 19th century saw two states that chose to harness nationalism – the kingdom of Prussia, and its smaller counterpart, Piedmont-Sardinia. Already we discussed how Sardinia employed nationalism in 1859 to secure territory from Austria. Recall it successfully portrayed itself as an *Italian* state willing and able to contest Austria for control of the peninsula, and as such, it secured an easy flow of nationalist volunteers to fight for irredentism – as well as

a compliant population in those territories that were liberated. Moreover, Austria appeared to sense Sardinia's nationalist advantage in the peninsula, and proved itself willing to make generous concessions to end hostilities soon after these started. For example, in the second war of unification, Austria ceded the province of Lombardy. And in the third war of unification (1866), it ceded Venetia to an Italy that was otherwise weak militarily.

But despite these successes, Sardinia's implementation of nationalism paled in comparison to that of Prussia, the premier innovator of the period. Here we will focus on Prussia and not Sardinia for three reasons. First, Sardinia's use of nationalism was already discussed in chapter X – and even though that discussion still left out many details, the main thrust was clear (as seen in the preceding paragraph). So, in the interest of not extending an already-long chapter, and of offering fresh content, it pays to better focus on Prussia. Second, Prussia was the only European *power* that innovated during this period, and this offers a better theoretical fit. After all, the hypothetical scenario in chapter X had assumed evenly-sized states with no political entities that were more powerful than themselves. If we are discussing the applicability of this scenario to the Continent, then such states can only be the leading European powers of the time: Great Britain, France, Prussia, Austria, and Russia. On the other hand, Sardinia was a non-power, and its successor Italy would only gain status later in the century. And third, Prussia's leading status as a military innovator presents research advantages – it has attracted more scholarly attention, and consequently more (and more varied) sources for evaluation.[108]

Yet a discussion of Prussia should go beyond a merely long-winded description of its innovations in the area of nationalistic technology. This is especially so because the general scope of its military reforms can be offered briefly. These began immediately after the end of the

[108] This third reason also translates to more English-language sources on Prussia than Sardinia/Italy, which is a consideration here because English is my main language here.

abstinence era (1815-1859) that we discussed previously:

> The Army Bill of 1860 was ultimately to double the size of the standing army, and preserve the three-year term [for new conscripts]. [These] would then serve four years with the reserves, and only after that pass into the Landwehr. The regular army was to become the only source of Landwehr recruits; the Landwehr would fall entirely under its administration. The army could now draw upon seven annual classes of trained men at mobilization. The Prussians were thus able to field 355,000 soldiers against the Austrians, and, with the allies of the North German Confederation, a million in 1870 [against France] (Posen, 1993, p. 103).

Of course, history already tells us the remarkable outcome of both the Austro-Prussian and Franco-Prussian wars – Prussia employed the new technology of nationalism successfully, gained political control over many of its surrounding territories, and finally merged with those territories to become the Second Reich. So this success coincides with that predicted by the theory, as we expect an innovator to adopt a technology and use it to the disadvantage of non-adopters. But at the same time, questions arise. Two are not only reasonable to discuss here, but altogether crucial. They ask that we delve into certain details of Prussia's adoption of nationalism, and confirm if those details also match our theoretical expectations.

The first question asks if the innovator's adoption did involve the technology in question. That is, did Prussian conscription actually entail much nationalism on the part of Germanic recruits? A skeptic can argue that, say, perhaps their conscription instead involved a call for loyalty to the Prussian crown (in the same spirit as what Austria and Russia would demand of their subjects) – but not any appeal to German *nationhood* itself. Can this be verified? I doubt that it could to a high degree of certainty, since that would require delving into the hearts and minds of 19th-century Prussians. To my knowledge, there are no polls that asked Prussian subjects why they enlisted – and any possible subjects for questioning are no longer alive. And so, we only have clues, although fortunately they are fairly good ones. Three sets of clues are particularly revealing.

One set of clues concerns Prussian politicians, who appeared to identify Prussia not purely as a crown to be forever preserved, but as the foundation for a much larger enterprise – the consolidation and growth of a true pan-Germanic state. In this, Prussia was often seen in stark contrast with Austria, which was instead seen as an entrenched and self-serving monarchy. Consider the public testimony of the German historian Johann Gustav Droysen (then a member of the Frankfurt parliament), who addressed his colleagues in 1848:

> We cannot conceal the fact that the whole German question is a simple alternative between Prussia and Austria. In these states German life has its positive and negative poles – in the former, all the interests which are *national* and reformative, in the latter, all that are *dynastic* and destructive. The German question is not a constitutional question, but a question of power; and the Prussian monarchy is now *wholly German*, while that of Austria cannot be…We need a powerful ruling house. Austria's power meant lack of power for us, whereas Prussia desired German unity in order to supply the deficiencies of her own power. *Already Prussia is Germany in embryo*…(Droysen, 1848; my emphasis)

And Droysen was apparently not alone. Just a year after the above speech, the National Assembly at Frankfurt would offer the Imperial Crown to Frederick William IV of Prussia (Brian, 2006, p. 70). The offer was ultimately unsuccessful.[109] But what matters to us is not the offeree and his actions, but those of the offerers – they give further confirmation that Prussia, not Austria, was seen as the best prospect for national unification in the eyes of many. And as such, if the Prussian state ever came calling for military duty, the German nationalist would tend to see it as the legitimate agent of the German nation (even if only in embryonic terms, as Droysen suggested).

The second set of clues comes from Prussian state leaders. Arguably, if they resorted to using nationalism in their military campaigns, the role of the technology should have been clear to them. Notice that if the statesmen were *quiet* about nationalism, the conclusion would have

[109] The Prussian king was arguably not yet ready to harness nationalism in 1849. He is famous for rejecting the National Assembly's offer (on the advice of his ministers) and replied that he "would not pick up a Crown from the gutter" (Brian, 2006, p. 70).

been unclear – after all, perhaps they stayed quiet to not spill the secrets of this powerful social technology, as opposed to just not seeing its helpful role in warfare. But on the other hand, even an implicit recognition of the technology leaves us with much less ambiguity. The latter is the case – by way of the *Volksschule* (primary school) education that was imparted to Prussian children, and which appeared to include a patriotic component that either contributed to victory, or was seen to do so:

> For Prussia's *Volksschule* teachers the events of [1866 and 1870-1] brought their own dramatic reversal of fortune. They entered these years as the scapegoats for [the nationalistic agitations of] 1848; they emerged from them as the heroes credited with having made Königgrätz and Sedan possible. Every one of Prussia's soldiers, after all, had gone through the *Volksschule*. War Minister von Roon and Education Minister von Mülher were convinced that 'the Prussian *Volksschule* teacher was the victor at Königgrätz', a conviction of which they promptly informed William I in 1866. In 1871 Bismarck sent greetings to a nation-wide teachers' meeting being held in Hamburg, according the teachers the gratitude of the Fatherland for their 'outstanding contributions' to recent national successes and charging them with the task of building a sense of German nationhood (Schleunes, 1989, p. 160)[110] [111]

It is revealing to note the Volksschule, by its elementary nature, was simply unlikely to include the kind of technical training that also helps military victory. For instance, if the same Prussian statesmen were to credit secondary or vocational schools for their military victories, we would not be sure if those schools contributed to nationalism, or if they merely gave students the technical skills to perform well in war (e.g., training in drilling and marching, marksmanship, or

[110] On the issue of education, there is a disagreement between the majority view of the literature and that of the theory of nationalism-as-technology. Scholars routinely believe that nationalistic education can (to be perfectly blunt) teach and *create* nationalism in people's hearts and minds (for examples, see Posen, 1993; Van Evera, 1994; Weber, 1976). Nationalism-as-technology instead deduces from the principle of phenotypic matching. That is, people have an array of phenotypes, both innate (like physical markers) and developed or "artificial" (like language and customs). So, education can trigger an awareness that "others" are our phenotypic matches, and we react by warmly considering those "others" to be our extended family. But education alone is usually not strong enough to create robust phenotypes from scratch, and much less challenge the longstanding loyalties created by existing phenotypic matches. (See pages X for an elaboration of this whole argument.) However, for the purposes here, these diverging views do not conflict. They both recognize education as important, even if one view sees it as a powerful maker of nationalism, and another as just a helpful conduit for its spread.

[111] Primary schools also exhibited nationalism in another way – through the direct contributions of teacher trainees themselves: "during the 1870 war, many pupils in the primary school teacher training seminars volunteered for military service, suggesting that nationalist sentiment was already deeply embedded in this important group" (Posen, 1993, p. 113).

outdoormanship). But with the Volksschule, this confounding teaching knowledge simply does not play a role, and so we can distinguish a higher likelihood of nationalism playing a role – or at the very least, that leading Prussian statesmen saw it as such.

Finally, the third set of clues comes from the people themselves. Did their joining the Prussian army convey patriotic sentiment – or instead the acquiescence of subjects who would face punishment if they shirk duty? Already we noted how Prussia found eager volunteers in the Volksschule pupils of the teaching training seminars (see footnote Error: Reference source not found). But this spirit was also found elsewhere, if not simply extensively, across the kingdom. Consider the spirit of Prussian citizens in the eve of war with France, as epitomized in the experiences of one student:

> Adolf Matthias, a student at the University of Marburg, recalled waiting hours under a hot sun on 15 July just to catch a glimpse of seventy-three-year-old King Wilhelm I of Prussia when his train passed through from Bad Ems to Berlin. As the royal train rolled through Marburg, the crowd roared its approval:... "War, we want war Your Majesty!" Later that evening, Matthias sat in Marburg's beer garden when the telegram announcing France's mobilization was read aloud from the bandstand. "Never," he wrote in his diary, "have I seen such passions as were released by those magic words, ["The war is declared!"] Officers, civil servants, professors, students, merchants, we all sang [national anthems like "Hail to Thee in Victor's Crown", "The Guard on the Rhine", "I am a Prussian, know ye my colours?", and "Germany, Germany above all"]. Later, when the band was exhausted, we walked over to the *Ratskeller*, where we drank some more, and beat up some English students, who said things that offended our patriotic hearts. Matthias volunteered for the army the next morning, as did tens of thousands of others. Far more Germans than French volunteered for the war…(Wawro, 2005, p. 79).

To this, the skeptic may question whether Matthias's experience was simply an anecdote of exception. Perhaps others did not see it the same way, especially those with more information at their disposal – or perhaps the nationalistic fervor did not go far beyond the cities. Yet consider the perceptions of these two trained observers, which should help ameliorate both concerns:

> Prussia's gathering storm terrified French officers like [Marshal Achille] Bazaine. On 20 July, the marshal anxiously telegraphed Paris: "the Prussians are putting invalids to work

> in their public offices and sending every able-bodied man to the front!" A week later, a Parisian journalist in Prussia gasped at the sudden evaporation of "every man between the age of twenty and thirty-eight…They are all under arms…*The countryside is deserted.* Walls of wheat await the absent scythe, and there are soldiers everywhere one looks!" (p. 80; my emphasis)

Clearly, a senior French officer saw much the same picture as young Matthias – just from the other side of the looming war. And military enlistment was also not the exclusive reaction of city dwellers – at least if that Parisian journalist is to be believed. Together, the testimony of these disparate persons can be seen as a fairly reliable indicator. Why? The reason is the same as that used to test for, say, the quality of a box of oranges. If we test the quality of oranges that are well spaced apart in the box, and they all taste consistently well, then we are fairly confident of having a good batch of fruit.[112] Here it is the same thing – just with three people from very different walks of life, but who all saw the same Prussian nationalistic fervor at play.

Let us now put concerns at rest. Once Prussia chose to reform its armed forces and embrace a wider degree of popular participation, the evidence points to such participation stemming (at least in significant part) from nationalism – not from sheer coercion, and not from singular devotion to the Prussian monarch. As evidenced by German politicians, such nationalism also involved a concern for German unification under the aegis of the Prussian state. It was also appreciated by Prussian policymakers, at least insofar as its manifestation was fostered in primary schools. And it was clearly shown by the rapt enthusiasm of Prussian citizens on the eve of war with France. These are all signs of a country that harnessed nationalism-as-technology.

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[112] Notice this is not the same as picking the oranges at random. For example, if we picked oranges from the crate at random, it is possible to pick three that are very close to each other. All else equal, if that closely-packed selection proved to be of good quality, we would still be less confident about the crate's overall quality than if the same random selection would have given us three oranges that are further apart (and also show themselves to be of good quality). This is why a farmer is wiser in inspecting well-spaced-apart fruit in boxes, as opposed to relying on any randomization device of dubious practicality.

So the above tells us that the second phase of nationalism adoption is corroborated by the evidence. There were two innovators present, Prussia and Sardinia, and they reaped the benefits of their technological adoption. Yet, also recall that, according to the prediction for a second phase of partial technology adoption, any countries' use of nationalism would also be limited to that technology's inherent characteristics. As such, innovators could not just embark on a path of unabashed conquest. After all, they cannot convert their applicable male populations into soldiers and forcibly annex weaker neighbors – nor use nationalism to turn any new subjects into yet more troops. Recall that states are bound to the character of the nation "onto" which they exist. So, a state *A* can harness its own indigenous population *a*, but any foreign nation *b* will not see them as legitimate rulers. On the other hand, if *A* finds territory in which *a* nationals are being ruled by another state *B*, it is able to mount an irredentist offensive to "rescue" them. These offensives are predicted by the theory, and they should be glaringly apparent from the early adopters of nationalism. So, a second crucial question is whether the actions of Prussia conform to this pattern. Were they irredentist offensives of an inherently limited scope?

On the one hand, it is clear that Prussia focused its territorial gains on lands with Germanic populations. Even in its war with France, for instance, Prussia made sure to annex only Alsace-Lorraine, in which the population mostly spoke German dialects at the time. But on the other hand, it is glaring that the irredentist offensives by Prussia do *not* fit perfectly with the theorized ones, and it is helpful to see why. Consider that the model predicted irredentist states to seize territory from other states with populations that felt their current rulers were foreign and thus illegitimate. Yet, in its war against Austria, Prussia did not truly seize territory belonging to Austria. In fact, after Prussia's victory against Austria in 1866, Bismarck was adamant about *not* conquering Austrian territory. He reveals as much in his memoirs:xxx

> I could see no future acceptable to us [in annexing] the countries constituting the Austrian monarchy, in case the latter were split up by risings of the Hungarians and Slavs or made permanently dependent on those peoples. What would be put in *that* portion of Europe which the Austrian state from Tyrol to the Bukowina had hitherto occupied? *Fresh formations on this surface could only be of a permanently revolutionary nature.* German Austria we could neither wholly nor partly make use of. The acquisition of provinces like Austrian Silesia and portions of Bohemia could not strengthen the Prussian state; it would not lead to an amalgamation of German Austria with Prussia, and Vienna could not be governed from Berlin as a mere dependency (2007, p. 50; only the sentence-long emphasis is mine)

Yet upon closer analysis, this divergence from the model in Chapter X is actually corroborative. Bismarck did not want to take Austrian land precisely because it would have conflicted with the irredentist rationale. That is, if Prussia took over land populated by non-Germans ("Hungarians and Slavs"), it would have simply replaced Austria as the "foreign" occupier of those peoples. This is decidedly not the goal of irredentism. The irredentist attacker wants to gain land that is populated by its *co-nationals* – not land populated by foreign nationals. To occupy the latter was to invite non-compliance and even revolts, which is why Bismarck reasoned that "fresh formations" on this multi-ethnic "surface" or landscape would only give way to a "permanently revolutionary nature".[113] To put it in terms of the model, it was that country *A* (Prussia) did not want to take territory belonging to country *B* (Austria) because it was lived on by people of *c* (non-Germanic) nationality. Country *A* only wants territory with *a* people, and so it passes on adding *c* people to its population.[114]

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[113] A similar argument can be made of "Austrian Silesia and portions of Bohemia", which Bismarck also warned about. Elsewhere in his memoirs, he also justified his misgivings about those prospective conquests:

> I gauged the proposed acquisitions from Austria and Bavaria by the question, whether the inhabitants, in case of future war, would remain faithful to the King of Prussia in the event of the withdrawal of the Prussian officials and troops, and continue to accept commands from him; and I had not the impression that the population of these districts, which had become habituated to Bavarian and Austrian conditions, would be disposed to meet Hohenzollern predilections (2007, p. 44).

Again, the statesman's apprehensions are based on the predicted loyalty of any potential new subjects. In contrast to non-Germanic lands, though, here he seems to take seriously the "royalism" of Austrian subjects – that is, the possibility that they will be loyal to the Hapsburg crown, and not accept Prussian leadership (or perhaps not adopt a pan-German identity with ease, either). But the same logic applies. The irredentist conqueror is reluctant to conquer land that is not populated by people with a "compatible" nationalistic identity.

[114] A contrast can be made here between the irredentism of 19th century Prussia and the genocidal policies of Nazi

Thus, in its deviation from the model, the history of the Austro-Prussian war is helpful because it confirms an important intuition: when they use nationalism for conquest, countries apparently prefer not to gain territory with foreign nationals. Also of interest is that this intuition also helped to define the broader competition between Austria and Prussia in central Europe. That is, those two powers were contesting their influence over fellow *Germanic* kingdoms of smaller size, and this helped curtail Prussian ambitions. Again, Bismarck's writings are of help. Here he writes to Prussian Prime and Foreign minister von Manteuffel in 1856, years before the offensives began:

> …Germany is clearly too small for us both [Prussia and Austria]; as long as an honorable arrangement concerning the influence of each in Germany cannot be concluded and carried out, we will both plough the *same disputed acre*, and Austria will remain the *only state to whom we can permanently lose or from whom we can permanently gain*…I wish only to express my conviction that, in the not too distant future, we shall have to fight for our existence against Austria and that it is not within our power to avoid that, since the course of events in Germany has no other solution (Bismarck, 1856; my emphasis).

Countries, like most people, fight for a purpose – there are certain stakes, which are in contestation among the combatants. And almost all the time, we understand stakes in a positive sense, or by what they include. But we can also understand stakes in a negative sense, and here Bismarck is illustrative. "Germany" is "too small" for the two states; it is the "same disputed acre". But why should this acre *not* include territories past "Germany"? If we listen to the theory of nationalism-as-technology, the answer lies in the excludability of "incompatible" populations. Non-German territory is not in contestation between Austria and Prussia because it does not lead to assimilable populations, and thus stable conquests, in the long-term. Thus, the social technology of nationalism is responsible for a national *demarcation* of the stakes. Such

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Germany. As seen in the main text, through the policies of Bismarck, the former acted reluctantly in adding foreign peoples to its population. But the latter saw the possibility of enslaving and annihilating foreigners to "make room" for a growing German population (Rich, 1992, p. xlii). Both positions are skeptical about the power of national assimilation, but only one adopts a radical solution to pursue conquest in spite of the limits of such assimilation.

demarcation prevented the Prussian wars from extending further territorially, or lasting longer than they did.

Moreover, just a lack of imagination would prevent seeing how Prussia could have waged war without any regard for nationalism. Let us consider some counterfactuals briefly. Perhaps a "nation-blind" Prussia would have tried to wrestle Hungary away from the Austrian empire – after all, the Hungarians seemed dissatisfied, so any ambitious Hozenhollern king could have tried to seduce them into becoming compliant subjects. Or, using her mobile armies, Prussia could have cut across the western flank of Austria. This path would have begun at Baden, reached into the Tyrol, and entered the northern territories of modern-day Italy. Recall that Austria had faced staunch resistance from the Italian population in the peninsula – and so, Prussia could have tried to also wrestle those lands away from her. Further, if it successfully executed those two sets of conquests, Prussia would have enveloped Austria and set the stage for a final offensive to destroy that state and annex its territory. But "successfully" is the crucial term in the last sentence, and history showed it could hardly have been fulfilled. In an era of nationalist technology, Prussian leaders were sensible enough to accept that it helps only certain kinds of conquests, and that foreign lands with foreign peoples are best left alone.[115]

Turning briefly to the other adopter of nationalism in this period, we can also safely

[115] Prussia exercised a similar restraint in its war with France, and there we see an interesting contrast between the civilian and military leaderships. On the one hand, there is Bismarck. After Sedan, he "wanted peace as rapidly as possible, because of his fear of foreign intervention and his desire to avoid inflaming French national passions…[and so he] favored neither an advance on Paris nor an extensive occupation of French territory." On the other hand, general Moltke's position was wholly different, as the chief of staff wanted to "pursue the war to the end, imposing peace on Prussian terms" In this, Moltke's position reflected the view that war carried its own autonomy, and so diplomats should step in only when the soldiers were finished (D. E. Showalter, 1971a, pp. 351-352). This drastic difference in views was eventually resolved in favor of Bismarck, as the king supported him and the French sued for peace. But what is interesting to note is how this incident contradicts the usual narrative about nationalist leaders, who are supposed to get carried away by the supposed belligerence of the nationalist spirit. Here, the civilian leader concerned with unifying Germany was also concerned with keeping conflicts limited and not provoking other nations. It was the military leadership, concerned with its own autonomous conduct of the war, that neglected the nationalist dimension of both combatants. That is, Prussia only could easily hold onto Alsace-Lorraine because of its German-speaking population, while an all-out presence in France would only provoke that nation into continued resistance. A similar point about the different goals of nationalist leaders and military leaders is made in the conclusion.

conclude that its followed the irredentist rationale. That is, Sardinia evidently limited its conquests to the Italian peninsula, where the population was arguably composed of "proto-Italians" that could be safely assimilated. But note that, for our purposes, Sardinia is the lesser example of irredentist restraint. After all, it was not a full-fledged European power when it embarked on those conquests. Because of this weakness relative to its neighbors (particularly a hostile Austria), Sardinia could not be "blamed" for limiting the territorial extent of its conquests. On the other hand, Prussia shows a powerful state choosing to limit its conquests even when it arguably could have pursued more gains (as the above counterfactual had already illustrated). It is fairly good evidence supporting the predictions of how an innovator would behave.

Yet, with such glaring successes to its name, any technology ought to tempt those that previously abstained from it. Recall this rationale undergirds the next theorized phase of technological adoption, in which nationalism would be embraced fully by the bulk of users. The next section will see if this prediction pans out. What evidence is there for (and against) the full adoption of nationalism by states in the last third of the 19th century?

Phase III: the rest play catch-up (1871-1914)

Overall, history seems to corroborate this predicted phase. After the innovators struck, the next phase saw the remaining powers adopting the technology of nationalism in earnest. The result was convergent behavior from both innovators and latecomers. For the innovators, the success of nationalism only meant that reforms would be consolidated and extended. This happened in the new Italy of the late 19th century, after the irredentist conquests of Sardinia allowed for its birth.

There, the

> [l]aws of 1871 and 1873 reduced the service of conscripts...to four years, with a further nine in the reserves, copied the Prussian system of one-year volunteers, and set the wartime strength of the army at 800,000, divided into ten army corps. The number of different grounds on which a potential recruit could be exempted from military service were reduced and the law of 1873…established the principle of general obligatory personal service. Finally, a law of 1875 reduced service to three years. Further changes of significance were to occur…among them the development of a territorial militia as a further form of reserve and the expansion of the army to twelve corps…(Gooch, 1980, p. 119)

On the part of the new German empire, heir to the other innovator of the previous period, it can be argued that it "lacked the impetus to innovate" – at least not in the same manner as France (Posen, 1993, p. 113). After all, it was the latter that had experienced a sound defeat by Prussia's own mass armies in 1870-71, and the former that had inherited the latest and most advanced implementation of nationalism in the Continent. So the new German empire would have been at risk of complacency. But even so, it found ways to extend the adoption of nationalism. One venue was through education. In laws passed in 1871 and 1872, the role of religion was de-emphasized in education – instead, the core of the currilucum would be both history and the German language. The goal seemed to enhance the national consciousness of young Germans (p. 114). In addition, the new German education also made sure to articulate the *responsibilities* that came from such national membership. For instance, in 1890, Prussian primary schools received orders to train their children "as active members of German society, as self-denying subjects, and as men who will be glad to pay the supreme sacrifice for king and country" (p. 115).

Further, another way in which Germany extended its usage of nationalism was through the military. The army made sure to inject a high patriotic content in the communications issued by officers, in printed publications, and even in religious sermons to soldiers (p. 116). However, if we take seriously the importance of nationalism in successful recruitment, it is doubtful whether

such propaganda was of much use *after* soldiers had already enlisted. After all, most soldiers who enlist are assumed to have been nationalistic enough to join, and presumably have understood their stay in the army – so it is needless to try to convince them to serve. Nonetheless, these efforts suggest an innovator trying to push a technology in new directions. Unsurprisingly, this is neither unique to nationalism nor to social technologies in general. For example, the reader can see a parallel in German efforts to exploit nationalism, even in redundant ways, and those of software programmers who seek to improve an already-good product (e.g., a functional word processor) with yet more features and modes. Surely, the attempted improvements do not guarantee a better technology, but they do suggest a continued faith in the value of the technology. Germany evidently felt this way in the years after 1870.

Let us here return to the latecomers, to those which showed an earlier reluctance in the products of nationalism: 1) an effective universal conscription system, and 2) a widespread reserve army. It is their adoption of nationalism that corroborates the predicted third phase, with its widespread usage of the technology followed by a period of peace. Yet such adoption was neither simple nor unproblematic, and this challenges the elegance of the model in chapter X. For each latecomer, the adoption of nationalism had to accommodate the complex social impediments that forestalled adoption in the earlier phases. But at the same time, within each power, there was a marked and stronger push for adoption – even when it had to negotiate, or downright conflict with, existing constraints. How did each latecomer fare? Below we summarize this.

We begin with France, which as already mentioned, directly experienced the full affront of a well-prepared innovator during the 1871 war.[116] Of all the latecomers, it appeared to show

[116] In mentioning France's defeat by Prussia in 1870-71, we need to be careful and avoid the simplistic view that France was wholly negligent or unprepared for such war (even as it was unprepared in the social technology related to troop provision – see the failure of 1866-68 reforms in footnote Error: Reference source not found). In fact, regarding the prospects of war with Prussia,

the greatest push for reform.[117] In fact,

> it was a measure of the primacy with which [the French republic] viewed the role of the army in society that the National Assembly did not turn to devising a constitution until it had first passed laws on conscription in 1872 and on military organization in 1873… (Gooch, 1980, p. 110)[118]

Yet French reforms did not come easily, even though "[t]heories about the value of the long-service regular soldier had been conclusively disproven at Metz and Sedan" (p. 110). So, even though Prussia showed the value of reserves and short-term conscription, many in France still doubted whether the solution laid in those tools. Just consider that at the outset of debates,

> [the National] Assembly, which was strongly right-wing and was at first dominated by monarchists, expressed its military conservatism by arguing that long military service was essential for three reasons: it would produce discipline and obedience, it would act as a moral antidote to the decay of the Second Empire and enable the different orders of society to develop "mutual esteem", and it was in any case necessary to produce a good soldier. These considerations conformed with the convictions of [Adolphe] Thiers, the first president of the republic, whose ideal was *the army of the July monarchy* [of 1830]

> [t]he generals' optimism was by no means wishful thinking. In Italy and the Crimea, France outshone both her allies and her adversaries. Prussia's victory in 1866 had inspired important reforms in the areas of supply and administration. France had the best rifle and the only machinegun in Europe. A set of mobilization plans was being developed to replace the traditional System D – plans updating, among other things, the systematic use of railways to concentrate and supply troops. Not all of the reforms had matured, but the French army was by no means unready for war in the summer of 1870 – and not merely war against armies organized and trained like itself (D. E. Showalter, 1971a, p. 348).

In an era devoid of nationalism technology, such preparations may have given France a more evenhanded outcome to the war.

[117] Note also that the French had to institute reforms in more than just their recruitment system. After 1870, the French faced relative deficiencies in fortifications, artillery, cavalry, infantry, and general staff. Further, its reforms in those areas experienced challenges that were comparable to those in recruitment. Among those challenges were these: forts without steel and concrete reinforcements that could not resist the newest German cannons; a general staff that favored routine over reform, and a growing deficit of trained artillery officers, non-commissioned officers, and even of horses for the cavalry (as Germany had imposed a horse embargo in 1875) (Mitchell, 1981, pp. 51, 53, 55, 57, 60).

[118] Note that before its war with Prussia, France already had tried to implement reforms to its system of military service. Between 1866 and 1868, Napoleon III had tried to establish a wartime army of 1,000,000 troops with reserves - yet his attempts encountered staunch resistance. Wide swaths of society, particularly the wealthy, resented those reforms (see Wright, 1942, for an extended history of French public opinion during this time). Eventually, a service reform law was passed on February 1, 1868, but it involved so many compromises that it was of little use. For example, the system of exemptions continued just as before. By 1870, this meant that the French army only had 380,000 troops and still lacked reserves (Gooch, 1980, p. 101).

> … (p. 111; my emphasis)

Not everyone saw things the same way – otherwise, France evidently would not have reformed at all. For instance, one of France's leading military figures, Louis J. Trochu, had "supported a three-year term of service *à la Prusse* even though it was doubtful whether the budget would bear the amount of expenditure [for] such a policy" (p. 111). But ultimately, the 1872 conscription law would reflect France's reluctance to fully embrace the social technology of the time. Its terms would copy Prussian techniques with some watering-down:

> [the] principle of compulsory military service was established, for a term of five years, but was immediately eased by a variety of exemptions…and by drawing lots to determine whether service would be for the full term of five years or for one year only. In imitation of the Prussian system, a category of one-year volunteers was also established to cater for upperclass young men who paid for their own lodgings and equipment and were given in return officers' training. Total exemption was permitted to all those intending to follow the so-called "liberal careers" in education and the church…In the event the most significant feature of the law was to be the principle of universal service which, having once been established, the government seemed at such pains to undermine…(p. 112)[119]

Turning to Britain, a laggard during the first phase, it not only had Prussia's and Sardinia's war performances as examples of what could be done by fully embracing nationalism. It also had its own performance, and a rather poor one, during the Crimean War.[120] [121] This combined

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[119] Another critical assessment of French reforms is made by Mitchell, who notes that the "military reform of 1872 was a bad compromise between those who wanted to retain the old professional organization and those who wished to institute universal conscription...[, while it also] kept the door open for the old abuses of wealth and privilege in evading conscription" (1981, p. 50).

[120] The poor British performance had at least two sources. The first was a declining military budget that had only begun to recover by 1852. The other, more relevant here, was a shortage of manpower:

> Of the 153,000 enlisted men [in the British army at the outset of the Crimean war], two-thirds were serving overseas in various distant quarters of the Empire in the spring of 1854, so troops for the Black Sea expedition had to be recruited in a rush. *Without the conscription system of the French*, the British army relied entirely on the recruitment of volunteers with the inducement of a bounty. [Further, d]uring the 1840s the pool of able-bodied men had been severely drained by great industrial building projects and by emigration to the United States and Canada...The main recruiting grounds for the British army were pubs and fairs and races, where the poor got drunk and fell into debt (Figes, 2011, p. 180; my emphasis).

[121] The British shortages in manpower during the Crimea could also be blamed on the empire's own expansion in international trade. Because this trade would have increased demand for labor, and thus raised its wages, the prospective soldier would have a greater incentive to instead join the labor force (Rowe, Bearce, & McDonald, 2002). Yet this argument only assumes selfish citizens who just consider their own financial benefit. For a nationalist population, the presence of personal opportunity costs will surely sway many citizens away from

appreciation of Prussian strength and British weakness also resulted in a pronounced concern about defense of the homeland. In the late 19th century, this concern manifested itself among the elite and public alike:

> …in January 1871, the former Prime Minister Lord John Russell stated that England was open to invasion. He argued for the retention in Britain of a force of 200,000 troops, regular and auxiliary. The consequences of the failure to do this were set out in a literary form when, in May, Lieutenant-Colonel Sir George Chesney published "the Battle of Dorking" in *Blackwood's Magazine*. This proved so popular that it was reprinted as a… pamphlet a month later: over 80,000 copies had been sold by the end of the summer .. (Kochanski, 1999, p. 54)

"The Battle of Dorking" was a precursor of today's science fiction – it imagined an outright and successful military conquest of Britain by a Prussian-like enemy. British fears, it seems, were not just skin-deep. And so reforms were ultimately passed:

> The Army Enlistment Act of 1870 reduced service from twenty years to twelve, half of which time was spent with the colours and half in the reserve, bounty money [for recruits] was abolished and bad characters rejected and, as a result of the improvements in pay and conditions, the private soldier was at last brought out of the eighteenth century (Gooch, 1980, p. 120).[122]

Like France, though, it is important to note that British reforms also involved an element of restraint. Consider that the reforms did not involve compulsory military service, even though

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enlisting. Yet this fails to consider that, without nationalism, the enlistment rate would experience a further decline. Simply, the nationalist citizen is not a complete altruist, but one that balances his national duties with his personal wishes. He will be swayed by selfish appeals as much as patriotic ones, and the relative effects of either appeal are bound to vary from individual to individual, and from situation to situation.

[122] The British reforms also became known as the "Cardwell's Army Reforms", so named for Edward Cardwell, the British Secretary of State for War from 1868 to 1874. For a brief history of the reforms, see Farwell (1985, pp. 185-189) and Ensor (1952, pp. 7-16).

they made voluntary service more palatable. Simply, the political pressures against conscription were too great, since for "Britain's Liberal and Labour parties, conscription promised to create an electoral backlash, while for the Conservatives, conscription would only fan domestic unrest and energize the political opposition" (Rowe, Bearce, & McDonald, 2002, p. 572). And like with the French, the passing of the reforms was not a frictionless exercise. In Britain's case, the reforms had to contend with resistance from the military elite itself. This resistance was centered around one looming figure, the Duke of Cambridge, who was Commander-in-Chief of the army from 1856 to 1895 (and who also was Queen Victoria's first cousin, a relation he used to pressure his political opponents). The duke had fought only in the Crimean war, yet was "bitterly opposed to all change in any form." In this,

> [he] was supported by most of the senior generals and by many other officers who had a vested interest in the existing system, who honestly believed that reforms would be ruinous to the army, and who insisted that the army must follow the precepts of the great Duke of Wellington in spite of the existence of improved weapons which demanded changes in tactics, strategy, and military organization to exploit them and the need to provide defence against them (Farwell, 1985, pp. 185-186).

Yet this pocket of resistance ultimately proved unable to roll back the tide of adoption. Apparently the conservative officers could not dispel the proven success of nationalism abroad, nor the clear British difficulties faced in the Crimea. If they had, perhaps the reforms would have been undone. But they were not.

Let us now turn to the staunchest laggards of the abstinence period. Despite its earlier misgivings, Russia also saw the need for reform:

> In 1861, Dimitrii Miliutin had become war minister and he at once proposed a conscript army based on military districts…The following year four such districts were created

> (Warsaw, Vilno, Kiev, and Odessa)…[and by] 1865 the army corps had been replaced by the new Great Military Districts – nine in Europe and five in Asia. European Russia was also divided into twenty-two recruiting districts to handle reservists…[Later on, the] Franco-Prussian War [also] resulted in pressure being put on the minister of war to adopt the Prussia system, and in 1874 military legislation replaced the old term of fifteen years by periods of six years with the colours and nine in the reserve…[Finally, in] 1878 "reserve units" were created in the regions to receive reservists on mobilization (Gooch, 1980, p. 122).

Still, there were problems with these reforms. Tsarist Russia counted more on their soldiers' loyalty to the crown than to the nation, and as such, the reforms missed an apparent requirement for effective conscription and reserves – to work best, they must do so under the umbrella of nationalism. Without the proper harnessing of the latter, conscripts and reservists are more likely to evade service and otherwise not comply. In fact, this predicted underperformance eventually showed in the Russo-Japanese war (1904-1905), when reserve units, to put it simply, "did badly" (p. 122). In a war that was decidedly *not* defensive of the Russian motherland,[123] one Russian general wrote of a particularly strong act of non-compliance by his soldiers:

> In the rear hospitals there have appeared a large number of Other Ranks with wounded fingers. Of these, 1,200 have only the index finger injured. The absence of the right-hand index finger means release from military service [because right-handed shooters need it to pull the triggers of their weapons]. Therefore, bearing in mind that in action the fingers are well protected by the trigger guard, there are grounds for presuming deliberate self-injury. In view of the foregoing, the commander-in-chief has ordered that measures be taken to impose legal responsibility on those who are guilty (quoted in Westwood, 1986, p. 125).

The non-compliance also took other forms, as there were reports of reservists "plundering railway stations" and "escaping the battlefield by acting as stretcher-bearers, sometimes with ten or more men carrying one stretcher to the rear" (p. 125). Could we imagine similar acts by Prussian soldiers fighting to unite Germany, or Italian volunteers in their fight against Austria? Hardly, and such non-compliance suggests that in its rush to adopt reforms, Russia was a

[123] Recall that nationalism works best in defensive circumstances, so an offensive Russian war against the Japanese (or even just one of an ambiguous strategic nature) would trigger similar doubts about popular participation as those facing Italy during the Italo-Ethiopian war.

latecomer that did not lay the proper groundwork of nationalism to make mass armies "work."

Being told of Russian difficulties in adopting nationalism, the reader may suspect that Austria-Hungary had suffered a similar experience – and he would not be wrong. After all, the Hapsburg's anti-nationalistic tradition may have allowed the superficial adoption of two endproducts of nationalism, universal conscription and reserves. But it would not permit tapping into the core technology itself.

For Austria, the impetus for military reform began to mount after Prussia asserted itself militarily in mid-century.[124] Consider the Franco-Prussian war. It is common historical knowledge that the war began with France's declaration of war on July 19, 1870. Less known, however, is that Austria had seriously considered joining the French side – yet the Hapsburg emperor was skeptical about his generals' claims of military preparedness and ability to mobilize troops quickly. So the emperor chose caution in the form of armed neutrality. But he also ordered an investigation into his country's military capabilities, which shortly thereafter discovered that "six hundred thousand [Austrian troops] could have been fielded in six to eight weeks, though there would have been severe logistic shortages" (Rothenberg, 1999, p. 88). Only doubtfully could this compete with the Prussian war-machine.

Just a few years later, too, Austria confirmed these weaknesses in its war for Bosnia-Herzegovina (1876-1878). Then, "the war revealed quite clearly that regiments could not fight without their reservists, and since these often had to travel long distances to rejoin their units the Austrian military machine would be alarmingly slow in mobilizing for war..." (Gooch, 1980, p. 123). What is interesting is how these delayed mobilizations were linked to Austrian fears of nationalism. Specifically, during that war, Austria operated "a system whereby three batallions of

[124] Still, it should be noted that as late as 1866, the Austrian military command (as well as many observers) had continued to believe that "their army, because of its greater combat experience, was superior to the Prussian" (Rothenberg, 1999, p. 66).

each regiment could fight as soon as war broke out, while the fourth and fifth batallions remained in the recruiting districts in order to incorporate reservists before adding them to the campaign". What was reason for keeping fewer battallions at home? It was "the traditional antipathy in the empire towards too close an association between regiments and particular geographical areas" (p. 123). This was because battalions composed of ethnic minorities, like the Croats, could conspire with their home nationalist populations and arrange for effective armed revolts – a possibility which the conservative Austrian crown was well familiar with.

Nevertheless, like it happened with other latecomers, the external pressures to adopt a new technology (even if only superficially) were too great. In a string of reforms beginning in the early 1880s, and lasting until the eve of the first World War, the Austrian military tried to institute many of the same measures as other powers:

> The Austrian half of the empire was…forced to emulate, somewhat belatedly, the Hungarian *Honved*[125] [reserves] and there developed a race between the reserve forces of the two halves of the empire during the latter part of the century…both decreased their periods of service and came to take on more of the appearance of regular army units…As far as the regular army was concerned a law of 1912 reduced service to two years and raised the size of the annual contingent from 103,000 to 159,000 (Gooch, 1980, p. 123).

Yet the Russian parallel held. By not fully implementing the technology of nationalism, the Austrian half-measures would only be of limited effectiveness. Further, Austria had a more severe problem than Russia. Whereas the latter demanded soldiers' loyalty to the Tsar *without* eschewing their loyalty to the Russian nation, the Austrian leaders saw any divided loyalties with

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[125] The *Honved* was the Hungarian militia, an approximate of the *Landwehr*: a national army meant to comprise "Magyar regiments with the Magyar language of command and Magyar officers" (Rothenberg, 1999, p. 29). It was originally formed in 1848 and gained greater autonomy as the Austrian empire became the dual monarchy of Austria-Hungary in 1867. Among other things, it could not be employed outside the country without the consent of the Hungarian Diet (Barnard, 1886, p. 77).

suspicion – to them it was simply risky that a Slavic soldier feel any attachment to his ethnicity as well as to the Hapsburg crown. But since a state is unable to simply "turn off" or even "switch" the national loyalties of its subjects, Austria was condemned to pay the price for its staunch anti-nationalism. This was not a complete surprise for informed observers at the time, and so it was that

> [on] the eve of the First World War…there were doubts about how far the army and the reserves were united in their loyalty to Vienna as racial tensions mounted in both the German and Magyar portions of the states, and doubts also about whether the shared experience of military training was enough to hold together national minorities, some of whose interests might be better served by Russian overlords (pp. 123-124).

The worries came true in more than one occasion. Like their Russian counterparts, who evaded combat during the earlier Russo-Japanese war, many of Austria-Hungary's troops also displayed significant signs of non-compliance in World War I. Consider the following incident during the Russian April offensive of 1915:

> On April 3 the 28th [Czech] Infantry Regiment, which in its home garrison at Prague had been subject to considerable nationalist and socialist propaganda, surrendered almost without resistance to the Russians during the battle for the Dukla Pass. An outraged Archduke Friedrich asked the emperor to dissolve the unit and this was done on April 17, 1915. It was the first open mass defection, and the incident became and has remained the subject of considerable controversy as to the causes, motivations, and even the actual conduct of the regiment. But most [Austrian] senior officers believed that the affair proved that Czech troops were no longer reliable and from now on special precautions would have to be used when they were committed to action…[Yet this] did nothing to solve the problem of the wayward and uncooperative "Soldier Schwejk," fast becoming the prototype of passive resistance to authority (Rothenberg, 1999, p. 185).

Lest we think this was an isolated incident, such defections actually intensified as the war wore on. And they cannot be blamed on the courage of troops, but on their national loyalties. Simply, there was a consistent pattern of ethnic minorities refusing to fight for the dual monarchy. Just

consider that by 1918,

> [a]lthough the army still managed to hold its lines against Italy, behind the front the breakdown of the military establishment accelerated at an increasing rate. After the Piave mutinies, refusals to go into action, and mass desertions became frequent and were no longer confined to Czechs. Slovene, Ruthene, Polish, Serb, and even Croat units were also affected. Whenever possible, mutinous units were surrounded and captured, but many escaped to join the deserters in the "green cadres" roaming in the hills…By the summer of 1918, the "green cadres" had machine guns or even field artillery, and when Emperor Charles visited Sofia and Constantinople in May, heavy precautions had to be taken to safeguard the imperial train (p. 214).[126]

Thus, there is truth to the pattern hypothesized in the previous chapter. In the third phase of technological adoption, the latecomers were predicted to adopt nationalism en masse. This they did, insofar as the "endproducts" of the technology were concerned. But the history of Austrian and Russian reforms tells us something that was not readily apparent: just because all latecomers adopt, it does not mean all their adoptions will be equal. By this we mean equality in two forms: in the thoroughness of any reforms, and in their ultimate effect. Compared to the French and the British, Russia and Austria were less thorough in their reforms, and also less effective in obtaining the desired result.[127]

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[126] Note this overall picture of the Austrian army seems to contradict one author's more favorable conclusion that "the officers and the army were a remarkable cohesive institution, at least until the second year of the First World War" (Deak, 1990, p. 8). Yet even he admits that the "military system created in [the reforms of] 1868 had many drawbacks and only one merit: it endured" (p. 58). The problem is that this is the same nuanced analysis that one can make of a defective car with mechanical problems – yes, it is in very bad shape, but it can still take one across town. Of course, this optimistic view is largely contradicted when that car faces higher levels of stress, and it simply falls apart. Something similar arguably happened with the Austrian army. It held itself together through a careful balancing act, but it lacked enough stability to endure World War I without the significant desertions that plagued it. Simply put, the strength and cohesion of an army is rarely put to the test in a better way than through war.

[127] Note I treat these two forms of equality as independent concepts, not as ones linked by causation. That is, the effects of any reforms should not be construed as necessarily linked to the extent of their thoroughness. For instance, a laggard may choose to adopt a technology "halfway" to accommodate a creaky infrastructure that is already present. In doing so, he may actually achieve more stable results than a radical innovator who adopts a technology more thoroughly than the infrastructure allows for. In the case of nationalism, of course, it happened to be that the least-thorough innovators were also the least effective militarily. But in an alternative play of history, imagine a super-innovative Austrian empire that was too thorough in nationalist reforms. Perhaps this overcompensating laggard would have ultimately feed its own demise – as ethnic minorities were widely trained to provide reservists, but instead took advantage of their military training to just break away from the state. In sum, the laggards might have been dealt a bad set of cards, but they could have played them much worse than they actually did.

Of course, the theory of nationalism-as-technology tells us to expect two things from the third stage of adoption. The first was that latecomers, in their rush to emulate the innovators, will evenly spread the use of nationalism across the region. This much we have seen above. Yet a second expectation is that such period will also feature a decline -if not altogether an absence- of military conflict in the region. Was this the case?

It was, with a few caveats. From 1871 to 1914, the continent of Europe experienced no militarized conflict between its great powers at all. These 43 years of peace are commonly ignored by the public and even many international relations scholars, but they would not be surpassed in length until the post-1945 period. At the same time, the peace simply pertains to the absence of physical hostilities. For instance, Germany embarked on a naval arms race during the period, and tensions rose between it and Britain. But the two powers did not fight at the time. The peace also applies to relations among European powers only. Already mentioned was the Russo-Japanese war of 1904. Because it involved an Asian power against an Eurosian one, it does not feature the regional membership predicted to experience peace. The same applies to European wars that happened either between non-powers, or between a power and a non-power. The Serbo-Bulgarian war of 1885 would be an example of the first type of war, while the Russo-Turkish war of 1877-78 falls under the second type. In short, there was a remarkable peace, but it was never an universal one – nor was it ever predicted to be so.

Still, let us briefly explore the reasons for this peace, given that we have already documented a wide adoption of nationalism technology in the late 19th century. Recall the previous chapter gave us some explanation as to why we should expect it. In the third phase of nationalism adoption, the spread of the technology is conducive to peace for two reasons. The first and most obvious is the inherent imbalance between the offensive and defensive capabilities

of nationalism. In other words,

> the defense is simply too favored with the further adoption of nationalism. States turn to building mass armies with loyal soldiers, who are eager to defend their homeland – but are skeptical about generic conquests. As these armies mature, the average country's defensive bonus outpaces its offensive one by a growing margin. The result is less incentive to attack others, less territorial disputes, and ultimately more peace, as shown previously.

Thus, the defensive bias of the technology can be credited with its *long-term* contribution to peace. But what about peace in the short-term? After all, if the technology of nationalism produces peace after the mass armies have gained in size and matured, then it is also the case that the likelihood of war is *higher* until those mass armies have indeed matured. So what accounts for nationalism's contribution to peace until then?

The answer is the second reason for peace under fully-spread nationalism, and lies in the motivation for territorial conquest under the model. With the help of some European history, we can now examine its empirical validity. Recall that the second phase (of partial nationalism adoption) featured irredentist conquests, but not any other kind of conquest. And, by the third phase of full adoption, it was simply the case that "[s]tates already exploited all opportunities for easy, irredentist conquest" (see p. X). Does the research on Europe corroborate this assumption? Overall, yes. There did seem to be an absence of the irredentist urge to "rescue" minority populations of nationals across interstate borders – at least insofar as the major powers were concerned. The reason is simple. Once the German and Italian unifications were done, the European theater lacked *sizable* irredentist targets for any of the powers. To help illustrate this point, we can consider some counterfactuals for two powers, and briefly discuss the rest. By

looking at what could have been (should good irredentist targets have truly existed), we can better see how devoid of them was 19th century Europe.

First consider Britain. It is obvious that it lacked irredentist targets in the continent, yet it could have been otherwise. In an alternate reality, perhaps the French region of Brittany could have been populated with English-speaking subjects that retained their "non-Frenchness" and clamored for Britain to liberate them. And maybe Britain could have done as much during a moment of French weakness, such as during the Prussian occupation of 1870-71. But in our reality, this did not happen with the region also known as "Little Britain." Simply, Bretons historically remained independent of both Britain and France – that is, until France expanded its control of the region during the French revolution. So, Britain did not face a population of proto-Brits asking to be rescued from France. Further, the region of Brittany may have been too small to merit an irredentist war. After all, compare its size to Prussian designs over surrounding German kingdoms, which did encompass sizable parcels of central European territory – or, for that matter, to Sardinia's justified ambitions to conquer the whole Italian peninsula. Quite simply, history did not give the British any tempting targets for irredentism in Europe. There are no tales of clamoring Brittanians, or any other ethnic minorities, that could have been assimilated by it.

A second case of absent irredentist targets is Russia. Surely, the Tsar could have hoped to fan pan-Slavic sentiment across eastern Europe and the Balkans. Briefly imagine the alternate history if this would have been the case. Perhaps non-Russians Slavs would have revolted against their non-Slav rulers, and vigorously clamored for annexation by Russia. In response, Russia may have tried to launch a string of irredentist conquests. These may have been small at first, but eventually gained in size and scope as more Slavic populations awakened to the possibility of "liberation". A clear push for such conquests could have ocurred in the Balkans.

After all, that region saw both Austrian and Ottoman influences waning alongside the declines of those states – so why should Russia not have taken advantage of that? Further, Russia need not have worried much about intervention by other powers. As long as it exercised the same territorial restraint that Prussia showed during its conquests of Germanic lands, the conquests may have eventually been accepted by other grudging powers.

Of course, this was not the case in our reality. On one hand, pan-Slavism did *not* necessarily mean a sense of kinship with Russia – and much less a desire to be absorbed by it. Just consider that the very first Pan-Slav congress, held in Prague on June 1, 1848, was actually both anti-Austrian *and* anti-Russian. In fact, instead of siding with Russia, it "called for a union of the Western Slavs (Czechs, Moravians, Silesians, and Slovaks), Eastern Slavs (Poles and Ukrainians), and Southern Slavs (Croatians, Slovenes, Serbians, and Dalmatians)" (L. L. Snyder, 1968, p. 327). This is the sort of pan-Slavism that would make Russia hesitant about launching wars of irredention. If anything, fellow Slavs may have seen Russia as a big brother to liberate them – but not as a big father whose house they really wanted to move into.

Further, this hesitation appeared to show in Russian foreign policy.[128] An example is the outcome of the Russo-Turkish war of 1877-78, which Russia initiated after anti-Ottoman unrest flared up (again) in the Balkans. Russia won that war, and presumably it could have attempted an annexation of at least some Balkan territories. But consider the Treaty of San Stefano, the armistice signed by the warring parties on March 3, 1878. Its main term included "the formation of a very large Bulgarian state, stretching from the Black Sea through all Macedonia, beyond the Vardar, and reaching the Aegean at Salonica." Also, the treaty gave territorial gains to Serbia and Montenegro, and autonomy to Bosnia-Herzegovina under Austro-Russian supervision (Albrecht-

[128] See Borrero (2004, pp. 265-266) for a brief summary of pan-Slavism which also concludes that tsarist Russia was hesitant to embrace it.

Carrié, 1973, p. 172). These terms would ultimately be amended during the 1878 Congress of Berlin, in which the other powers pressured Russia for a more even-handed division of the spoils. Yet notice the restraint that Russia already exercised in San Stefano. Without outside pressure by the powers, it did not push for an annexed Bulgaria, or just an annexed portion of it – or even for a national plebiscite to determine if Bulgarians wanted Russian rule. The tentative answer for this restraint? The foreknowledge that pan-Slavism did not guarantee a successful irredentist conquest, and so Russia opted to avoid the nationalist troubles that had plagued both Austria and the Ottoman empire in the Balkans.[129] [130]

If Britain and Russia lacked clear and sizable irredentist targets, what can be said of the remaining powers? Germany evidently saw itself satisfied for the time being, and arguably was consolidating its existing gains from mid-century. Austria-Hungary was simply "out of the game", since it lacked a national identity by which to attract populations beyond its borders. As to France, it did not have large French-speaking populations to conquer. Perhaps it could have pursued Belgium, but its population was mixed (French- and Dutch-speaking), the territory was fairly small, and its strategic location was deemed sensitive by the British. Conquering Belgium would have thus been fairly expensive for the French, and could have incurred armed

[129] An alternative argument about Russia and pan-Slavism is that war does not require for the former to embrace the latter - it is enough if *other* states believed that Russia would support fellow Slavs, and that these states acted belligerently because of such belief. This arguably is what Austria did on the eve of World War I, by adopting a forceful posture against Serbia and seeking German support against Russia. But even in itself, this logic is not airtight. Austria could have just as easily *avoided* tensions with Russia over Serbia, precisely because it supposedly expected Russia to defend fellow Slavs. Yet, it should be borne in mind that Austria had good reasons to doubt Russian resolve to support fellow Slavs. After all, there was a clear record of Russia ambivalence about interference in the Balkans (see the main text for its restrained position in the armistice negotiations of the Russo-Turkish war). Such record actually led one observer to describe aggressive pan-Slavism by Russia, or "pan-Russism", to have "never [been] adopted by the tsarist Russian government and always combatted by liberal and humanitarian trends among the Russians themselves, as well as by the nationalism of Ukrainians and Poles, Czechs, and Serbs" (Kohn, 1952, p. 721). In addition, this study adopts the position that World War I is best explained by firm German intentions to wage a war in Europe, as well as by a looming cult of the offensive that warped military decisionmaking at the time.

[130] If they would have been alive to see it, 19th century Russian statesmen may have felt validated by the collapse and subsequent breakup of Yugoslavia, a pan-Slavic state that very much showed both the limits of that respective pan-nationalism, as well as the staying power of smaller national allegiances.

intervention by both the British and the Germans. Another prospect was Alsace-Lorraine, lost to Prussia during the 1870-71 war. In fact, its loss served to fuel decades of French revanchism against Germany. But a few realities were reflected in the failure to pursue that territory. First, the French lagged behind Prussia/Germany in the implementation of nationalist technology, something which was already evidenced above. To confront Germany, with its conscription system and reserves, was a risky if not losing proposition. (The case becomes even more lopsided if we include Germany's rising industrial base and its adept use of "hard" military technologies like railways.) Second, the Germans had taken care in selecting Alsace-Lorraine for conquest. The territories taken were largely populated by German-speakers, and their proportion only increased during the years. This was due to the terms of the 1871 Treaty of Frankfurt, which allowed for French-speakers to legally emigrate from the region until October 1872, due to much illegal French emigration after that date, and due to a continued influx of Germans into the region.[131] Given these trends, it is no wonder that Alsace-Lorraine remained an object of revanchism, but not of workable irredentism.

In sum, the theory of nationalism-as-technology led us to expect peace from two causal mechanisms – the rise of defensive mass armies, and the decline of irredentist targets. Further, the history of the period is plainly corroborative. Yet, at the same time, we can also go beyond the hypothesized mechanisms and entertain any "discoveries" made during the historical research. Here we can discuss yet another mechanism for peace – or at least for the delay of hostilities – during the third phase of adoption (1871-1914). It was not predicted beforehand.

The new mechanism consists of the following: because nationalism is a technology that takes time to implement in state armies, and given its inherent risks, any adopters were reluctant to engage their troops prematurely. Simply, it would make little sense to mobilize troops that are

[131] See Eckhardt (1918, p. 434) for a concise summary of the migration in Alsace-Lorraine between 1871 and 1914.

in the middle of reform, and before any major technological decisions had a chance to "trickle down" to the unit-level. Just consider that from the time of its major reforms in 1860, Prussia waited six years before waging its successful war against Austria, and a decade before doing the same with France. And this country was the best implementer of the technology – could any of the laggards hope to put nationalism to work any faster? At the same time, a skeptic may argue, latecomers are often able to leapfrog past innovators by avoiding the trials-and-errors of the latter and just adopting the most "stable" version of any technology. This seems the case in technologies like computer software, but does it make sense for 19th-century nationalism? At least not in any apparent way – after all, recall that each of the latecomers had complex domestic situations that were different from that of the innovators. So, none could *readily* adopt nationalism, even after it had proven its value to Prussia and Sardinia, because those complex domestic situations had not gone away for the latecomers. For instance, recall that even after losing to Prussia in 1870-71, France had to juggle a variety of domestic interests that were either against military reform or the military itself – and that these interests did manage to water down the implementation of egalitarian military service. So, it is not simply the case that the successful innovators "cracked the code" of nationalism, and just made it easily available to latecomers. Instead, the innovators' success with nationalism simply showed that success was possible in the first place. Nationalism was proven useful, but each latecomer would have to crack its own code.

Let us take the implications of this mechanism further. Since the laggards only began adopting nationalism after the innovators waged successful wars, it is possible to see a rise of similarly "disruptive" technologies with the following result: an initial wave of wars as the technology is first used, and a subsequent peace as all other parties hunker down to adopt it as well. But note this possibility may be tough to test, especially because wars (at least among

powers) do *not* tend to systematically lead to periods of peace. At least one set of statistical tests has found this out – so that "[o]nce a war (or a series of wars) is over, neither its incidence nor its seriousness has any impact on the likelihood of war in the period immediately following" (Levy, 1983, pp. 166-167). But while those tests were fairly comprehensive,[132] they do not exclude certain possibilities. One is the "clash" of two opposing causal forces: those pushing for post-war peace, and those pushing for post-war contagion. If so, on average, we may not see any *systematic* pattern because those forces cancel each other out over centuries.[133] But a "disruptive" technology like nationalism could still be on the side of pushing for peace after war – at least insofar as innovators have run out of (irredentist) gains to make, and latecomers need some time to adopt the new technology.[134]

Conclusion and contributions

Immature as it may be at this point, the theory of nationalism-as-technology helps derive a sequence of systemic expectations for which there is good evidence. During the 19th century, nationalism was at first avoided, then used well by a few, and then used with mixed success by all powers. Consequently, the century also saw a spike in major power wars when the innovators struck, and a total absence of it as the laggards spread the usage of the technology. But instead of rehashing more of the points already made in this chapter, it is useful to ask here – how does all

[132] The quoted summary findings by Levy are valid "for Great Power wars as well as for interstate wars involving the Powers over the last five centuries of the modern Great Power system" (1983, p. 167).

[133] Note that Levy recognizes this distinct possibility: "[e]ven if there are no individual contagion effects, there are several possibilities[; for instance,] some or all of [the] distinct contagion linkages may operate but simply cancel out…" (1983, p. 168).

[134] Such a "technological delay" argument does appear to be new in the group of arguments proposing war as a precursor to peace. The more conventional arguments are, for instance, that wars deplete state resources for any subsequent wars, or that wars create a repulsion for mass violence. See Levy (1983, p. 151) for a list of several such arguments.

this contribute to our understanding of nationalism and conflict?

The theory helps in two ways. First, it corrects the often-espoused idea that nationalism was on a steady path of adoption during the period. An exponent of this view is Posen (1993), who views the adoption of mass armies to be persistently driven by the anarchic environment in which states must be stronger to survive. A suggestive quote is below:

> Neither [19th century European] political elites nor professional officers "embrace" the mass army. To varying degrees, they are driven to it by the exigencies of international competition. The French revolutionaries were forced to innovate by the magnitude of the military challenges they faced. Others were forced to imitate the French success. As each combatant stumbled into ways to improve the mass army "military format," *each successive combat* demonstrated to others the new tricks to imitate. Literacy of the officers, NCOs, and enlisted personnel was one such trick. Another was motivation through systematic indoctrination into nationalist ideologies, which stressed the uniqueness and inclusiveness of one's own collectivity, relative to the one next door. And yet another was continuing expansion in the sheer size of the mobilized force. *These fed on each other, both within boundaries and across them* (p. 121; my emphasis).

To read Posen is to imagine the adoption of nationalism technology in a linear path across time and space in Europe. "Each successive combat", he tells us, led to tricks that "fed on each other" and spread through states. This view leaves little room for abstinence, backpedaling, and halfheartedness in adoption – but all these things happened, and often, throughout the 19th century.

For example, earlier we discussed how Prussia actually backpedaled from conscription and militias after the Napoleonic wars. The public felt a growing unease about universal service, while a very apprehensive king found a way to detooth the Landwehr by financially starving it and keeping it subordinate to the regular army (see page 192). Yet this de facto abstinence from engaging nationalism is seen differently by Posen. He concludes that Prussia "retained the form, although not quite the fact, of a general military obligation of the citizenry to the state", and simply sees that "[t]here was little change in Prussian military institutions from 1815 to 1860"

(pp. 100, 103). But keeping a practice in form, not in fact, is also known as just paying lip service to it – and that is what Prussia effectively did until about 1860, or a remarkable 45 years since the end of the Napoleonic wars. If international anarchy is seen to constantly push for innovation, this period represents a long "pressure drop" to explain.

To be sure, Posen *does* recognize the domestic Prussian situation at the time. But his characterization is subtly revealing:

> From 1815-60 the organization of the Prussian Army…was a central matter of domestic political dispute. The king and the Junker aristocracy mistrusted the Landwehr and aimed to destroy its autonomy; they hoped to preserve and expand aristocratic dominance of the officer corps. The purpose was to secure the army as a defense of monarchical power against the growing political power of the middle and working classes. *At the same time, however, considerations of security were also accommodated.* By 1866 Prussia had achieved a competently commanded, highly motivated mass army, which was at the same time politically reliable (p. 102; my emphasis).

Note he concludes that accommodation to international security concerns still managed to occur, even though the Landwehr was all but dysfunctional until after 1860 (see page 193). And more telling still is how Posen mentions such security accommodations (see the italicized sentence above), and then simply turns to add that "[b]y 1866" Prussia had attained an effective mass army. What is crucial are not the two sentences themselves, but what should have appeared in-between them. Prussia attained its great mass army after reforms that *only began in 1860* – so there was much wasted time since the backpedaling after 1815. If these are accommodations to security considerations, they are seriously belated ones.[135]

On the other hand, the theory of nationalism-as-technology tells us to see the period of

[135] A similar thing happens with, say, French reforms after 1870. Earlier we noted how half-hearted they were (see p. 217) – yet Posen saw the glass as half-full. Telling is a footnote in which he comments on another author's own skepticism of those reforms:

> [Allan Mitchell] argues that the French consciously imitated much German military practice. Yet he judges them harshly for the measured pace and limited extent of their imitation and improvement, especially on the breadth of conscription of the adult male population, and the organization of men who had completed their term of service into reserve units. I am struck by what was done and thus I judge the evidence as supporting my theory (1993, p. 109; footnote 109).

The footnote unfortunately ends there, without extended justification of why "what was done" should be weighted more than what was not.

abstinence as pointedly different from that of widespread adoption. If anything, for Prussia and France, the first period was a *reversal* in their usage of nationalism technology (from the Napoleonic era). It was more downturn than slowdown. In addition, technological theory also helps us predict the peace-inducing potential of nationalism, which Posen largely ignored. Instead, he is primarily concerned with the question, "How might nationalism cause war?", and offers that the "impulses of nationalism may… help cause international 'spirals' of insecurity" (1993, pp. 123-124).[136] Any *curvilinear* relationship between nationalism and war is thus ignored, while it is obviously a centerpiece of this chapter and the preceding one.

To be sure, we have only discussed a single scholar's perspective, albeit an influential one, in international relations. If we wanted to further challenge the contribution of nationalism-as-technology, perhaps we could point out to historians and sociologists who indeed saw more subtlely to the adoption of nationalism in militaries across the 19th century. For instance, this chapter quoted Gooch (1980) at length (see, to name a few instances, pages 192, 199, and 217). He certainly saw ebbs and flows in countries' willingness to embrace conscription and reserves. Another good example are Mjøset and Van Holde (2002). For the first half of the 19th century, they recognize that "France and the westwards countries on the continent practiced a *watered down* system of peacetime conscription which accommodated social inequities through liberal 'buying out' practices". On the other hand, the eastern countries employed a stricter form of conscription, with Prussia as "the most dynamic developer" of this system. And these authors, contrary to Posen, also see substantial conservatism by Prussia in *not* developing the tools of nationalism – explicitly they mention that "the fate of liberal military reform in nineteenth

[136] Moreover, Posen retains a pessimistic treatment of nationalism when he posits an interdependent relationship by which "nationalism is as often a consequence of conflict as it is a cause" (pp. 121-122). A more evenhanded treatment could have mentioned that nationalism is both cause for peace *and* conflict, depending on the circumstances. Yet it is possible this bias is inherited from the nationalism-as-ideology assumption, which commonly sees nationalism as having inherent qualities that foster belligerence towards foreigners.

century Prussia is perhaps best shown by *the decline and eventual collapse of the citizen militia, the Landwehr*" (2002, pp. 40-41; my emphasis). This is not the "little change in Prussian military institutions" emphasized by Posen between 1815 and 1860 (1993, p. 103). Instead it dovetails with the themes of abstinence and backpedaling that are predicted in Phase I of adopting nationalism as a technology.

So, these nuanced historical assessments present another challenge for the theory. What does nationalism-as-technology contribute if it predicts things that are already recognized by others? The answer is simple: perspective. A historian can recognize the fluctuations in adopting nationalism across the 1800s, and even discern broad trends. But technological theory tells us why those broad trends happened, and in doing so, also broadens our "causal perspective". For example, at first, states were not willing to adopt nationalism for their militaries because of the political risks to their domestic stability. All the above authors recognize this. But what they do not recognize is that the reason for such reluctance is more than just domestic-political, or merely grounded in 19th century conditions – it is the default behavior of most human agents that encounter *any* new technological form. To earn their name, innovative technologies are bound to upset or clash with pre-existing conditions, and also to involve much ignorance (or even misinformation)[137] about their use. So the theory of nationalism-as-technology asks us to look wider, and to connect the causes for state reluctance in adopting nationalism with the causes for similar reluctance elsewhere. Under this broader perspective, we see many parallel cases: militaries' hesitation in adopting repeating rifles, customer apprehension about the first microwave ovens, couples' misgivings about new forms of contraception, viewers' reluctance to

[137] An example of misinformation about new technologies are misleading claims by their engineers or marketers, who typically have an interest in promoting their spread. The flip case would be detractors of new technologies, who may exaggerate their risks for any number of reasons. It could be that the new technologies challenge important tenets of their worldview. For example, people with rigid notions of religion may be upset at technologies that imply those notions are wrong. Or, much more simply, the challenge could be to the detractors' pocketbooks (if they make money from older technologies).

buy the latest media format, and so on. With technological theory, this wealth of cases enters the picture, and promises to help us develop singular ideas that cut across them, and so explain more of the world.

That is the long-term promise of technological theory. But for now, we should tend to an immediate concern, as well as an intermediate one. Regarding the former, are there any powerful counter-arguments that still need to be considered against the theory of nationalism-as-technology? And as for latter, can the theory offer more contributions for political science than explaining war and peace patterns in 19th century Europe? The next chapter concludes this study by tackling those two questions.

Conclusion

Even though there is evidence supporting the theory of nationalism-as-technology, challenges remains on two fronts. On the one hand, there is a powerful counter-argument that deserves a response – if nationalism led to peace during the 19th century, why was this peace broken by World War I? And what explains the horrible bloodshed of this conflict? These questions need answers, lest the theory lose its credibility. On the other hand, even if nationalism-as-technology provides a cogent explanation for past patterns of war and peace, what more contributions can it make? After all, we already live in a world all but fully endowed with nationalism technology. So, any predicted happenings from the spread of nationalism should have happened already. Can the theory help us predict anything else, or its future utility is now limited? We tackle World War I first.

A Discussion of Relevant Causes for WWI

This section will devote itself to discussing the forces which ultimately led the European countries to WWI. Those forces, or "drivers," should be differentiated from "primers," or those circumstances which only *trigger* a chain of events but are not ultimately responsible for the chain's continued motion. Naturally, the conventional wisdom has long held "Balkan nationalism" as a "root cause" of WWI – and this would appear to contradict the idea that the technology of nationalism was peace-inducing in Europe. Many view the assassination of the Austrian royal-heir Ferdinand by Serb nationalists as the first domino whose fall "led" to all others. But this view subscribes to certain assumptions that seem unfounded. In fact, in context

of the other forces at play at the time, the events in Austrian-occupied Bosnia –while nonetheless important- were but incidental to the chain of events. In fact, the argument will be made that absent the killing of Ferdinand, a host of other crises would have still led to WWI. In that sense, the forces that precisely could have turned *any* crisis of some gravity into a major conflagration are the true "guilty parties" behind WWI. These are the forces to be discussed next.

One of the most obvious contributors to WWI seems to be the aggressive and alienating foreign policy of the German Empire. Or, more to the point, the policies espoused by King William II, who ascended to the throne in 1888. Whereas Bismarck predicated the stability and measured growth of the newly-unified country, William II espoused the different approach of *Weltpolitik*. It would be inappropriate, though, to call this new approach a philosophy – given that the new king's "ideas on policy…were often 'half baked' and leaning toward the sensational" (Albrecht-Carrié, p. 205). So, more fitting is to say that William II embodied a new attitude devoid of Bismarck's historical perspective. Under the former's reign, Germany's behavior became impatient, bullying, and reckless – adjectives that would have found no place in Bismarckian Germany or Prussia.

The troubling results of *Weltpolitik* came quickly after William's ascendance to the throne. Germany's alliance with Russia was almost immediately undone by a host of diplomatic missteps – such as William's pursuit of a closer friendship with Austria (the traditional competitor of Russia in the Balkans) and his failure to renew the Reinsurance Treaty with Russia. By 1892, only four years after William II came to power, an estranged Russia hit back diplomatically with a new alliance with France. This represented the "first important breach in the Bismarckian system" that sought to keep France –Germany's historical opponent- alienated (p. 208). Now Germany faced the possibility of a two-front war, something which Bismarck's

system of alliances sought to avoid.

Relations with England fared no better. Another pillar of *Weltpolitik* was William's pursuit of German naval might – the seed of which was officially planted in 1898 with the first German naval law (p. 216). Needless to say, this posed at least a theoretical challenge to English naval supremacy. And the challenge became real as the German navy grew in size, while repeated attempts at Anglo-German rapprochement failed. By 1907, British fears got clear voice in an important memo by the country's foreign office. The memo concluded that

> A German maritime supremacy must be acknowledged to be incompatible with the existence of the British Empire, and even if that Empire disappeared, the union of the greatest military with the greatest naval power in one State would compel the world to combine for the riddance of such an incubus.[138]

What this meant for power relations was that England began to gravitate closer to both France and Russia (p. 271). The year 1904 thus saw the birth of the Anglo-French *Entente Cordiale*, by which those two powers settled their outstanding colonial differences. Soon after, the Anglo-Russian Convention of 1907 would give rise to a similar entente that, together with the Franco-Russian alliance of 1892, combined into the Triple Entente. In sum, *Weltpolitik*'s bullying style resulted not in the backing down of other powers, but in anti-German alliances that later served as the adversarial fault-lines on which the coming war was fought.[139]

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From *Memorandum on the present state of British relations with France and Germany*, dated January 1, 1907, and found in *British Documents on the Origins of the War, 1898-1914*, Vol. III, pp. 397-420 (quoted in Albrecht-Carrié, 1973, p. 254).

139 There is debate about whether Germany pursued an aggressive foreign policy or not – this is sometimes called the "Fischer controversy" (Van Evera, 1984b, pp. 116-117). (See the next footnote here for more detail on Fischer's work.) Yet there are two debates to keep in mind. Besides the one mentioned, we can also assume that

It is important to note how Germany's behavior here differs from that predicted of any state in the regional model discussed in chapter X. Simply, after all states have achieved their potential irredentist conquests, and given a fairly even balance of power, they should sensibly opt *not* to pursue policies of aggrandizement. There simply would be little gain in doing so, since any one aggressor state would 1) lack viable territory to conquer, as it would be populated by hostile nations, and 2) encounter an alliance of bothered neighbors to keep it in check. Historically, though, it seems that the Kaiser's singular control of his country's policymaking was enough for Germany to behave in such an unpredicted manner.

Besides the Kaiser's reckless policies, another widely-recognized contributor to WWI is the cult of the offensive. This refers to the (mistaken) belief that conquest was easy at the time:

> Despite the large and growing advantage which defenders gained against attackers as a result of the invention of rifled and repeating small arms, the machine gun, barbed wire, and the development of railroads, Europeans increasingly believed that attackers would hold the advantage on the battlefield, and that wars would be short and "decisive" – a "brief storm," in the words of the German Chancellor, Bethmann Hollweg (Van Evera, 2004, pp. 69-70).

In Germany, this belief took shape in the Schlieffen Plan with which the kaiser's general staff planned to rapidly defeat Belgium, France, and Russia in succession. Easily, if the cult would not have imbued the German leadership, that country might have been much more cautious in its brinkmanship games against other powers, and more reluctant to earn the distrust of its neighbors.

It is also interesting to speculate as to how *Weltpolitik* and the offense cult may have been

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Germany indeed had an aggressive foreign policy, and still debate whether that is sufficient or significant to explain WWI. In other words, this additional debate considers the importance of *Weltpolitik* as a cause in relation to, say, the cult of the offensive.

causally linked. For instance, these two factors may have feed on each other. The Kaiser's expansionist views might have promoted the ascension of a general staff that was abnormally offensively-biased. Before the Kaiser, though, we can only imagine that in Bismarckian times, offensively-biased military men would have come into conflict with the self-restraint of Bismarck's *Realpolitik*. Note that while it allows for the offense cult to matter as an intervening variable, this view also closely approaches that of the Fischer school, which "emphasizes Germany's 'grasping for 'World Power'' as the primary cause of [the First World War]" (J. Snyder, 1984, p. 125).

Conversely, the cult of the offensive could have fostered *Weltpolitik* and not the other way around. That is, the cult could have given an argumentative basis that validated *Weltpolitik* and gave it "analytical legs." Van Evera suggests as much when explaining that "German expansionism reflected the assumption that conquest would be easy both for Germany and for its enemies" (2004, p. 77). Thus, with the Schlieffen Plan fully fleshed out on paper, the Kaiser might have been encouraged to decide that his aggressive foreign-policy was feasible in the first place.

Finally, a third and more reserved assessment is not that *Weltpolitik* nurtured the cult, or vice versa, but simply that the former just never intervened to prevent the latter from crystallizing into the Schlieffen Plan. Partial to this view is Snyder (1984), who questions whether Weltpolitik *actively* promoted Germany's offense cult, and focuses on how the German General Staff's insularity from civilian control allowed it to develop the Schlieffen plan. Note that Snyder, an apparent skeptic of the Fischer school,[140] never goes so far as to claim that *Weltpolitik* had absolutely nothing to do with the Schlieffen Plan. Rather, he does allow for the

[140] The school, if it can be called as such, takes its name from German historian Fritz Fischer, whose *War of Illusions* argues on Germany's aforementioned role as the aggressor responsible for WWI.

possibility mentioned above, that "[German] civilian foreign policy aims and attitudes about international politics were at most a *permissive cause* of the Schlieffen Plan" (1984, p. 126; my emphasis).

In sum, there are several plausible alternatives regarding the link between *Weltpolitik* and the offense cult, as well as the role of each in fomenting World War I. While it is difficult, if not impossible, to parse the exact linkage behind those two factors, one thing can be fairly said: neither *Weltpolitik* nor the cult was at clear odds with the other. At the very least, they permitted each other to thrive in the collective mind of the Second Reich. At the most, they enjoyed a sort of ideological symbiosis, feeding on each other's advances. [141]

Thus one prominent debate in the literature is to what extent Germany's belligerence, or the offense cult (or both in tandem) led to World War I. This debate holds serious academic merit, especially given all the historical evidence behind each major viewpoint. But returning to the topic of interest, what is important here is how WWI has been explained *without* bringing much mention of nationalism. That is, both of the causes mentioned do not directly involve nationalism at all. Turning to *Weltpolitik*, the Kaiser's dreams of a globally-imposing Germany were not driven by nationalism any more than Bismarck's hopes of a stable Germany. In other words, if nationalism represents a man's –or people's- allegiance to country, then it is hard to

[141] Note there is some debate about the degree to which *Weltpolitik* was a cause of WWI, or not. Some authors agree with the view expressed above, while others find that Germany's diplomatic belligerence was not particularly unique at the time. In fact, the skeptics point out that Germany's foreign policy was one of fait accomplis and incremental advances, and did not in fact envision the launch of a major war. It should be pointed out, though, that new historical research shifts the blame back onto the civilian leadership that entertained *Weltpolitik* and which had the power to stop the war's initiation (Lieber, 2007, p. 188). At any rate, these recent findings prove largely immaterial to the discussion offered here. This is because the presence of a belligerent civilian leadership that very much wanted war does not invalidate the added effect that the offense cult had on increasing and sustaining German belligerence. In short, *Weltpolitik* and the cult could have co-existed in leading to war, something which is mentioned in the main text above, and which Van Evera also refers to (1984a).

make the claim that the Kaiser was any more nationalist than Bismarck.[142] [143] And if so, nationalism seems to lack any intrinsic warring character that may influence those under its "spell".

Similarly, the cult of the offensive did not need nationalism to foster the excesses of the Schlieffer Plan. In fact, if we take Snyder seriously, an offensive predisposition is already built into the institutional DNA of most militaries:

> The Germans' pursuit of a strategy for a short, offensive, and decisive war despite its operational infeasibility is simply an extreme case of an endemic bias of military organizations…exceptions and questionable cases notwithstanding, initial research indicates that militaries habitually prefer offensive strategies, even though everyone from Clausewitz to Trevor Dupuy has proved that the defender enjoys a net operational advantage (J. Snyder, 1984, p. 129).

Further, the reasons why militaries love the offensive have little to do with nationalism per se. Armies prefer the offensive for institutional reasons, to "promote organizational prestige and autonomy, facilitate planning and adherence to standard operating procedures, and [because this

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[142] The argument can be won –but only falsely- by assuming that nationalism inherently embraces aggression, and so the kaiser's *Weltpolitik* was more "nationalistic" than Bismarck's realpolitik. But this win is illusory, for it skirts around the bone of contention (i.e. are nationalists really more aggressive?) and instead picks an answer without due justification. This is the kind of reflexive thinking that characterizes much popular discourse that equates nationalism with hostile foreign policy. Of course, the baseline definition of nationalism (i.e. loyalty to the nation) does not imply the notion of aggression.

[143] A parallel can be drawn here with military men who pursued different strategies, yet cannot seriously be said to be more nationalistic than the other. For instance, Russian military strategy against Germany before WWI evolved from the cautiously defensive to the overextended offensive. (Russia eventually planned, rather unrealistically, to hastily attack both Germany and Austria.) What is interesting is that one man, General Yuri Danilov, was a major architect behind both strategies in turn. But the reason for his change of mind was not a burst of nationalistic fervor, but rather an assessment of circumstances. When he was "fundamentally pessimistic about Russia's ability to compete with modern, efficient Germany", Danilov supported the defensive plan of 1910. But by 1913-14, Danilov saw an opportunity in, among other things, "the improved military balance" and "the tighter alliance with France." He then advocated a more offensive strategy by which Russia would attack East Prussia while Germany took on France (J. Snyder, 1984, pp. 144-146). To my knowledge, no one seriously argues that Danilov was more nationalist in 1914 than 1910. Similarly, when military men debate offensive or defensive postures, it is just as unclear who truly is more nationalistic. In sum, we should not jump the gun by assuming that offensive postures are, by default, any more influenced by nationalism than defensive ones.

view follows] logically from the office corps' zero-sum view of international politics" (p. 140). None of these reasons links directly to nationalism itself – in fact, they probably held just as well in pre-nationalist times before the 19th century.

Besides a military's internal reasons to want the offensive, Snyder also identifies an external condition that worsens this bias: "little civilian oversight" (p. 140). That is, a more involved civilian leadership –arguably less biased towards the offensive- could help stymie a military's excesses. Ironically, this turns the conventional wisdom about nationalism on its head. A common belief is that nationalism makes citizens more belligerent towards foreigners. So in a "nationalistic country" (e.g. the German Empire around 1914), civilian interference in the military would arguably make things worse. But in Snyder's argument, the opposite happens. Instead of encouraging aggression, civilians can very well keep the military more grounded in reality. Further, one could argue that it is a military's *militarism* –or loyalty to itself- that allows its offensive-bias to fester, whereas the nationalism of civilian leaders could temper the military by censoring policies that unduly risk the national wellbeing.

Interestingly, the Germany of pre-World War I was one where such militarism was clearly observed - and not necessarily, or exclusively, by foreign observers. Charles Altschul notes:

> The most unmistakable evidence of such a [militarist] tendency has since many years existed in Germany, though probably little noticed by most Americans who travelled there. Visitors to foreign countries usually observe only what appears on the surface; come into contact with certain classes of the population only; and have in consequence, quite naturally, but a superficial picture of local conditions. Some of the characteristics of Militarism are in evidence in all European countries in all of which some disadvantages of maintaining large standing armies are apparent .But in no other is the adulation of the soldiery so pronounced as in Germany; in no other have citizens, once retired from active military service, as much reason to cling tenaciously to the rights and privileges of the Army Reserve; in no other is Militarism either so exaggerated or so objectionable. And it is not only the observer from abroad who is inclined to take this view. It is highly significant to see how German liberal opinion faced this issue, even though many Germans and many German publications deny that there is such a thing as Militarism in Germany! (1918, p. 21)[144]

[144] Lest the reader think otherwise, Altschul also understands militarism in a similar fashion as the one we assume

One example of domestic German resistance to militarism was embodied in the German socialist Karl Liebknecht, whose lecture-turned-book against militarism earned him a prison sentence in 1907. Yet his position found echo in the populace, and so "the working people of Berlin promptly nominated and elected him, while still in prison, as their representative for the Prussian Landtag." Further, Liebknecht found his anti-militarist position to be perfectly compatible with loyalty to the German nation. As he declared:

"The aim of my life is the overthrow of monarchy, as well as the emancipation of the exploited working class from political and economic bondage. As my father[145], who appeared before this court exactly thirty-five years ago to defend himself against the charge of treason; was ultimately pronounced victor, so I believe the day not far distant when the principles which I represent will be recognized as patriotic, as honorable, as true" (A Personal Friend Of Karl Liebknecht, 1917).

Efforts like Liebknecht's did not prevent the German military from influencing the developments that followed in 1914, but they do point to a national perspective that was active at the time, and which diverged from the militarist one.

In sum, if we delve into the civil-military relations that foster the offense cult, we find

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here. For him, militarism is better seen as "[t]he condition which manifests itself among a people, when education and social custom have for a prolonged period given undue prominence to military training and military glory, and the tendency has developed to magnify the function of the army in the State at the expense of purely civic virtues, until finally civil authority is undermined and no longer resists the encroachment of the military authorities." Interestingly, too, Altschul distinguishes between militarism proper and *navalism*. For him, the latter is less prone to overturn civil-military relations, as "the men in the naval service are not only very much less numerous, but are scattered all over the world, and therefore not in a position to play politics at home" (1918, pp. 20-21). This simple reason may seem easy to counter, but Altschul could have a very good point. After all, the German military seemed overwhelmed by the influence of its army, and this may explain its militarist and possibly expansionist ambitions. Less easy to explain, however, are cases like Imperial Japan's. In it, the navy seemed to carry a greater relative political weight than its German counterpart, yet Japan still seemed just as expansionist during the early- to mid-20th century.

[145] Karl Liebknecht's father was the German parliamentarian and co-founder of the country's Social Democratic Party, Wilhelm Liebknecht (1826-1900).

two things regarding nationalism. The latter plays little or no part in the military's own reasons for feeding the cult. And an external factor, the military's potential oversight by nationalistic civilians such as Liebknecht, could have even mitigated the cult. Thus it is far from self-evident that nationalism contributed to the cult of the offensive.

So far, we have seen how two widely-discussed forces behind WWI –*Weltpolitik* and the cult of the offensive- do not involve nationalism directly. Of course, this does not mean that nationalism was entirely absent from the picture of WWI. But it suggests that we should relegate nationalism to other roles. In fact, nationalism played three such roles that contradict the conventional wisdom – it played an incidental part in triggering the war, served as an intervening variable during the conflict, and (somewhat unexpectedly) helped mitigate the spread of the war itself.

The incidental role of nationalism in triggering WWI was already mentioned. Prince Ferdinand's imprudent visit to and subsequent assassination in Sarajevo indeed "sparked" Austria's declaration of war against Serbia. Such declaration gave Germany the opportunity to decide whether or not Austria should be supported, a decision which clearly risked a possible confrontation with Russia. In that sense, yes, Serbian nationalism did play a part – its violent reaction to Austria's occupation, manifested by Ferdinand's killing, was a first step towards war. But it was a step that did not have to inevitably lead to what followed.

The violence in Sarajevo was followed by two decisions that could have conceivably been otherwise if not for other factors –one by Austria, and the other by Germany. Austria did, but did not *have to*, declare war against Serbia. That it did so was probably a reflection of the continued Austrian intransigence in dealing with foreign populations (the reader will remember the same stubbornness leading to Austria's loss of influence in Italy). But we can easily conceive of other

countries confronting an upsetting event like the Sarajevo assassination, and choosing to withdraw from a troubled occupation. In other words, the killing of Prince Ferdinand gave Austria the opportunity –but not the determination- to declare war against Serbia. Further, if Austria would have withdrawn from Serbia after the archduke's assassination, it may have well removed the Balkans from the list of potential crisis flashpoints at the time. Should fate have given the Austrian monarchy more foresight, then today we may be praising the ability of Balkan nationalism to keep Austria's ambitions at bay. Of course, such singleminded praise would be as misleading as the blame thrown at Balkan nationalism today for its "role" in triggering WWI, which ignores the long history of Austrian attitudes towards nationalism.

The second crossroad in route to war was decided by Germany, when it supported Austria against Serbia and Russia, even when doing so risked world war. A naïve reaction to this statement may be that Germany was alliance-bound to Austria, and so had to support it against Russian designs in the Balkans. But a treaty of alliance in itself, as anything that exists on paper, never constrains actors against their will. Despite its alliance with Austria, Germany could have done many things to avoid war. It could have argued that the terms of the alliance were not applicable under the current circumstances, even if doing so required a forced interpretation of any terms. It could have even dissolved the alliance altogether by claiming Austria was taking "undue advantage" of the relationship to push the region into war. In short, there is a million and one ways to reinterpret a treaty – especially if war is at stake.[146]

What is more, it is likely that Germany did not even have to reign-in Austria with a creative reading of its treaty obligations. A more direct way was to bluntly tell Austria that war against Serbia was out of the question – before it was even declared. This is far from a

[146] Also consider here how Italy joined World War One in 1915 - "only after switching allegiances, entering the conflict on the side of the Allies" (McNeese & Jensen, 2010, p. 20). Clearly, then, the pre-war arrangement of alliances cannot be held to be fully binding if one of the relatively weaker parties was able to switch sides.

preposterous scenario. Germany was *the* dominant partner in the relationship with Austria, and had pushed its weight around before. Decades earlier, after losing the Seven Weeks' War, Austria had acted on Bismarck's suggestion to form the Dual Monarchy – arguably the most important development in late-19th century Austrian politics (Kissinger, 1994, p. 138). Thus, by 1914, with Germany mightier than ever, and Austria-Hungary barely holding onto its power status, it is a stretch to negate the Kaiser's ability to restrain Austria. If Germany wanted it so, Austria could have either not sparked the July crisis in the first place, or at least stopped fuelling it any further.

What the logic above suggests, history corroborates. Newly discovered evidence shows that "German leaders did not lose control of events on the eve of war, but rather capitalized on [the July crisis] as a golden opportunity to start the war they wanted." (Lieber, 2007, p. 184). For instance, one important development during the July crisis was Germany's ultimatum to Russia to cease all military preparations, which the latter began in response to Austria's attacks against Serbia. The new evidence suggests the ultimatum was rigged so as to be ignored by Russia – which it ultimately was- and thus give Germany the excuse to fight:

> …when Germany delivered its July 31 ultimatum to Russia to cease its mobilization by noon the next day or face German mobilization, [Chancellor] Bethmann Hollweg deliberately omitted a sentence (which was included in telegrams to other embassies) warning that mobilization for Germany would mean war. German leaders went out of their way to soften their warning to Russia so that the Russians would not actually capitulate and possibly rob Germany of the opportunity to fight its war against France and Russia. Indeed, Russian leaders expected only that German mobilization, not war, would follow their rejection of the ultimatum. But Germany had decided on both mobilization and war regardless of Russia's actions (pp. 186-187).

Alongside Bethmann's suspicious editing of the Russia ultimatum, Lieber discusses other similarly interesting pieces of evidence that allude to Germany's willingness to fight (pp. 184-187). One more deserves brief mention because it illustrates German intentions well before the war. On December 8, 1912, Germany received a dispatch from London which stated that Britain

would support France in case of continental war. Yet the raised prospect of an enlarged conflict did not make Germany blink. Instead, the same day of the dispatch, a "war council" meeting was convened, "where German leaders either decided upon the war to be fought less than two years hence or came to the conclusion that a war in the near future was highly likely" (p. 185).

The sum of this new evidence points to a Germany that aimed for war before 1914, and did not waver much in exacerbating the July Crisis. Yet a caveat is needed here. One should not take this new evidence to mean that the instincts of *Weltpolitik* preclude the importance of all other forces in bringing about WWI. One determinant that still matters is the offense cult, and already mentioned was how it could feed, and be fed, by German expansionary ambitions. This interrelationship is alluded to by Snyder, who also looks at the new historical evidence, yet reminds us that "belief in the feasibility and necessity of offensive strategy entices both fearful and *greedy* aggressors to attack" (J. Snyder & Lieber, 2008, p. 177; my emphasis). So Germany, no matter how greedy of an aggressor, still needed some margin of confidence that its assaults would ultimately succeed. The offense cult provided that margin, and this answers "the question of how such a [German] preference [for expansion] could emerge and hold sway" (J. Snyder & Lieber, 2008, p. 181).

But while the "new" history of WWI does not invalidate the offense cult, it does make our object of interest –nationalism- lose much of its luster as a driving cause of WWI. The new evidence confirms that the July crisis was not a Pandora's box of nationalism – which, once opened, unleashed passions beyond anyone's control.[147] Sure, if Ferdinand had been spared, July

[147] The reader also will note I give short thrift to the "railroad timetable" theory, popularized by A.J.P. Taylor (1966). According to it, the mobilization of mass armies required a fairly inflexible of railroad logistics - which, once started, could not be quickly stopped or easily changed. Thus, once the European powers decided to implement mobilization, the momentum towards war all but escaped their hands, and so World War One was ultimately "*imposed* on the statesmen of Europe by railway timetables". The reason for the short thrift is that subsequent research to Taylor's work has largely invalidated this purported "unexpected climax to the railway age" (p. 20; my emphasis). Consider the research that found

> Belgium's 1914 concentration was wholly improvised; the [British Expeditionary Force]'s deployment

1914 might have been a quiet month. But if we take the new evidence seriously, German decisionmakers would have found another excuse to wage war in the near future. This is fertile ground for historical counterfactuals – my own view is that perhaps a colonial squabble, in Africa or Asia, would have given the excuse. But whatever that crisis-trigger might have been, it belongs in the same category as that July in Serbia – as historical happenstance that merely triggered, but did not drive, what ultimately followed. In sum, Balkan nationalism may not be more useful in helping us understand WWI than, say, the USS *Maine*'s explosion sheds light on 1898.[148]

At the same time, beyond the accident of the July Crisis, nationalism did retain a consistent role throughout the war. In line with the theory offered here, the major powers found in nationalism a valuable tool for the coming conflict. One of its basic applications, as mentioned elsewhere, was to facilitate the widespread introduction of conscription. Yet the more important point here is how the inherent nature of this social technology influenced the course of the war. If we bear in mind its defensive bias, nationalism served the same function as the machinegun and

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> could be fine-tuned every twenty-four hours; [French Chief of the General Staff Joseph] Joffre could choose when and where he concentrated and whether to attack or not. In Berlin the political assumption that France would fight alongside Russia was more crucial than were the dictates of the concentration plan, as in St. Petersburg was the assessment that Germany was determined to provoke a confrontation (Stevenson, 1999, p. 193).

This research essentially reverts the discussion to the continuous interests of some participants in commencing hostilities, which dovetails with the argument presented in the main text. Railroads were part of the story, to be sure, but they did not drive the story.

[148] The above discussion, which highlights Germany's willingness to engage in war and its domestic militarism, also make clear the limits to a balance-of-power perspective in understanding why World War One broke out (Gellman, 1989). It wasn't that Germany was externally compelled to war by balance-of-power imperatives in the European continent - if we take the evidence of its decisionmakers' thoughts circa 1914. Also, let us consider that, earlier, Bismarckian Germany faced a similar balance of power, yet endeavored for stability and not hegemony. And let us not forget more intimate reasons associated with the inner lives of men:

> The place of folly and wisdom of policy also are effectively ignored by balance of power theory. Bismarck *did* overrule the elder Moltke's proposal for a preventive war; he *did* eschew entanglements in the Balkans; and he *did not* seriously challenge British seapower. After Bismarck, it is hard not to be impressed by the folly of German leaders, whether one explains their conduct of foreign policy as a result of gross negligence or as deliberately provocative schemes. Max Weber argued that Germany's difficulties in foreign policy before World War I were the result of poor leadership after Bismarck when '*direction* of the state by a *politician* - not by a political genius, to be expected only once every few centuries, not even by a great political talent, but simply by a politician' - was missing (p. 177).

the trench: *it kept major offensives at bay*. In fact, nationalism probably also worked in conjunction with the technologies just mentioned. Nationalism supplied an eager (or at least consenting) machine-gunner to the trenches, who arguably had more heart, and was more willing to stay in his trench, than his non-nationalist counterpart.[149]

Conventional wisdom often blames nationalism for seducing young men into battle. But in the case of WWI, such a charge must be balanced with an understanding of what nationalism helped do. It helped the Triple Entente recruit enough troops to stem Germany's hegemonic plans. A counterfactual is again informative. Absent nationalism and its defensive bias, the course of WWI would have been much closer to that dreamed by offensive cultists. With its sheer material might, Germany could have well financed and supplied an army strong enough to achieve its strategic goals in the continent. Its rivals, devoid of effective conscription as a tool, would not have endured years of brutal trench stalemates like they ultimately did. Instead, and probably worse, they would have had to swallow German occupation.[150] If we take the latest scholarship in earnest, *Weltpolitik* and the offense cult made up the combustible mix that ultimately started WWI. But nationalism, a defensively-biased tool, actually helped keep the fire contained. To be sure, the flames were not extinguished quickly – four years of massive death attest that nationalism is not a cheap or rapid tool, even when used defensively. Yet, fortunately for the Entente members, nationalism worked *as it should*: it gave them the continuous manpower to prevent German offensive success.

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[149] There is evidence of this relatively unwillingness to stay and fight by soldiers without a national stake. Recall the mass desertions experienced by Austria during WWI, which were often comprised of ethnic minorities (see p. X).

[150] It is interesting to see how this same argument can be applied to WWII, in that the Allies also were able to secure a steady stream of consenting troops. Yes, Hitler may have also been able to secure German nationalism to fill his army's ranks. But let us remember that nationalism has a defensive bias – so with attackers and defenders both employing it equally, and not counting other factors, nationalism ends up giving the defender an edge. Thus, nationalism offers an added reason as to why the initial attackers ended up losing both world wars.

Anyone listening to an extended discussion about WWI can relate that, sooner or later, nationalism gets casually thrown into the mix. Its inclusion is often vague, unexplored, but with the intimation that nationalism somehow made the slaughter inevitable – as if, in the words of one typical commenter, "with Archduke Ferdinand's death, all of Europe quickly found itself marching into the First World War" (Doder, 1993, p. 7). By now, we know such inevitability to be illusory. The flare of Balkan nationalism that killed Ferdinand seems, given the current evidence, to have merely given Germany the excuse to wage war. Of course, questions remain. Yet those revolve around other variables. A serious discussion can be had about whether *Weltpolitik* fostered the cult of the offensive, or the other way around, and how this interplay led to war. But as mentioned before, it is telling how these debates tend to distance themselves analytically from the July Crisis and Balkan nationalism. The reason is simple. Fate could have substituted the latter with other historical accidents (e.g. territorial disputes in Africa leading to WWI), and the essence of the above debates would have stayed the same.

What is more, the undue fixation on Balkan nationalism as a contributor to WWI has distracted us from the more systematic effects of nationalism in that war. By 1914, with nationalism fully spread across the European heartland, the theory offered here tells us any offensives would be very costly. And they were. Surely, hard technologies played their role in enhancing the defense. But as already mentioned, nationalism virtually manned the trenches that turned German offenses into stalemates.[151] Of course, the extreme loss of life tempts some casual observers to find a single (and convenient) culprit in nationalism. Yet to blame nationalism for the slaughter of WWI is akin to blaming machineguns – it is merely to point a finger at a tool of modern nation-states, while not helping us understand the actors and beliefs that truly drove the

[151] I am generally dismissive about debating whether or not the bloody stalemates of trench warfare were preferable to a quick but bloodless German victory. The debate could be had, though the stalemates plainly seem like the necessary, but lesser, evil.

hostilities.

With an adequate explanation for the onset and character of WWI, the theory of nationalism-as-technology still seems useful in answering for peace in 19th century Europe. At the same time, what else can the theory tell us? Today, nationalism seems to have fully spread (or almost so) across the world, so we are in the predicted third phase of adoption – in which countries have acquired defensive bonuses and conquests are all but prohibitive (see p. X). The theory tells us nothing about what to expect afterwards, at least insofar as nationalism itself is concerned. But the promise of technological theory is not exclusive to that social technology. Below we turn to examine two promising venues. Each relies on nationalism-as-technology as inspiration to predict new happenings in world politics. That is, we consider two other collectivist[152] social technologies, and what would happen if they begin to replace nationalism. These are militarism and cosmopolitanism, and the findings hold as much surprise as those for nationalism.

Militarism- and cosmopolitanism-as-technologies

We begin with militarism. This social technology is akin to nationalism, but channels a person's loyalty towards the military instead. As such, a militarist would assume self-risk in protecting and furthering the interests of that principal collectivity. We can further distinguish among at least two forms of militarism. The first is national militarism, in which the loyalty is to the armed forces of a particular nation or nation-state. A fair example is German militarism during World War II. It can be argued that many German soldiers were loyal to the Wehrmacht and that this loyalty translated into a willingness to obey its directive to fight beyond the national

[152] Collectivist technologies, as the name implies, are those which ellicit personal loyalty to a collective entity – like a nation, corporation, army, or religious movement.

borders of Germany. Under this form of militarism, the soldier may be loyal to the nation as well – but his primary loyalty is to the armed forces. This could mean that the soldier consents to his army's wishes because 1) he sees those wishes as trustworthy preferences that also protect the national interest, 2) sees those wishes as legitimate even though they do not involve the national interest at all, or 3) sees those wishes as contradicting the national interest, but follows them because of his primary loyalty. Naturally, if its soldiers are nationalist as well, an army endowed with militarism would pursue either 1) or 2) above. Pursuing 3) runs the risk of divided loyalties.

A second form of militarism is the opposite of the first: *non*-national militarism, or "pure" militarism. This militarism involves loyalty to a military body that is not tightly linked to any nation or nation-state. Mercenaries that are loyal to their group would be endowed with such militarism. So would soldiers belonging to a host of sub-national and supra-national armed groups. An example of the former are non-ethnic guerrilla organizations. As for the latter, we do not see any modern examples that fit nicely.[153] A historical possibility might be the imperial Roman legions, in which the soldiers' loyalty was often to their general and/or legion instead of to Rome. Since some of these legions operated well beyond the borders of the Roman state (as well as independently of its strict wishes), they could be considered to have been supra-state entities.

Let us now entertain the possibilities of a world in which militarism spreads over areas that were previously endowed with nationalism. Recall from chapter 5 that two factors determine the relationship between nationalism and conflict in a region – the balance between offensive and defensive capabilities, and the presence of conquerable territory past a state's borders. But whereas nationalism favored the defense, and promoted conquests for irredentism, the case with

[153] International crime syndicates or cartels, for instance, do have "soldiers" to commit violent acts. But I do not consider them to be *predominantly* armed groups (i.e., armies). Large and by, they are businesses with armies on the side. Similarly, international terrorist groups may seem to qualify, but they are usually linked to religious, political, or national goals – they do not embody the "pure" aspect of non-national militarism.

militarism is wholly different. If national militarism spreads into a region of states, these may well be able to launch more offensives than when endowed with nationalism. The reason is that militarist citizens will be concerned with the interests of the armed forces over those of the nation. So, if their army finds benefit in constantly pursuing offensives abroad, the true militarists will ignore the national interest and comply with the military's wishes. Of course, it could also be that militarists may question the wisdom of such continued offensives for the sake of the army *itself*. But, because militaries are usually able to control the information flow to the troops, they may only offer data that justifies those offensives. (On the other hand, 19th century nationalism developed in Western states in which the flow of information was much freer; so back then, it would have been harder to deceive nationalist citizens.)

At any rate, this form of militarism may ultimately flounder. Even if it allows for sustained offensives, any state's national militarism would still encounter the nationalism of its neighbors. In particular, that state would contend with the unhappy foreign nationalists of any conquered territories – and history shows that such lands are a losing, or at least costly, proposition in the long-run. But consider the spread of *pure* militarism instead. With it, an army could well try to surpass the very limits of state or national co-identification. It could conquer foreign territory, and attempt to convert occupied nationalists into ambitious militarists. Those new converts may then see the arriving supra-national army as an institution that deserves greater loyalty than the conquered state. Further, they may then join such an army to contribute to its cause and partake in the benefits of extended conquest. It is easy to see such supra-national militarism achieving a snowball effect, so that the first army that manages it well could conquer an entire region. The result may well be a large militarist mega-state. Or, since technology consistently surprises its interested users, the result could be a very gory stalemate – as many

large armies all acquire supra-national militarism at the same time, and keep launching wanton attacks that go nowhere.

Of course, we should inject some contemporary reality into this discussion. There is no sign that national militarism is on the rise (unlike, say, the 1930s). And much less are there signs of its more dangerous supra-national cousin. But theory should not be bound to present-day realities. At its best, theory lets us imagine how, by manipulating a few variables, it is possible to achieve an array of plausible worlds. And who is to say, for instance, that the future will not bring a social technology that resembles militarism in some fashion? If so, it is preferable to have a readymade model that helps us make sense of that new unknown technology. Thus, the theory of nationalism-as-technology opens the door to imagined futures – as long as we are willing to tinker patiently and creatively with its analytical components.

Still, the skeptic can object. After all, should not technological theory let us make more "relevant" predictions as well? Say, if we will not see the rise of militarism for the next century, can it still offer insights into the spread of other social technologies? In short, the theory can. For instance, we can examine the implications of a social technology that is argued to make steady forays in a globalized world: cosmopolitanism.[154] Although the term lends itself to a variety of interpretations, we can consider it to entail the following:

> The nebulous core shared by all cosmopolitan views is the idea that all human beings, regardless of their political affiliation, do (or at least can) belong to a single community, and that this community should be cultivated. Different versions of cosmopolitanism

[154] Note that the belief in the spread of cosmopolitanism is not a fad. As early as the late 19th century, it was already seen as a powerful force to overcome other forms of collectivism and bring peace. Consider the words of W.C. Selleck, a reverend associated with the American universalist movement of the time:

> The idea of cosmopolitanism is spreading everywhere. The world is both smaller and larger than it used to be. It is smaller in the sense that we are all nearer together; it is larger in the sense that every man's conceptions are broader and higher…what may we not hope for from it! I believe we may hope for the not very distant reign of universal peace, an ultimately universal co-operation, and the consequent blessings of a larger measure of universal prosperity (1893, p. 142)

> envision this community in different ways, [but the] philosophical interest in cosmopolitanism lies in its challenge to commonly recognized attachments to fellow-citizens, the local state, parochially shared cultures, and the like (Kleingeld & Brown, 2011).

For the purposes here, let us consider a strong variant of such cosmopolitanism. Endowed with it, a population will feel loyalty to the entire global community, and be willing to assume self-risk in furthering global interests. This social technology would also entail a disregard for the interests of nations, *including the very one to which a population may have previously belonged*. This last point is especially important, as we imagine the effects of cosmopolitanism on a region that had adopted nationalism.

In this hypothetical scenario, the first states to be endowed with cosmopolitanism would actually find themselves at a strategic *disadvantage* to their neighbors. Simply, the unwilling (or unwitting) innovators would lose the support of their ertswhile nationalist citizens. These would no longer be willing to enlist in the defense of the homeland, and much less in case of actual war (as that would place them in direct danger). On the other hand, any neighbors may be tempted to use the innovators' cosmopolitanism against them. They could do this by occupying some (or even all) of the innovators' territory. Recall that under nationalism, it is foolhardy to occupy territory with a population of a different nationality than the invaders'. Here, it does not matter. Since cosmopolitan citizens are indifferent to one ruler versus another, an ambitious invader does not need to worry about resistance fighters or other forms of non-compliance. If the conquered peoples did not revolt against their previous ruler, they will not be any more likely to do so under the new administration.

Of course, if cosmopolitanism spreads into more states, the region runs a risk of continued

offensives and conquests. And as long as cosmopolitanism can be kept from spreading fully, those states with non-cosmopolitan populations will often find themselves on the winning side of conflicts. One may wonder, though, if the aggressor states also run a risk of being conquered themselves – after all, should they occupy lands with cosmopolitan citizens, perhaps those citizens will pass that technology along to the nationalist portion of the population. That is certainly a possibility, but it can also be that aggressor states find ways to keep cosmopolitanism from spreading domestically. For instance, they may impose strict border controls that prevent cosmopolitan and nationalist citizens from co-mingling. Or, they may pursue conquests in far-off lands, and use distance to further prevent contact among the two types of populations. And because nationalism still remains a working social technology, these aggressor states may find ways to strengthen its domestic use (perhaps by creating new artificial phenotypes in hopes of triggering further co-identification). In fact, the aggressor states may even decide to push back against cosmopolitanism in the newly conquered territories, and hope to implement their own brand of nationalism over the population. Surely, it is an open question whether those efforts would be successful or not. But at least until the full spread of cosmopolitanism throughout the region, we can expect a conflict-ridden region with a mix of states: aggressor states that maintain some form of functioning nationalism, and cosmopolitan states that are exposed to attacks from the former. Finally, perhaps the end result is peace, once cosmopolitanism fully spreads to the entire region. Yet, it would have been a tremendously expensive peace, prompted only when conquerors had literally run out of loyal nationalist soldiers to do their bidding.

In sum, the effects of the spread of cosmopolitanism are surprising. They certainly contradict the rosy view of that social technology as held by its advocates – who never (to my knowledge) consider how it may lead to more conflict. And these predictions are also surprising relative to

those for militarism. We expected the latter, with its bad reputation, to be associated with more conflict. But it was not in the cards to have cosmopolitanism derive much of the same effects. Of course, these are all suppositions. But they tell us that technological theory offers predictions that challenge our conventional viewpoints, which is something that good science often does.

We end not with rehashed points but with future demands. This dissertation shows that nationalism-as-technology, and technological theory in general, have the maturity for more theoretical development and more demanding tests. Let them come. In the area of theory, it would be interesting to see if more findings from technology studies can apply to nationalism. For instance, can we hypothesize which states would be the new adopters of social technologies based on the characteristics of innovators in other unrelated technologies, like genetically-modified grains or cellphones? And regarding empirical testing, can we examine the effects of nationalism as it has spread across regions beyond Europe? Also, do the hypothesized effects apply not just to great powers, but to all states in a given region? The pathways for future research are many, but their direction is the same – to push the envelope of the theory, and see how far it goes in telling us about international politics.

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