Cooperation Under Fire: Institutional and Cultural Dynamics during War

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Field Paper

15-Feb-02
“...on moving to a quiet sector, a battalion of the 51st division heard the Germans shout, ‘We Saxons, you Anglo Saxons, don’t shoot’, and apparently all went well, for a few days later the Saxons, ‘shouted...that Prussians were relieving them, and asked us to give them hell.’” (Ashworth, p.34)

“When I hear the word culture I reach for my revolver.” - Hermann Goering

“When I hear the word revolver I reach for my culture.” - Fritz Lang, playing himself, in Godard's film 'Contempt'.

Scholars and popular writers generally represent conflicts between states as clashes between radically opposed peoples, in which propaganda and fear combine to set soldiers on each side violently against each other. World War I is no exception: it is typically portrayed as a conflict in which the lives of infantrymen were nasty, brutish, and short - when the lives of the infantrymen were considered at all. Historians traditionally place an emphasis upon the role of commanders in large battles, rather than on the life of the individual foot soldier or events of the war away from the Somme, Ypres, Verdun, or other major battles.¹ As a result, they overlook the fact that, for long periods of time, relative peace and calm prevailed along sections of the western front – despite the attempts of generals to keep the war going at all times in all places.

As chronicled in Tony Ashworth's book, Trench Warfare 1914-1918: The Live and Let Live System, German and English troops² developed elaborate systems for convincing generals that fighting was continuing apace throughout the conflict even while relative peace prevailed.³

The live-and-let-live system progressed through three phases: at first, overt truces appeared during Christmas in 1914. These truces were usually of short duration. The high command passed down strict orders forbidding truces, putting an end to this first wave of verbally agreed

¹ John Keegan’s book The Face of Battle (1976) is a notable exception to the first assumption, but not the second, as he portrays the life of the individual soldier in major battles.
² Ashworth’s book draws directly only on the records and diaries of the British Expeditionary Force, and thus provides a first-hand account of only British-German cooperation; however, he does cite other sources as indicating that such cooperation occurred elsewhere as well.
³ It is important to note that Ashworth’s description does not contradict other accounts of World War I, but rather provides an account of previously ignored areas: the day-to-day life in the trenches away from the major battles.
upon ceasefires. Instead of eliminating truces between soldiers, the prohibition actually led to the development of covert arrangements to limit violence between opposing forces. In practice, the system became one of either sporadic or ritualized violence in which both sides appeared to be attacking each other, but avoided causing casualties. The truces also became longer in duration. The third stage saw an end to covert truces, which could not be maintained due to the high command requiring raids, which could not be faked.

How did enemies manage to cooperate with each other despite the pressures of trench warfare? Political scientists and sociologists usually understand the live-and-let-live system as a specific case of the general phenomenon of cooperation under duress. They believe that the live-and-let-live system can be explained with reference to a series of specific rational-choice models. Despite the increasing sophistication of these models, their explanatory power is limited for two reasons: first, they assume fixed sets of preferences and strategies for all of the actors, seeking to explain strategies selected and outcomes based on these sets; second, they are ahistorical, and only allow a limited role for the path-dependent effects of previous interactions, common culture on actions, or agency.  

In this paper, I argue that the creation, maintenance, and ultimate destruction of the live-and-let-live system cannot be understood without considering the path-dependent social interaction between and among the higher command, the front-line soldiers, and the support troops on both sides. In these interactions, cultural phenomena played three important roles: first, culture served as a source of common background that soldiers drew upon in order to bridge no-man’s-land and create affective ties; second, the interactions between the two sides produced cultural symbols

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4 Rationalist path dependence relies on an economic metaphor of increasing returns (Pierson 2000). While this is one useful way of looking at path dependence, it neglects the preference alterations that may result, and the effects of these alterations.
and meanings that helped to reinforce the live-and-let-live system through a culture of cooperation; third, when those affective ties were violently broken and trust was violated, this led to vengeful acts and a culture of retribution that would not have existed, were it not for the previous history of cooperative interaction.

Through this explanation, I solve three puzzles that existing rationalist interpretations cannot. First, I explain why common cultural tropes (Saxons and Anglo-Saxons in the opening quote) became important for determining the potential for cooperation, and why cooperation occurs between regular units and not elite units. Second, I explain how interaction leads to, and succeeds in reinforcing, cooperation within and among regular units. Third, I explain why regular units reacted more violently than elite units to the imposition of raiding.

In explaining how social interaction supports or undermines this system, I draw upon the two bodies of literature: the New Institutionalism in social science, and the Normal Accidents/High Reliability literature in organization studies. I use the first body of work to distinguish between informal and formal aspects of institutions and to construct a framework for describing the different parts of the live-and-let-live system; I use the second (which concentrates on how large, complex socio-technical systems fail or succeed in preventing accidents) to explain why it worked when it did and how it fell apart.

The structure of the paper is as follows: First, I review the literature on how the live-and-let-live system worked; I also review the more general literature on constraints on doctrine and weapons use to situate my work. I then outline my approach in three steps: first, I distinguish between formal (organizational) and informal (cultural) social factors; second, I suggest how existing social factors can affect future ones; third, I examine existing theories on culture, reliability, and
accidents, relating these to the framework developed in the first section. Next, I use Ashworth’s account of the live-and-let-live trench warfare system as a theory-building exercise to construct hypotheses about cooperation between enemies. I then draw implications regarding other possible applications of this framework.

**Explanations for Cooperation**

*Rationalist Explanations for Live-and-Let-Live*

Several authors have directly addressed the Live-and-Let-Live system, using rational game theoretical models to explain how the system was maintained over time. Robert Axelrod (1984, Ch.4) describes the Live-and-Let-Live system as an iterated prisoner's dilemma, in which relatively small groups facing each other were able to maintain cooperation (once started exogenously) for extended periods of time, despite the efforts of those who were higher up in the chain of command to stop such behavior, since monitoring was difficult. Joanne Gowa (1986, pp.179-181) has objected to Axelrod’s analysis, arguing that this was not a prisoner’s dilemma so much as a coordination game: in the short term, soldiers always have an incentive not to shoot; the only problem was recognizing their common interest in not shooting. In the absence of indications of a major battle, peace could prevail. Additionally, Gowa points out that Ashworth argues that the disposition of the soldiers – whether they were in elite units or not – was important in determining whether a live-and-let-live system evolved or not. Michael Hechter (1987, pp.73-75), using his model of group solidarity, argues that Axelrod's account primarily rested “…on each side’s ability to monitor the enemy’s behavior.” He further argues that this example “only works because each army acts as if it were an individual player,” since monitoring costs quickly spiral when there are multiple players.
More sophisticated variants of this basic approach also exist. The Fearon-Laitin model of interethnic cooperation seeks to explain cooperation between sides with characteristics very similar to two opposing groups of soldiers who wish to cooperate: a lack of ability to identify and/or punish individuals on the other side who “defect” from the truce. They give two possible equilibria for cooperation: a “spiral equilibrium,” where the fear of a spiral of escalatory violence keeps individuals from defecting, and a “in-group policing equilibrium,” where individuals are kept in line by their own communities. This approach has been taken to its furthest extent by Badredine Arfi, who demonstrates, using evolutionary game theory, that interethnic cooperation can arise in a path-dependent fashion even without a long shadow of the future through stochastic ‘experimentation’ by the two sides, and cites Ashworth’s book as evidence (568-9) for the essential randomness and path-dependence of the system.

All of these explanations have some merits, and can be used to explain portions of the live-and-let-live system.\(^5\) The importance of information and monitoring among all groups (commanders and groups of soldiers both on the same side and on opposite sides) in maintaining and destroying the cease-fires are correctly emphasized. The need for a simplified, unitary actor on each side is also an important insight. Although none of these explanations combines multiple games, the disagreement over which game is being played underlines the need for different games to describe different interactions. Some even recognize the effects of long-term interaction on affective relations\(^6\).

However, the methodological assumptions made by adopting a rational-choice framework also limit explanatory power. All of these models (except Gowa’s) assume a prisoner’s dilemma

\(^5\) Both the merits and disadvantages of these approaches will be further empirically elaborated; I focus here on the theoretical merits and advantages.
\(^6\) See, for example, Axelrod 1984, pp.84-87.
captures the essentials of interaction. This is certainly an adequate explanation for the situation at the beginning of the war; however, major changes in the structure of relations between the two sides during the war – the growth and destruction of affective ties, the attempts to put a halt to the truces, and the requirement of raiding – deny the easy categorization of the conflict into one model of interaction or another. The lack of agency in all of the models (except Arfi’s) fails to explain how elite units invented the system of raiding, which was then imposed as a requirement on all units, or how clever individuals used common cultural symbols to bridge the gaps between the trenches.7 Hechter explains that the armies acting as single actors helped to enable cooperation, but he fails to explain why or how they acted as single actors. Path-dependency is a part of Arfi’s model, but is limited to dependencies based on strategies chosen and imitated, rather than dependencies based on affective reactions to a sudden change in strategy, or dependencies based on the larger social context.8

Consequently, one of these perspectives can successfully solve any of my three puzzles. Pre-existing patterns of cultural difference (elite troops versus regular troops, Saxons and Anglo-Saxons) should matter little for determining cooperation; these explanations rely instead on the shadow of the future, the structure of the game, monitoring mechanisms, or random experimentation, none of which deal with initial differences in culture other than information. They explain one part of how interaction reproduces the system (through giving better information on the players), but they fail to explain how affect itself changes. Finally, the

7 Arfi proposes a stochastic model of interaction in which agents randomly choose to “experiment.” While this is a clever way of simulating agency, it falls somewhat short of a description or explanation for agency.
8 A weak sense of path-dependency is included in other models; the Fearon-Laitin model includes multiple-turn “punishment phases” based on past behavior; Axelrod’s tit-for-tat strategy and Gowa’s cooperation game also depend on the previous round’s moves.
violent retribution of regular units above and beyond the practices of the elite units cannot be explained.

**General Explanations for Cooperation**

Other relevant literatures exist which, while not addressing the live-and-let-live system directly, deal with military interactions in which opposing sides chose to refrain from the use of certain types of weaponry.\(^9\) Some of these explanations argue that narrow calculations of self-interest are the primary motivation behind countries’ restraint in weapons use (realism or neorealism):\(^{10}\) cooperation occurs when the situation offers no advantage to either side for escalation. Neoliberal institutionalists argue that informational \(^{11}\) structures at the international level lead to cooperation through improving monitoring of violations are more important. Sociological institutionalists claim that normative structures determine cooperation\(^{12}\); still others argue that the organizational culture, institutional inertia, or the resource dependence of military organizations are what determine weapons use\(^{13}\). Like the rationalist explanations listed above, these general explanations also compromise explanatory power through tradeoffs; there is little scope for contingency or change, since beliefs usually are taken as being relatively static and unchanging, or at best unidirectional and constant. Cooperation arises through internal attributes of actors choosing independently, or through simple strategies of interaction, without consideration of the

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\(^{9}\) Although the live-and-let-live example has variation across units (elite and non-elite), and therefore is not susceptible to an analysis at the level of the international system, my attempts to build a framework for more general analysis here requires a brief discussion of the general schools of thought.

\(^{10}\) For general ideas on cooperation due to concerns about escalation, see Schelling 1980; for the conditions for cooperation in a spiral dilemma, see Jervis 1978.

\(^{11}\) The classic neoliberal text on cooperation is Keohane 1984.

\(^{12}\) For a summary of the sociological institutionalist program, see Meyer 1997; for an excellent example of cooperation on the battlefield, see Finnemore 1999 on the rise of the Red Cross; Eyre and Suchman 1996 offers an example of weapons acquisition based on sociological institutionalist thought.

\(^{13}\) Kier 1997 and Legro 1995 argue that organizational culture provides a better explanation for military doctrine than other explanations; Posen 1984 argues that realism provides a better explanation than an organizational resource dependence argument. See below.
complex effects of positive (or negative) interaction. In those few circumstances where more sophisticated notions of change are incorporated, it has been primarily descriptive.¹⁴

Some authors have attempted to compare the explanatory power of these different perspectives. Legro (1995) compares realism, institutionalism, and organizational culture explanations.¹⁵ He finds organizational culture to explain cooperation better than institutionalism or realism for weapons use. Posen (1984), by contrast, argues that realism predicts military doctrine better than resource dependence. His arguments have been refuted in part by a finer-grained organizational culture approach, argued by Kier (1997); she argues convincingly that military doctrine in Britain and France changed as a result of resource dependence, combined with entrenched organizational culture.

All of these schools of thought tend to take preferences as given, structure as immovable, and agency¹⁶ as minimal; consequently, they take a view of the system as relatively static and unchanging. The (neo)realist perspective assumes that state survival is the main goal of the state; “advantage” is calculated in terms of this goal, with power (measured relative to other states) as the means to that goal. Neoliberal institutionalism assumes that survival is not (always) at stake, such that gains can be measured absolutely, rather than relative to gains from other states. Sociological institutionalism does allow for changing preferences, but generally assumes that

¹⁴ Price 1997 is an excellent genealogical study of chemical weapons use, but does not seek to extract a general theory.

¹⁵ His “institutionalism” lumps elements of neoliberal institutionalism (institutions help cooperation through information and monitoring) with sociological institutionalism (institutions lead to cooperation through spread of norms regarding appropriate behavior). While institutions can do both, the intellectual roots of these explanations (and consequently the predictions) are very different and often opposed. His “organizational culture” conflates different organizational theory schools, combining (rational) resource dependence with (less rational) institutional inertia and (not very rational at all) beliefs about organizational self-image. However, he does offer one of the few comprehensive attempts to explore cooperation across schools of thought.

¹⁶ I differentiate between agency, which allows units to alter the structure, and actorhood, which allows units to select from a palette of choices within the structure. On the agent-structure debate, see Wendt 1987 and Dessler 1989; on change in the structure of the international structure, see Wendt 1999 and Ruggie 1986.
such changes are uni-directional, towards the prevailing norms of the international system. Agency is minimal in all cases; states can act to balance, form alliances, create institutions, or adopt norms, but cannot change the structure of the system.  

Existing approaches that focus on organizations tend to be no less constrained. Legro’s organizational culture approach takes the organizational beliefs he uses to explain weapons use as givens; as he notes, “Cultural birth and change are large topics that generally lie outside the scope of this study.” (p.24) in this sense, they are no more flexible than Posen’s organizations, which simply seek offensive doctrines in order to maximize resources and autonomy. One notable contrast is Kier’s work, which explains a change in doctrine due to a change in resource allocation.

Like Legro and Kier, I seek to explain patterns of cooperation (and discord) based on an organizational and cultural lens. However, I seek to explain these patterns not by looking at characteristics of organizations such as culture and weapons, but rather by looking at how culture (organizational or other) functions to bridge gaps between organizations, how the systems formed by the interaction of subgroups of two opposing military organizations are reproduced through a common culture that arises from that interaction, and how past systems influence future systems. I elaborate my framework for analysis in the next three sections, first defining how I use the terms institution, organization, and culture, then discussing the role of agency in changing systems, and finally using systems accident theory to explain how cultures and organizations interact to maintain existing patterns of interaction.

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17 There are some partial exceptions to this; new norms can be added to the palette of existing ones by creative agents. See, for example, Finnemore’s succinct account of the rise of the Red Cross.
Theory

Institutions, Organizations, and Culture

In this section, I explain and justify my definitions of institutions, organizations, and culture. The definitions for all three of these concepts have been the subject of much debate in social science, with little or no consensus. Rather than systematically attempt to survey the literature here, I use definitions which are constructed in line with common conceptions, allow the three concepts to be easily related to each other, and can be related to relevant definitions in the field.

In brief: I define institutions as intersections of organizations and culture; both organizations and culture create and limit possibilities for action; organizations shape action through formal social factors (rules and procedures), while cultures shape actions through informal ones (norms and principles); organizations and culture can be broken down into individual elements, which specify behavior in particular transactions between actors with particular identities; cultural beliefs can be separated into shallow and deep types, and can be identified as situationally or collectively generated.

Institutions are broadly conceptualized as rules of the game, organizations, norms, beliefs, or regularities of behavior; I adapt my definition here from Greif’s (2001) definition of institution: an interrelated set of both formal and informal institutional elements associated with a particular behavioral regularity, where an institutional element is defined as “…a social factor that contributes to generating regularities of behavior among individuals with a particular social

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18 Note that the division between culture, organizations, and institutions that I develop in the following sections is an analytical distinction which depends both on the subject of analysis and on the nature of the regularity being studied: many cultural factors are also institutionalized in formal organizations, and all organizations will have informal, cultural sides to them. Some regularities of behavior, however, will primarily result from either the formal or informal side of institutions, and therefore could be studied as organizations or cultures without much loss of analytical bite.
position and in a particular transaction while being exogenous to each of the individuals whose behavior it influences but endogenous to the society.”(I-6) Social factors include formalized types (rules and procedures) and non-formalized types (norms and principles), and are found either individually or bundled into a set.\(^{19}\)

Breaking up institutions (as well as organizations and culture) into elements has the benefit of making clear how agents construct new institutions and new systems out of the parts (elements) of old institutions. These institutional social factors regulate social interaction in three ways: prescription, proscription, and permission.\(^{20}\) These take the form of statements “You must do X,” “You must not do Y,” and “You may do Z.” In the live-and-let-live system, for example, the military demanded that “you must attack the enemy;” this later became much more specific, demanding that “you must perform raids.” Proscription can be seen in the informal norms which the live-and-let-live system depended upon, including “you must not break the truce without warning,” or “you must not violate the trust by attacking under pretense of peaceful intentions.”

Note that monitoring becomes important: if one can appear to be doing X without actually doing it, and a competing (and monitorable) norm or rule requires not doing X, then apparent compliance with both simultaneously is possible (and not doing X is the outcome). As I will argue, it is the conflict between these different rules and norms that allowed the live-and-let-live system to operate, but later also led to the culture of vengeance.

By contrast with institutions, culture consists most broadly of socially shared (common and connected) knowledge that gives meaning to interaction. I define culture analogously to Greif’s

\(^{19}\) I differ from Greif’s definition in two respects: first, institutions composed solely of formal or informal factors are not defined as institutions, but rather as organizations or cultures; second, Greif includes organizations as social factors, but later gives organizations a special role; therefore, I exclude them here, except insofar as they can be considered as sets of formal social factors.

\(^{20}\) There is also the ambiguous ground of actions which are not explicitly codified.
definition of institutions. A cultural element would be a particular set of informal social factors (principles and norms) regarding a particular set of circumstances, including beliefs regarding what game is being played, what strategies are possible, and what the payoffs are, which produces a behavioral regularity.\footnote{Another alternative might be to define a cultural element to be the set of beliefs regarding a given subgame in an extensive form game; however, the subgame alone does not determine behavior, which can only be determined by considering the full game; therefore only the extensive form will do as an element.} An example of a cultural element in the live-and-let-live system is the notion that “when opposing soldiers meet in no-mans-land, they should retreat, rather than fight.” If a group of actors share a culture, then there exists a set of situations for which they share beliefs regarding the norms and principles giving actors identities and structuring behavior, producing a behavioral regularity. This definition is close to definitions given in the constructivist tradition in international security,\footnote{In the constructivist tradition in international security, culture has been defined as “…a broad label that denotes collective models of nation-state authority or identity, carried by custom or law. Culture refers to both a set of evaluative standards (such as norms and values) and a set of cognitive standards (such as rules and models) that define what social actors exist in a system, how they operate, and how they relate to one another.” (Katzenstein 1996, p.6). This definition relates closely to Katzenstein’s, although his definition spills over into what is defined here as institutions: “collective models of nation-state authority or identity” are norms and principles shared by actors; the carriers of culture, custom and law, would relate to informal (cultural) and formal (organizational) elements respectively; social factors define “what social actors exist in a system, how they operate, and how they relate to one another.” The difference is in the analytical division of concepts; some social factors (here, law) would fall under Katzenstein’s definition of culture, and under my definition of institutions, but not under my definition of culture. Similarly, some parts of the “collective models” may also be based on formal rules, rather than on informal factors.} but differs from the more restrictive definitions favored in the rationalist tradition.\footnote{One rationalist response has been to reduce culture to the game theoretical notion of common knowledge; for example, culture is defined by Weingast and Laitin as “the set of beliefs as to what others in your group will do (or the common expectations in your group as to what other players will do) in a given situation. This includes common expectations of what happens off the equilibrium path.” (Laitin 2001, p.3). By contrast, Greif includes not only expectations as to what others will do (what Greif calls behavioral beliefs), but also internalized beliefs “regarding the structure of our (and potentially other) world(s) and the implied relationship between actions and outcomes.” (I-9) and internalized constraints. In game theoretical terms, the Weingast/Laitin definition of culture here concerns strategies, whereas Greif considers beliefs regarding the structure of the game tree and payoffs to be a part of culture, too. Since what others will do in a given situation includes the tree and payoffs, Weingast and Laitin’s definition does include these aspects implicitly; however, most of their analysis focuses on strategies. While cultural effects on strategic action have been under-emphasized (Swidler 1986), this approach (like Swidler’s) threatens to tilt too far in the other direction by over-emphasizing the strategic interaction aspects of culture rather than the structural aspects.}
Having defined culture, the different types of shared culture can be defined more explicitly. With respect to the issue of common culture, at least two different levels are usually relevant: culture at a “situational” level – i.e. culture that is created through repeated interaction between two particular parties, and culture at a “collective” level – culture that exists between two groups despite the lack of previous interaction. The latter originates above and beyond the interaction level, at the macro-structural or collective level of analysis, as opposed to the micro-structural or interaction level of analysis (I borrow here from Wendt, 1999). Both can be institutionalized – meaning, in this context, complemented or supplanted by a set of formal rules and procedures.24 The raids which were invented informally by elite units became a formal requirement for all units by the latter half of the war.

Collectively shared culture can provide a wide palette from which parties can choose to draw from to create local, situational agreements (as I discuss below). For example, in the opening quote, the Saxons draw upon a collectively shared notion of who the soldiers on each side are, based on ethnicity, in order to obtain an informal cease-fire. Interaction between cultural elements at the situational level of analysis is also important, since initial patterns and shared understandings which result from simple interaction can result in other patterns and beliefs determined through negotiation, providing an opportunity for bootstrapping into an institution. The first, overt Christmas truces demonstrated that both sides had the ability and the desire to

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24 These two levels of analysis do have some interplay, especially over longer periods of time. In fact, situational socialization – the process of developing a common culture in a given situation – could be seen as a microfoundation for collective socialization, since collectively shared culture between two groups with very little shared culture would have to diffuse first through local, situational sharing. Current microfoundations on the international level are sketched out only loosely, referring to agents acting as consultants, spreading norms worldwide through their claims to legitimacy which lie on technical, legal, or rational bases (Meyer 1997, p.164-6). Further development of how these agents interact with others and socialize them would provide a more stable microfoundation on which to construct theories of global socialization.
communicate and cooperate, leading the way for the covert truces that followed, which would have been difficult to create without the previous truces.

Along with a theory of the interaction between levels of analysis, a theory of how culture spreads through socialization is needed. Here I consider two levels of knowledge: shallow and deep knowledge.\textsuperscript{25} When one is learning what to do in a given culture, initially it is through mimicry, imitating the actions of others (shallow), without understanding the underlying reasons behind the strategies taken (deep). In socialization processes,\textsuperscript{26} it is first this shallow knowledge that is passed on (through observation or interaction), then later deep knowledge.\textsuperscript{27} When new soldiers were brought up to the front lines, the previous group would tell the new group that if they didn’t shoot, neither would the other side; through interaction with the opposing side, they would discover the complete set of rules involved, and perhaps what happens if they do shoot.

What role do organizations play here? An organizational element can be defined in much the same way as an institutional or cultural element\textsuperscript{28}: as formalized social factors (rules and

\textsuperscript{25} The definitions of culture used in Laitin and Weingast can also be divided into two areas: so-called on and off the equilibrium path beliefs. Common knowledge of the “on the path” strategies I term shallow knowledge; common knowledge of the “off the path” strategies, by extension, I term deeper knowledge.

\textsuperscript{26} Note that socialization is often a multidirectional dynamic: except for situations where a small number of individuals are confronting a large, powerful group, interaction leads to mutual socialization.

\textsuperscript{27} This is analogous to, or perhaps even identical to but merely a different way of describing, symbolic interactionist descriptions of socialization interactions: first we communicate by meaningless gestures which become infused with meaning through interaction over time, becoming symbols(Blumer, 1969). The meaningless gestures are, perhaps, like shallow knowledge, while having a symbolic understanding of those gestures would be like deeper knowledge. Alternatively, shallow knowledge could be similar to explicit knowledge, teachable through direction, while deep knowledge is more similar to tacit knowledge, that gained by experience.

\textsuperscript{28} In Greif’s work, the role of organizations “is to produce and harbor rules that coordinate behavior, contribute to the perpetuation of internalized constraints, and influence the set of beliefs that can prevail with respect to a particular transaction.”(I-9) This can be done through “introducing a new player (the organization itself), by changing the information available to players, or by changing payoffs associated with certain actions.”(I-10) In other words, the organization can determine or alter both behavioral and internalized beliefs (regarding the behavior of others and the structure of interaction respectively), as well as internalized constraints (such as norms), although it seems likely that the latter two are more likely to be altered by the organization only over time. By emphasizing how a (formal) organization can alter beliefs about payoffs, Greif underlines the dynamics between formal and informal aspects, but primarily in one direction: from formal to informal. The role of pre-existing cultural elements in determining the structure and function of an organization is generally underemphasized.
procedures) that contribute to generating regularities of behavior among individuals, while an organization is simply a set of interrelated organizational elements. Note that this contrasts with some traditional definitions of organizations. For example, in his overview of organizational studies, Scott (1998) proposes three definitions of organizations, which variously emphasize the collective goals and formalized social structures (a “rational” definition), the multiple interests of participants and the informal structures inside organizations (a “natural” definition), and a definition which emphasizes the effects of the external environment (an “open” definition) (p.26-28). The definition here corresponds most closely to a rational open definition, since informal aspects have been analytically assigned to culture. More radically, the goals of the organization aren’t a part of the definition, since goals better correspond to informal principles than formal rules and decision-making procedures. As such, it is a sparing definition of an organization, capturing only essential qualities.

**Figure 1: Cultural and Organizational Elements form Cultures and Organizations.**

How do culture, institutions, and organizations relate here? Culture would seem to correspond closely to the classical organizational theory notion of the informal aspects of organizations (see, for example, Scott, 1998): in the social factors above, norms and principles. By contrast,
organizations reflect what classically would be called formal aspects: rules and procedures. Institutional elements (cultural or organizational) define behavioral space, both enabling and limiting action. When combined, cultural elements define cultures, while organizational elements define organizations (see Figure 1). The combination of organizations and cultures define institutions, with behavioral space created and limited by the institutional elements from the organizations and cultures (see Figure 2). Where agency is directed (i.e. invention) depends on the overlap (or lack thereof) between cultural and organizational requirements. If they overlap greatly, the institution is functional, and invention is progressive for the function of the institution. Note that I am not taking a structural-functional position here: I use the term “functional” with respect to whether it action is taken in line with formal organizational goals, and not as an explanation for the structure of the organization itself.

An example of this is the invention of the raid by elite units, whose culture was largely in line with the requirements of their organization. If there is little overlap, there is little room for experimentation or agency. If there is no overlap, i.e. conflicting requirements, there is conflict between the two, and invention is likely to be regressive from the perspective of the organization, subverting the functions of the organization (e.g. pretending to fight). Alternatively, invention by those who make formal rules will be regressive for the culture, attempting to pull behavior back within the organization (even if the culture cannot be changed). In this paper, I focus on the interaction between prescriptive and proscriptive rules and norms, i.e. “must” and “must not” statements.
Figure 2: Three combinations of Cultures and Organizations into Institutions

From these considerations, I advance two hypotheses: First, the more deeply shared a culture, the more stable the equilibrium, but the more radical the reaction will be if the equilibrium is broken; Second, the more overlap between cultural and organizational requirements, the more functional and reinforcing the relationship, and the more likely that innovation will be progressive; the less overlap, the less functional, more conflicting, and the less likely it is that innovation will be progressive.

Institutional Dynamics

I will now attempt to sketch out a framework for interaction to explain how agents create new structures using old elements. In this section, I split the institutions discussed into two
categories: the initial institution created by the interaction (which I term the negotiation), and the final institution which the interaction creates. In some cases, these are one and the same institution. Individual agents or groups come to the bargaining table with a great deal of institutional baggage, including a wide range of formal and informal elements from institutions which those participants are a part of. Each agent or group can draw upon existing elements in their repertoire for one of two purposes: for structuring the negotiation itself, or for structuring the new institution.\textsuperscript{29} Drawing on the former obviously affects the latter: by structuring the negotiation in a certain way, the likelihood of an institution being created can increase or decrease, and the shape of the institution can also be altered. Particularly talented agents – cultural ‘virtuosos’ – can draw upon and reinterpret existing elements in unexpected ways, overcoming seemingly impossible barriers to create new institutions or to hold together existing ones.

Due to the dynamic nature of this interaction, a well-defined game tree often cannot be constructed ex ante\textsuperscript{30}. Individual agency plays a key role as participants decide which existing elements to make salient, and where to apply them. By making certain elements salient through claims (actions and statements), participants can build up links between the parties involved, altering the strategies available and even the payoffs within the institution of the negotiation. Returning to the opening quote: by invoking the (admittedly distant) links between Saxons and Anglo-Saxons, the speaker made common backgrounds more salient for interaction.

\textsuperscript{29} This conceptual framework draws upon sociological network theory; multiple ties exist among actors, but which ties matter depends upon what has been made salient in a given interaction (see, for example, Breiger, 1974); it also draws upon the new institutionalism, and its sense of actors drawing on existing cultural building blocks “out there” for use in constructing institutions (see, for example, Meyer, 1997)

\textsuperscript{30} This is due to cognitive limitations, shifting identities and payoffs, and unintended consequences of making certain claims salient, although one can always be constructed ex post after the negotiation to demonstrate the “meta-game” that was played.
Formal and informal elements play different roles in the initial negotiation. Formal elements determine the existing structure within which the negotiation is being held and thus define the domain within which agency can operate, but are less likely to be altered during the negotiation. Informal elements such as principles and norms are often less restrictive, and can be more dynamically applied across institutions or altered within an institution during an interaction. During the war, the official rules that actively constrained agency changed sporadically, while the informal norms between combatants were subject to constant change through interaction.\(^\text{31}\)

Furthermore, because end payoffs (internalized constraints) and the tree structure (internalized beliefs) are a part of the game, decision making must be made under conditions of great uncertainty. However, uncertainty can be dealt with through using informal principles to guide negotiations. One example of how principles can be used is described in the literature on incomplete contracting. Incomplete contracting is always a problem in organizations; as some authors have emphasized (Kreps, 1990), informal aspects such as principles can play a key role in ensuring that principals do not cheat on agents ex post by credibly committing to solve disputes based on principles. However, this is also true outside of a formal organizational context. By establishing principles for negotiation, participants can build up trust during a negotiation, where trust means the belief that others will not take advantage of bargaining asymmetries. This can be based on either the discovery that interests were originally aligned, or on the discovery that interests have become aligned as a result of the process of the negotiation.

This is one area in which socialization can play two key roles: first, by providing existing shared elements, either through collectively or situationally shared culture, and second, by making

\(^{31}\) There is an infinite regression problem here: what about the negotiation about the negotiation? And so forth. This is a definite real-world problem, since parties can get involved in talks, or talks about talks, or talks about talks about talks…
certain elements more salient prior to the negotiations, such that participants do not need to use as many resources to draw upon them. A shallowly shared culture will not be as useful as a deeply shared culture, since the shared elements are incomplete, and therefore cannot provide as strong of a basis for mutual trust.

A dynamic exists between culture, organizations, and institutions, which affect both the creation and perpetuation of new cultural practices, organizational structures, and institutions. The organizational part of institutions, being formally codified, is much easier to observe and connect with behavioral regularities than the cultural part; however, as detailed above, the informal, cultural part may be more important in the initial stages of institution-building than the formal, organizational part.

To the previous section’s hypotheses, I add: *The more deeply and more collectively shared culture is, the more likely it is that a negotiation will be successful in creating a new institution.* *The more restrictive organizations are, the less likely it is that the negotiation will be successful.*

*Systems Accidents and Military Organizations*

In previous sections, I have produced a framework for answering the question of why new institutions may be successfully created and operated, based on considering culture and organizations; in this section, I consider the question of how institutional structure can succeed or fail in difficult tasks. I develop the answer to this question through looking at one aspect of high-performance operations: a lack of accidents. In the context of the live-and-let-live system (from the perspective of the soldiers), an “accident” would be the breakdown of the system into open warfare.
To answer this question, I first start with the question of why accidents occur (and how incidents turn into accidents). The most complete analysis on this subject from a systems perspective is still Perrow’s *Normal Accidents: Living with High-Risk Technologies* (1984). Perrow points to two factors that accident-prone systems he studied have in common: interactive complexity and tight coupling. A system has interactive complexity if it has a great number of parts that can interact with each other in complex (and, consequently, often unpredictable) ways. It is tightly coupled if failures in some parts will quickly cause failures in other parts, preventing an actor involved in the system from preventing an incident from turning into a full-fledged accident. One of the key factors in preventing accidents, therefore, is making the system loosely coupled enough and simple enough such that failure in one unit does not cause failures in other units at a rate that cannot be absorbed or counteracted by the system: incidents do not become accidents. Perrow argues that some systems are simply too tightly coupled and too complex to allow for prevention of “normal accidents,” and that those which have potentially catastrophic impacts (such as nuclear weapons and nuclear power) should be abandoned.

However, the High Reliability Organizations (HRO) group at Berkeley has performed research on organizations which would seem, at first glance, to have high interactive complexity and be tightly coupled, but fail much less often than would otherwise be expected, including aircraft carriers, air traffic control systems, and nuclear power plants. The HRO group identified eleven characteristics (Rochlin, 1993) which these organizations had in common, which can be condensed into the following: assumption that errors are omnipresent and dynamic, requiring continually adaptive, anticipatory monitoring; maintenance of informal, redundant modes of problem solving; simultaneous decentralization of authority combined with centralized belief
structures; risk aversion; constant learning and improvement; and complementing formal rules with informally developed operating procedures.

Most of the factors described by the HRO group involve cultural aspects: principles regarding operation and monitoring, norms of learning, improvement, and risk aversion, informal modes of problem solving. Some involve complementing formal and informal aspects: formal rules regarding safety are complemented by informal procedures, authority is decentralized while the ability to centralize is maintained. An example of the latter is found in aircraft carrier operations: while the formal chain of command is preserved at all times, under periods of stress, authority devolves to the technically most competent and experienced sailors. Consequently, systems that are tightly coupled and highly complex may be able to operate with a low frequency of accidents due to the cultural aspects of a given institution. Whether these attributes are possible or probable in given systems is debated.\textsuperscript{32} Similarly, organizational learning can also be limited in many circumstances.\textsuperscript{33}

Some recent work in HROs has uncovered additional factors that contribute to high reliability. By emphasizing the nature of safety as a collective social construct, Gene Rochlin points out that

\textsuperscript{32} In particular, Sagan (1993) argues that redundancy can be counterproductive, learning unlikely, and that common cultures in military institutions can lead to pernicious effects, such as cover-ups. Consequently, he points out, they are less likely to be highly reliable organizations, and thus will be unable to take steps to decrease the probability of systems accidents. He is correct in noting that redundancy can add complication, which may lead to further accidents; indeed, social redundancy can be even more likely to lead to additional problems than technical redundancy, due to social shirking (Sagan 1994). For example, the (redundant) presence of multiple crew members staring silently at the radar screens on an AWACS kept individuals from stopping two Air Force F-15s from shooting down two friendly Army Black Hawks in Iraq, due to the dispersion of responsibility. (Snook, 2000) However, not all redundancy is created equal, and social dilemmas such as this can be circumvented: by encouraging and requiring communication (note the “staring silently” above), the redundant parts can “work” as intended, and decrease (but not eliminate) the likelihood of error.

\textsuperscript{33} In The Limits of Safety, Sagan catalogues some examples of failures to learn in the U.S. nuclear weapons complex. Two of the circumstances include the politics of blame, which give individuals incentives to cover up, and a common organizational culture emphasizing the unity of the organization which gives the entire organization similar incentives. However, some organizations have found ways around these dilemmas: for example, in air traffic control, errors and incidents can be reported anonymously, thus increasing organizational learning. Common culture can also be beneficial, if it promotes collective responsibility for mistakes (see below).
one of the key differences between highly reliable and other organizations is that some organizations (including most military organizations) have prevalent ‘hero’ stories, in which individual initiative and responsibility are celebrated; by contrast, HROs tend to discourage these stories (Rochlin, 1999). This points to a fundamental cultural difference: where there is collective responsibility for successes and mistakes, reporting is more likely, cover-ups are less likely, and the possibility of learning is increased.

Both organizational and cultural elements have roles to play in preventing accidents, given the above analysis. These theories are, therefore, complements of each other: normal accidents theory finds the causes of accidents in the generally unyielding, formal structures of the organization, while high reliability characteristics originate in the more flexible, dynamic informal structures. This is not to say that these two sides do not affect each other (in fact, they have to, in order to work), or that accidents or their prevention cannot originate in the other side. However, it indicates that theories of preventing accidents in an institutional setting will be found in the interaction between the formal and informal components.

These accident theories generally involve a single institution; at first glance, it would seem to say little about opposing military forces, which in traditional analysis would be considered two separate institutions with little or no common culture or formal organizational links. However, this picture misrepresents reality; war is an experience which is highly ritualized (Finnemore, 1999; not to be confused with the ritualization of false aggression, detailed below), involving formal links and communication between opposing forces, as well as informal shared collective culture (which can vary depending on the adversaries). Additionally, individual units develop situationally shared culture over time in three ways: first, as they interact with each other, second, through these pre-existing formal links and third, through collectively shared norms and
principles. Consequently, interactions between units can be considered as part of a system, which even while it contains ritualized (real) aggression, seeks to avoid certain actions from taking place, analogous to incidents and accidents. The analogy becomes even more appropriate when considering the events detailed below, when both sides of a conflict seek to avoid harming the other through ritualized (false) aggression.

The hypotheses of this section can be summed up as follows: *The more complex and tightly coupled a system is, the more likely it is that the system will break down; the more collectively shared the culture of a system, the less complex that system will be; the more deeply shared a culture is, the less tightly coupled it is.*

**WWI: The Live and Let Live System**

To illustrate these concepts, I turn in this section to Ashworth’s account of the live-and-let-live trench warfare system. I reinterpret his findings in light of the above theoretical framework and criticisms of his account, and compare my findings with other interpretations. I start with a brief summary, then trace the evolution of the system over time.

*Summary*

The "Live-and-Let-Live" system started with a lack of hostilities during ration time, bad weather, or the Christmas break the first year, then remained in place and even spread after hostilities supposedly resumed. The institutional origins of these truces were varied: they included informal elements (both sides began noticing that they had rations at the same time, which

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34 The type of culture shared does not matter. A collectively shared culture of individualism and a deeply shared desire for risk-taking (say, solo flying around the world) would cause what we might consider to be accidents; however, from the perspective of that culture, the “accident” to be avoided would be not being allowed to fly!

35 All page numbers refer to Ashworth’s account, unless otherwise specified.
eventually became ritualized), formal (the Christmas truces were generally formally negotiated between units on the two sides), or environmental (bad weather preventing either side from usefully firing). After the initial truces, the formal rules were altered (rather, directly enforced, unlike before) to prevent further outbreaks of peace, including banning all communication with the enemy; subsequently, all truces had to be done informally through creative signaling (detailed below). Once cooperation began, however, it often was carried on through inertia. Over time, a culture of cooperation evolved among the regular troops on both sides, to the point where the truces were sustained not only by the desire for peace, but also by affective relationships.

However, these truces were not shared by all groups; when elite troops were involved in the fighting on either side, no truces occurred; instead, fighting continued as usual. As the war progressed, these troops, rather than coming up with new ways of creatively signaling the other side that their intentions were peaceful, invented methods for better harassing the enemy. One of these methods was the raid, a sort of small battle in which units would approach the opposing trenches through stealth or under cover of artillery, attack the trenches directly, then retreat before supporting troops could rally.

When this technique was brought to the attention of the generals, they decided to require raids of all units, not just the elite ones. This had different effects on different units: the elite units chafed at being required to raid on a schedule, rather than on their own timetable, using their own local knowledge to pinpoint the proper conditions for a raid. The regular units, unable to come up with a method of pretending to raid, were forced to break the truces. This had more severe

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36 The distinction between elite and regular troops is not entirely crisp; Ashworth notes that some units lost elite status, while others gained it, during the war. While many regular units were constantly involved in live-and-let-live interaction, with others this was more sporadic.
effects on these troops than on the elite troops: breaking the truces also broke the trust that had built up over time, and lead to vengeful retaliation by both sides, creating a culture of vengeance from a culture of cooperation.

The different trajectories of the elite and regular troops are shown in Figure 3, where the cultural shifts over the course of the first half of the war are plotted. The first, tentative truces began when the lines stabilized in November 1914, and were accelerated with the Christmas truces of 1914. The first time period (T1) of overt truces ended with the truces becoming covert; the second time period (T2) was characterized by a culture of cooperation, which lasted until raiding became required for units in early 1916. In the third time period (T3), a culture of cooperation turned into a culture of vengeance; raiding peaked in July 1916, and continued as a requirement throughout the rest of the war.

Figure 3: Cultural Shift of Regular and Elite Troops During the War
Overt Cooperation

In the initial period, cooperation was relatively easy for the two sides; in the places where lines were close together, regular combatants could shout to each other, while in other locations, white flags could be waved or signs could be written and held up. These sporadic cease-fires culminated in the Christmas truces of 1914, which were the first overt and widespread case of fraternization, in which events such as the following would occur: “Our Pioneer sergeant… made a screen, and painted on it, ‘A Merry Christmas,’ which we hoisted on Christmas morning. No shots were fired…. Later the Germans came boldly out of their trenches, but our men were forbidden to leave theirs, so they threw out tins of bully, and plum and apple jam, etc… Fritz rolled over two barrels of beer…” (The War the Infantry Knew, p.101) By contrast, elite troops, however, were constantly attempting to find new ways of attacking the enemy: “Typical of these elite units was the 2/Royal Welch Fusiliers which, according to its battalion history, began to innovate as early as December 1914.” (Ashworth, p.45)

This property – differentiation between units determining whether a system of live-and-let-live could be developed or not – bears further analysis. Ashworth comments on the possible combinations of elite and non-elite units early in his book:

In the former case [elite units facing each other], life was nasty and brutish, but compensated for by the comradeship of skilled trench fighters, and a regimental esprit de corps. But in the latter case, an elite unit ensured life was nasty, brutish and very short for their less skilled adversaries; further, where comradeship was weak in a non-élite unit, the individual endured the horrors and hazards of battle alone, without the emotional and technical support of others. (p.22)

The difference between elite and non-élite units, then, included a particular culture – the esprit de corps. An identification with regimental tradition was important for elite troops; non-élite troops sometimes could not remember which divisions they served in (p.204). In this case, the
relationship between culture and accidents is reversed: an accident (that is, a breakdown in the system) is defined not as the beginning of fighting, but rather the cessation of warfare, if the system is defined from the perspective of the elite units. Furthermore, this quote indicates that in circumstances where common culture – comradeship - in a unit was low, individuals were not banded together. As a result, two factors had to coexist to make live-and-let-live possible: a common culture of comradeship (a fairly general type) and a non-elite culture towards fighting. Ashworth notes (p.78) that solidarity in battalions in which aggression was supported (like elite battalions) worked for the official policy of trench warfare, while solidarity in other battalions worked against it.

While regular units had been exposed to demonizing characterizations of the enemy at home, they discovered otherwise during the war. As one soldier wrote, “At home one abuses the enemy, and draws insulting caricatures. How tired I am of grotesque Kaisers. Out here, one can respect a brave, skilful, and resourceful enemy. The have people they love at home, they too have to endure mud, rain and steel.” (A Soldier’s Diary, p.97, cited in Ashworth, p.143) Units interacting with other units are likely to discover these similarities through interaction; the important similarities for regular units tended to be the common suffering of the other side, while elite units likely discovered only the similarity of common aggression – and thus were unlikely to change.

Covert Cooperation

After the Christmas truces were discovered by the high command, they began enforcing the regulations against truces, and overt truces vanished almost entirely. However, a new form of cooperation took its place: covert cooperation, sustained through clever signaling and informal
measures on both sides. This form was more difficult to sustain, due to its covert nature. In this section, I describe the methods used to sustain the truces over long periods of time, and the effects that these longer periods of interaction had upon the units.

How was covert cooperation sustained, despite the rotation every eight days of the units? Incoming units were socialized into the system by being instructed by their predecessors as to the existing system of reciprocation. Thus, new soldiers were aware of the equilibrium strategy through teaching, and acquired a shallow knowledge of the existing culture. However, it became clear through demonstrations of skill by each side (for example, German sharpshooters firing at a wall in a house until a hole had been cut) what the punishments for defection would be: thus, once this was demonstrated, they also shared deeper knowledge of the game being played. Deeper knowledge made the system much more resilient to defection, since it helped prevent retaliation for defection from spurring on more retaliation: an incident (a few troops on one side firing) would end with the other side retaliating in a measured way, with a fixed number of shots (two or three) for each shot fired. Understanding the game that was being played, the truce could then be re-established. Deeper knowledge, then, made the system incorporating both sides less tightly coupled: when an incident occurred, it could be corrected before bringing down the whole system.

Complexity was also a problem in these truces, since on both sides, multiple agents existed who could destroy the truce, some of whom could not be punished directly by the other side. While infantry on both sides were exposed to the wrath of any combatant on the opposite side, mortar groups, mobile artillery, and heavy artillery often operated independently of infantry; any of these groups could break a truce. The formal organizations on both sides created a structure
which made it more difficult to keep the peace, since the infantry had no formal sanctions they could implement if the artillery were to decide to loose off a few rounds.

The solution to this problem was twofold: first, the infantrymen could informally sanction the artillery through both positive and negative social methods: provision of rare goods and delicacies, isolation, shunning, and so forth. Links were built up through forward observers, who interacted directly with the infantry. Mortar groups had to fire from infantry trenches, and so could be more directly dealt with by infantry. The opposing side’s artillery could also help to maintain truces, by attacking artillery which violated truces in the same measured way as infantry: a fixed ratio of shells returned for shells fired. Ironically, the solution to complexity was to create additional, informal links between groups complementing the formal links in order to ensure the reliability of the groups; these links helped to align the incentives of these groups, consolidating them so that instead of multiple groups facing each other over the front line, roughly two did.

One example of social punishment evokes the same metaphor – and analysis – as the participants in Rochlin’s high-reliability organizations: the stigmatization of the ‘hero,’ who by taking unnecessary risks, puts everyone at risk: “But opposition to official values was crystallized in the platoon’s ironic use of the term ‘hero’, to stigmatise soldiers whose behaviour conformed to military ideas but deviated from buddy values. Thus ‘hero’ was a derogatory value applied to a man who not only boasted of his courage and aggression but also actively sought intensive combat, and, further, whose aggression involved others in unnecessary risks in combat…. Heroes were both deviants and outsiders and were not allowed to join in the exchange of benefits of either the restricted or generalized kind.” (p.220)
How did they manage to establish or maintain links with the enemy? Creative soldiers could get around the bans on verbal communication with the enemy with some ingenuity:

The British patrol crawled along one ditch and the German patrol the other, and, when both reached the middle of no-man’s-land, one or other patrol raised up a helmet on a rifle, which signal was repeated by the other patrol. Avoidance thus established and understood, both patrol’s sat down and we did it, repeating at intervals the signals every assurance. After a credible time had elapsed, both patrols returned to their respective trenches, and no doubt the Germans-like the British-reported all was quiet. (Atkins p.90-91, quoted in Ashworth, p.104)

Creative signaling became an art on both sides; when firing became mandatory, it was done in such a way as to convey a lack of intent to do harm to the other side. War became false ritualized aggression. Infantrymen shot high, or at solid objects; artillery and mortar groups fired in consistent patterns at consistent times, such that the rounds could be avoided. Machine-gun nests would fire in musical rhythm (p.116) to well-known tunes.

Initially, these truces were instrumental, and held together by mutual punishment from defection. Neither side wanted to fight during meals; if you denied the other side its dinner, it was likely that you wouldn’t have any, either. The problems and solutions described above involved changing first behavioral beliefs regarding the other side (if I don’t shoot, neither will they), and changing the informal (cultural) structure of the battlefield, which in turn changed a limited set of internalized beliefs regarding the game that was being played. Note that no changes in the formal rules of the battlefield took place.

However, changes not only occurred in behavioral beliefs, but also internalized beliefs about common identity. These changed due to two methods: first, through gradual realization of the similarities between infantrymen on both sides due to repeated interactions and being exposed to similar situations (including both the situation on the battlefield and the lack of empathy with
their commanders); second, through the application of collectively shared concepts by clever individuals, including both ethnic appeals and appeals to common tastes. As Ashworth writes:

The process of mutual empathy among antagonists was facilitated by their proximity in trench war and, further, was reinforced as the assumptions made by each of the other’s likely actions were confirmed by subsequent events. Moreover, by getting to know the neighbour in the trench opposite, each adversary realized that the other endured the same stress, reacted in the same way, and thus was not so very different from himself. (p.25)

Cooperation was easier to achieve among some units rather than others because they already had a shared culture despite having never encountered each other before: what I term a collective, as opposed to a situational, culture:

I was having tea with A Company when we heard a lot of shouting and went out to investigate. We found our men and Germans standing on their respective parapets. Suddenly a salvo arrived but did no damage. Naturally both sides got down and our men started swearing at the Germans, when all at once a brave German got on to his parapet and shouted out 'We are very sorry about that; we hope no one was hurt. It is not our fault, it is that damned Prussian artillery.' (Rutter p.29, quoted in Ashworth, p.146)

This collective culture was available, but was only made salient in this example by the actions of a particular virtuoso. Ashworth argues that this is also indicative of an emergence of ethics between the two sides. He makes the important observation that the experience of mutual cooperation actually altered the payoffs of the players, thus fundamentally changing the game. While this is an important, often overlooked point, this quote hints at an additional reason why these two groups were able to come to an agreement: a sense (an imagined community, to be sure) of commonality between British and Saxon soldiers which is contrasted with "that damned Prussian artillery." The Saxon connection comes up several times in Ashworth’s book (see also p.110, p.150). Most startling is the complete reversal of sympathies indicated on p.34: “…on moving to a quiet sector, a battalion of the 51st division heard the Germans shout, ‘We Saxons,
you Anglo Saxons, don’t shoot’, and apparently all went well, for a few days later the Saxons, ‘shouted…that Prussians were relieving them, and asked us to give them hell.”

The implication here is that it might be easier to get to a state of sharing situational culture if there are other collective cultural ties that can be drawn upon. An old institutional element (shared culture) was incorporated into a new institution by a particularly brave German. This episode also demonstrates the self-reinforcing nature of institutions (see Greif) which are based on broader cultural ties: It becomes important not only in the creation of institutions, but also in ensuring that the institutions are robust against exogenous shocks: without being able to draw upon shared culture, the incoming salvo referred to in the first quote might have triggered off a series of tit-for-tat responses: shared culture loosened the coupling in the system.

Situational culture was established not only through direct appeals to ethnicity, but also to common collective cultural values. Newspapers were requested in order to find out what the media from the opposing side said regarding the war; these were lofted across the trenches. It was not only news about the war that soldiers sought, however:

“Further, like Fritz the Bunmaker, not a few Germans were interested in British football, as a private soldier of the 47th division described, ‘a voice called across, “What about the Cup Final?” It was then the finish of the football season. “Chelsea lost” said Bill, who was a staunch supporter of that team. “Hard luck”, came the answer from the German trench and firing was resumed. But Bill used his rifle no more… “A blurry supporter of blurry Chelsea” he said “E must be a damned good sort of sausage eater”’ (MacGill, p. 234-5, quoted in Ashworth, p.139; Ashworth goes on to note that previously Bill had been “the most aggressive man of his section.”)

Realization of additional common traits of all kinds among soldiers facing each other helped to temper fighting between the two sides, and develop empathy, through developing a common

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37 Ashworth notes in his endnote to this quote that “Both Greenwell and Hay wrote of similar occasions where as part of a live and let live arrangement the Saxons shouted of their impending relief by Prussians, and asked the British to stir it up for the latter.” (p.233)
situational culture. This was aided by the lack of common situational culture between the soldiers in the trenches and those who were further back from the front lines:

“When one is in the front line one cannot help having a fairly deep sympathy for the wretched fellow in the other front line across ‘no-man’s-land’; one knows that he is going through just as many dangers and discomforts, and that he is simply carrying out the orders of some general whose dangers and discomforts are infinitely less, and the hatred that you both have towards these generals breeds a common sympathy that is irresistible.” (Lytton, p.15, quoted in Ashworth, p.141)

Cultures of Vengeance

Note that these new situational cultural arrangements need not be cooperative, and in fact were not in the case of the elite units; shared underlying culture (either collective or situational) also makes it more likely for hostile situational culture to arise; a sense of betrayal due to being attacked by someone with whom you share a collective culture could increase the response to a provocation. Indeed, this was the result in World War I: the raids which commanders eventually instituted to break the stalemate led to an ethic of revenge.

Creativity and inventiveness were not unique to the regular units who practiced live-and-let-live; elite troops also came up with new methods. However, these were methods designed to harass the enemy further, rather than make peace, and began as soon as the lines became stable. The ‘raid,’ however, did not exist as a method of war until late 1915, when an elite Canadian unit drew up elaborate plans for an attack, involving numerous weapons groups, that penetrated German defenses, infiltrated the first set of trenches, then retreated quickly so that support troops on the German side were caught in artillery fire. (p.73-74)

This was quickly picked up by the high command, which bureaucratized the raid. Initially, elite units could decide when and where they raided, and used it as just another form of violence. However, these raids soon became mandatory, and were planned out according to a timetable.
This had two results: it destroyed the live-and-let-live system among regular units, and restricted the autonomy of the elite units. The raid was a violation of the trust that had been built up over time between two sides in a live-and-let-live sector; moreover, it could not be ritualized.

Revenge was not unique to the raids, or even to non-elite units. Ashworth argues that primary group solidarity accounts for the ethic of revenge, yet presents evidence that breaches of trust intensified the ethic; when the system was exploited by one side or the other to gain some temporary advantage, the response was not proportional, as a tit-for-tat strategy intended to restore the system would be, but rather extreme. This completely destroys the system, as any methods available were be used to attack the enemy, even those which could prove counterproductive (since mutual restraint on some types of weapons is quite rational). This attack was even termed a ‘hate:’ “A hate was a short intensive shoot by all the infantry weapons that could be got into action: rifle and machine-gun, fixed rifle, rifle-grenade, and trench-mortar… Often it was in revenge for some local incident.” (The War the Infantry Knew, p.116, quoted in Ashworth, p.209) Upon the death of two friends, one officer planned a hate in retaliation, described below:

I was elated. ‘This is for Thompson and Robertson’ I said, as our footballs [mortar shells] went on methodically…and then our guns began…grim exaltation filled me. We were getting our own back … my blood was up … the Boche was sending heavies over … I would go on until he stopped. My will would be master. Again our shells screamed over. (Adams p.177-9, quoted in Ashworth, p.209)

However, the institution of the raids had a different effect on elite units: “But the role of raids was different regarding elite units, on whose sectors the rules of kill or be killed normally prevailed. Here, the pattern of trench war was constant aggression and counter-aggression, which often escalated to a point where one side raided the other…. Some evidence suggests that after such a raid a period of tranquility intervened until the cycle of mutual violence restarted.” (p.196) Due
to the different historical paths before raiding occurred, raids had different effects: in units where
drive-and-let-live were practiced, strong reactions (beyond tit-for-tat responses) were provoked; in
elite units, a raid was simply the culmination of violence, and could even be followed by a
peaceful period.

Similarities and Differences with Other Explanations

The basic structure of interaction during the initial time period (T1) is well-described by the
Prisoner’s dilemma: by not firing back, one side would be put at a disadvantage, since the enemy
would be able to attack unimpeded; therefore, if one side fires, both sides would want to fire.
However, both sides would prefer not to fire at all, and without bringing in common formal
institutional links – i.e. during the first Christmas truces – cessation of firing was not possible,
until common culture developed. Thus, Axelrod’s description is apt – for this first time period.

Gowa’s argument that this is a coordination game is in contradiction with the differentiation
between units: clearly, elite units which were continually seeking battle with enemy units did not
face a coordination game, but attacked regardless of who they were facing. Additionally, I
would argue that this only became a coordination game over time: initially, before a situational
culture can develop between opposing sides, a prisoner’s dilemma of sorts existed. But due to the
affective ties that developed over time, the situation became more like a coordination game. The
third time period, in which raiding was required, doesn’t seem to be either a coordination game
or a prisoner’s dilemma, in that formal controls alter the structure of the game such that mutiny
became the only other option apart from raiding (Ashworth sees the French mutinies as an
example of just that.)
Hechter argues that the two armies acting as individuals is important due to the high cost of monitoring. The methods which troops used to maintain the cease-fire bear a close resemblance to Fearon and Laitin’s model of interethnic cooperation: in-group policing by the infantry prevented mortar groups and artillery from defecting and destroying the peace (although the positive inducements offered to the artillery might be more like in-group bribery rather than policing). The spiral equilibrium is also apparent: the possible escalatory response to a break in the truce by all combat groups also helped to keep the equilibrium going. Yet affective ties decrease the cost of monitoring through building trust among parties, whether within an army or across armies; they also decrease the incentives for defection and increase trust across the trenches, making both equilibria more resilient to noise or random events than would otherwise be expected.

The “lock-in” that Arfi notes was indeed a part of the system; a positive feedback loop operated in which initial cooperation led to future cooperation. However, the agents and events that triggered the system were far from random; rather, they were the result of clever, creative action. His notion of path-dependence, while explaining the positive feedback, says little (as do the other theories) about why a culture of vengeance resulted from the requirement of raiding, while the broader notion of path-dependence as argued above correctly represents the result of having trust disrupted by these raids: violent retribution.

**Implications**

Is the live-and-let-live system unique to interactions between the British and Germans in World War I? Ashworth gives evidence for similar systems that existed between other groups of combatants in the war and other, although much less well developed, systems in World War II,
the Korean War, and even Vietnam. However, in all of these cases, the evidence is limited. According to the theory developed above, such systems should be seen in places where interaction can be relatively long-term (or continuity is preserved through socialization), common culture is shared broadly, formal requirements are not too constraining and pre-existing informal culture on both sides is not disposed towards non-cooperation. I discuss two examples below of interactions which have at least some of the characteristics of live-and-let-live.

Afghanistan

Many observers were surprised by the speed with which the Taliban were defeated in Afghanistan. This victory, however, was enabled by the sharing of a peculiar case of a common culture of conflict. Alliances are fluid, and change quickly; victories in Afghanistan have ordinarily not been primarily by attacks, but by bribing the opposite side to switch. Bargaining, while not completely overt, is commonplace, and a standard ritual is followed for arranging meetings (e.g. firing in the air a certain number of times.) Some forms of live-and-let-live also exist; for example, the front lines are often porous, and goods are allowed to pass through: “During lulls in the fighting, there is often a steady stream of traffic passing through the front lines. Merchants drag burros laden with corn and rice and cooking oil and tea.” (Finkel 2001)

Retribution does not happen against other Afghans (although foreigners are an exception); one commander (Gul Agha) “…did not imprison surrendering Afghans; he gave them pocket money and told them to go home.” (Maass 2002). New troops are often simply incorporated into existing groups. All of these traditions are informal agreements, enabled through a deeply shared collective knowledge about how war in Afghanistan is waged. These traditions are not recent;
one account in 1992 remarked that “This is the essence of Afghanistan: a medieval blend of tribal loyalty and an effortless ability to switch sides and form new alliances with old enemies.” (Brown 1992); in 1996, during the Taliban’s advance, another noted that “Fighting can be a misnomer. The Taliban's recent capture of Kabul and its advance towards the Hindu Kush took place with barely a shot fired. After suffering two or three ambushes, it retreated in the same way.” (Steele 1996)

**India/Pakistan**

Along the Line of Control in Kashmir, Indian and Pakistani troops are posted in close proximity to each other. Minor skirmishes do happen from time to time along this front; however, elements of a live-and-let-live system are apparent. Interaction between the two groups in some places is very ordinary:

> Once each month, on a little mountain bridge, they creep toward each other. One side brings tea. For a while, they discuss cricket, movies -- and whether the hot line they installed years ago to contact each other in an emergency is still working. ``Quite civil, really,'' says Pakistani Brig. Mohammed Yaqub Khan. (“Forces Defend” 2002)

Journalists who are brought to the Line of Control see little shelling. One described the encounter: “Across a stream, less than 100 yards away, Indian soldiers hunkered down in a bunker. The armed enemies stared at each other. Then one of the Indian soldiers waved.” (“All Quiet” 2001) In other places, Indian officers play golf in a course overlooked on three sides by Pakistani troops (Burns 1998).

Previous to the current crisis, parts of the border away from the LOC saw even more cooperative actions between sides: lost animals would be brought back to their proper owners on the other side; joint border patrols would mend the pickets that indicated the border; sweets and greetings
would be exchanged at holidays. (Sengupta 2002). Violence had been reduced to synchronized grimacing:

At sundown today, as every evening, border guards from Pakistan and India strutted menacingly to within a sword's length of one another and scowled theatrically before turning on their heels to lower their national flags at the only border crossing between these two countries.

It is a pantomime of aggression between two historic antagonists - so practiced that the Indian and Pakistani guards signal each other to make sure they strut and scowl in unison. The spectacle draws large crowds, who stand on each side waving flags and jeering each other with gleeful spite.

Even when violence broke out, it was conducted in such a way that it could be de-escalated. Shelling is done in a targeted way in order to punish the post that breaks the ceasefire: “‘Our response to such shooting,’ the officer said, ‘is we select that post and then we punish it. We hit it and we hit it. I am not mincing any words, we hit it hard.’” (Kifner 1998) The same article notes that during one occasion when it escalated out of control, it was informally ended by a phone call on the hotline between the two sides.

Conclusions

Many important aspects of the Live-and-Let-Live System were well described by rationalist theories of cooperation. However, important puzzles remained unidentified and unsolved by these perspectives. By taking an institutional/cultural approach that takes a dual focus on agency and culture, I have taken some steps towards solving these puzzles.

The role of collectively shared cultural tropes has been clarified: these create opportunities for cooperation between opposed sides. The differences between regular and elite units with respect to their behavior during the war also fits well into this approach: their different cultural backgrounds led to radically different outcomes during the course of the war. While the regular
units invented covert cooperation, the elite units invented raiding, a technique that eventually brought down the system. Cooperation was bolstered by underlying cultural ties which were created through dynamic interaction both between and within armies. These ties changed affective relationships, deepened cultural understanding, and created trust ties that made the system resilient to minor shocks and made each side function as a single unit, decreasing complexity and coupling and thus preventing the breakdown of the system. In the end, once this trust was undermined by the imposition of raiding, the system fell apart, and the culture of cooperation was replaced by a culture of vengeance, in which both sides burned bridges and abandoned opportunities for future cooperation.

Finally, I have hinted at some future applications of this framework by briefly looking at two modern conflicts that appear to fit at least some of the requirements. Broader applications (and tests) could include looking at the role of culture in negotiations and in creating new institutions. One such possibility would be to look at agreements to prevent dangerous military activities or similar agreements between opposing sides, either during the Cold War or the present era.
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