

THE LIVE-AND-LET-LIVE SYSTEM IN TRENCH WARFARE IN WORLD WAR I

By Robert Axelrod, *The Evolution of Cooperation*, Basic Books, NY 1984, pp. 73-87 (Ch. 4).

Sometimes cooperation emerges where it is least expected. During World War I, the Western Front was the scene of horrible battles for a few yards of territory. But between these battles, and even during them at other places along the five-hundred-mile line in France and Belgium, the enemy soldiers often exercised considerable restraint. A British staff officer on a tour of the trenches remarked that he was astonished to observe German soldiers walking about within rifle range behind their own line. Our men appeared to take no notice. I privately made up my mind to do away with that sort of thing when we took over; such things should not be allowed. These people evidently did not know there was a war on. Both sides apparently believed in the policy of "live and let live." (Dugdale 1932, p. 94)

This is not an isolated example. The live-and-let-live system was endemic in trench warfare. It flourished despite the best efforts of senior officers to stop it, despite the passions aroused by combat, despite the military logic of kill or be killed, and despite the ease with which the high command was able to repress any local efforts to arrange a direct truce.

This is a case of cooperation emerging despite great antagonism between the players. As such, it provides a challenge for the application of the concepts and the theory developed in the first three chapters. In particular, the main goal is to use the theory to explain:

1. How could the live-and-let-live system have gotten started?
2. How was it sustained?
3. Why did it break down toward the end of the war?
4. Why was it characteristic of trench warfare in World War I, but of few other wars?

A second goal is to use the historical case to suggest how the original concepts and theory can be further elaborated.

Fortunately, a recent book-length study of the live-and-let-live system is available. This excellent work by a British sociologist, Tony Ashworth (1980), is based upon diaries, letters, and reminiscences of trench fighters. Material was found from virtually every one of the fifty-seven British divisions, with an average of more than three sources per division. To a lesser extent, material from French and German sources was also consulted. The result is a very rich set of illustrations that are analyzed with great skill to provide a comprehensive picture of the development and character of trench warfare on the

Western Front in World War I. This chapter relies upon Ashworth's fine work for its illustrative quotes and for its historical interpretation.

While Ashworth does not put it this way, the historical situation in the quiet sectors along the Western Front was an iterated Prisoner's Dilemma. In a given locality, the two players can be taken to be the small units facing each other. At any time, the choices are to shoot to kill or deliberately to shoot to avoid causing damage. For both sides, weakening the enemy is an important value because it will promote survival if a major battle is ordered in the sector. Therefore, in the short run it is better to do damage now whether the enemy is shooting back or not. This establishes that mutual defection is preferred to unilateral restraint ($P > S$), and that unilateral restraint by the other side is even better than mutual cooperation ($T > R$). In addition, the reward for mutual restraint is preferred by the local units to the outcome of mutual punishment ($R > P$), since mutual punishment would imply that both units would suffer for little or no relative gain. Taken together, this establishes the essential set of inequalities: $T > R > P > S$. Moreover, both sides would prefer mutual restraint to the random alternation of serious hostilities, making $R > (T+S)/2$. Thus the situation meets the conditions for a Prisoner's Dilemma between small units facing each other in a given immobile sector.

Two small units facing each other across one hundred to four hundred yards of no-man's-land were the players in one of these potentially deadly Prisoner's Dilemmas. Typically, the basic unit could be taken to be the battalion, consisting of about one thousand men, half of whom would be in the front line at any one time. The battalion played a large role in the life of an infantryman. It not only organized its members for combat, but also fed, paid, and clothed them as well as arranged their leave. All of the officers and most of the other soldiers in the battalion knew each other by sight. For our purposes, two key factors make the battalion the most typical player. On the one hand, it was large enough to occupy a sufficient sector of the front to be "held accountable" for aggressive actions which came from its territory. On the other hand, it was small enough to be able to control the individual behaviour of its men, through a variety of means, both formal and informal.

A battalion on one side might be facing parts of one, two, or three battalions on the other side. Thus each player could simultaneously be involved in several interactions. Over the course of the Western Front, there would be hundreds of such face-offs.

Only the small units were involved in these Prisoner's Dilemmas. The high commands of the two sides did not share the view of the common soldier who said:

The real reason for the quietness of some sections of the line was that neither side had any intention of advancing in that particular district.... If the British shelled the Germans, the Germans replied, and the damage was equal: if the Germans bombed an advanced piece of trench and killed five Englishmen, an answering fusillade killed five Germans. (Belton Cobb 1916, p. 74)

To the army headquarters, the important thing was to develop an offensive spirit in the troops. The Allies, in particular, pursued a strategy of attrition whereby equal losses in men from both sides meant a net gain for the Allies because sooner or later Germany's strength would be exhausted first. So at the national level, World War I approximated a zero-sum game in which losses for one side represented gains for the other side. But at the local level, along the front line, mutual restraint was much preferred to mutual punishment.

Locally, the dilemma persisted: at any given moment it was prudent to shoot to kill, whether the other side did so or not. What made trench warfare so different from most other combat was that the same small units faced each other in immobile sectors for extended periods of time. This changed the game from a one-move Prisoner's Dilemma in which defection is the dominant choice, to an iterated Prisoner's Dilemma in which conditional strategies are possible. The result accorded with the theory's predictions: with sustained interaction, the stable outcome could be mutual cooperation based upon reciprocity. In particular, both sides followed strategies that would not be the first to defect, but that would be provoked if the other defected.

Before looking further into the stability of the cooperation, it is interesting to see how cooperation got started in the first place. The first stage of the war, which began in August 1914, was highly mobile and very bloody. But as the lines stabilized, nonaggression between the troops emerged spontaneously in many places along the front. The earliest instances may have been associated with meals which were served at the same times on both sides of no-man's land. As early as November 1914, a non-commissioned officer whose unit had been in the trenches for some days, observed that

The quartermaster used to bring the rations up... each night after dark; they were laid out and parties used to come from the front line to fetch them. I suppose the enemy were occupied in the same way; so things were quiet at that hour for a couple of nights, and the ration parties became careless because of it, and laughed and talked on their way back to their companies. (The War the Infantry Knew 1938, p. 92)

By Christmas there was extensive fraternization, a practice which the headquarters frowned upon. In the following months, direct truces were occasionally arranged by shouts or by signals. An eyewitness noted that:

In one section the hour of 8 to 9 A.M. was regarded as consecrated to "private business," and certain places indicated by a flag were regarded as out of bounds by the snipers on both sides. (Morgan 1916, pp. 270-71)

But direct truces were easily suppressed. Orders were issued making clear that the soldiers "were in France to fight and not to fraternize with the enemy" (Fifth Battalion the Camaronians 1936, p. 28). More to the point, several soldiers were court-martialled and whole battalions were punished. Soon it became clear that verbal arrangements were easily suppressed by the high command and such arrangements became rare.

Another way in which mutual restraint got started was during a spell of miserable weather. When the rains were bad enough, it was almost impossible to undertake major aggressive action. Often ad hoc weather truces emerged in which the troops simply did not shoot at each other. When the weather improved, the pattern of mutual restraint sometimes simply continued.

So verbal agreements were effective in getting cooperation started on many occasions early in the war, but direct fraternization was easily suppressed. More effective in the long run were various methods which allowed the two sides to coordinate their actions without having to resort to words. A key factor was the realization that if one side would exercise a particular kind of restraint, then the other might reciprocate. Similarities in basic needs and activities let the soldiers appreciate that the other side would probably not be following a strategy of unconditional defection. For example, in the summer of 1915, a soldier saw that the enemy would be likely to reciprocate cooperation based on the desire for fresh rations.

It would be child's play to shell the road behind the enemy's trenches, crowded as it must be with ration wagons and water carts, into a bloodstained wilderness... but on the whole there is silence. After all, if you prevent your enemy from drawing his rations, his remedy is simple: he will prevent you from drawing yours. (Hay 1916, pp. 224-25)

Once started, strategies based on reciprocity could spread in a variety of ways. A restraint undertaken in certain hours could be extended to longer hours. A particular kind of restraint could lead to attempting other kinds of restraint. And most importantly of all, the progress achieved in one small sector of the front could be imitated by the units in neighbouring sectors.

Just as important as getting cooperation started were the conditions that allowed it to be sustainable. The strategies that could sustain mutual cooperation were the ones which were provokable. During the periods of mutual restraint, the enemy soldiers took pains to show each other that they could indeed retaliate if necessary. For example, German snipers showed their prowess to the British by aiming at spots on the walls of cottages and firing until they had cut a hole (The War the Infantry Knew 1938, p. 98). Likewise the artillery would often demonstrate with a few accurately aimed shots that they could do more damage if they wished. These demonstrations of retaliatory capabilities helped police the system by showing that restraint was not due to weakness, and that defection would be self defeating.

When a defection actually occurred, the retaliation was often more than would be called for by TIT FOR TAT. Two-for-one or three-for-one was a common response to an act that went beyond what was considered acceptable.

We go out at night in front of the trenches.... The German working parties are also out, so it is not considered etiquette to fire. The really nasty things are rifle

grenades.... They can kill as many as eight or nine men if they do fall into a trench.... But we never use ours unless the Germans get particularly noisy, as on their system of retaliation three for every one of ours come back. (Greenwell 1972, pp. 16-17)

There was probably an inherent damping process that usually prevented these retaliations from leading to an uncontrolled echo of mutual recriminations. The side that instigated the action might note the escalated response and not try to redouble or retriplate it. Once the escalation was not driven further, it would probably tend to die out. Since not every bullet, grenade, or shell fired in earnest would hit its target, there would be an inherent tendency toward de-escalation.

Another problem that had to be overcome to maintain the stability of cooperation was the rotation of troops. About every eight days, a battalion would change places with another battalion billeted behind it. At longer intervals, larger units would change places. What allowed the cooperation to remain stable was the process of familiarization that the outgoing unit would provide for the incoming unit. The particular details of the tacit understandings with the enemy were explained. But sometimes it was quite sufficient for an old timer to point out to a newcomer that "Mr. Bosche ain't a bad fellow. You leave 'im alone; 'e'll leave you alone" (Gillon n.d., p. 77). This socialization allowed one unit to pick up the game right where the other left it.

Still another problem for the maintenance of stable cooperation was the fact that the artillery was much less vulnerable to enemy retaliation than was the infantry. Therefore, the artillery had a lesser stake in the live-and-let-live system. As a consequence, the infantry tended to be solicitous of the forward observers from the artillery. As a German artillery man noted of the infantry, "If they ever have any delicacies to spare, they make us a present of them, partly of course because they feel we are protecting them" (Sulzbach 1973, p. 71). The goal was to encourage the artillery to respect the infantry's desire to let sleeping dogs lie. A new forward observer for the artillery was often greeted by the infantry with the request, "I hope you are not going to start trouble." The best answer was, "Not unless you want" (Ashworth 1980, p. 169). This reflected the dual role of artillery in the maintenance of mutual restraint with the enemy: the passiveness when unprovoked, and the instant retaliation when the enemy broke the peace.

The high commands of the British, French, and German armies all wanted to put a stop to tacit truces; all were afraid that they sapped the morale of their men, and all believed throughout the war that a ceaseless policy of offence was the only way to victory. With few exceptions, the headquarters could enforce any orders that they could directly monitor. Thus the headquarters were able to conduct large battles by ordering the men to leave their trenches and risk their lives in charging the enemy positions. But between large battles, they were not able to monitor their orders to keep up the pressure[1]. After all, it was hard for a senior officer to determine who was shooting to kill, and who was shooting with an eye to avoiding retaliation. The soldiers became expert at defeating the monitoring system, as when a unit kept a coil of enemy wire and sent a piece to headquarters whenever asked to prove that they had conducted a patrol of no-man's-land.

What finally destroyed the live-and-let-live system was the institution of a type of incessant aggression that the headquarters could monitor. This was the raid, a carefully prepared attack on enemy trenches which involved from ten to two hundred men. Raiders were ordered to kill or capture the enemy in his own trenches. If the raid was successful, prisoner would be taken; and if the raid was a failure, casualties would be proof of the attempt. There was no effective way to pretend that a raid had been undertaken when it had not. And there was no effective way to cooperate with the enemy in a raid because neither live soldiers nor dead bodies could be exchanged.

The live-and-let-live system could not cope with the disruption caused by the hundreds of small raids. After a raid neither side knew what to expect next. The side that had raided could expect retaliation but could not predict when, where, or how. The side that had been raided was also nervous, not knowing whether the raid was an isolated attack or the first of a series. Moreover, since raids could be ordered and monitored from headquarters, the magnitude of the retaliatory raid could also be controlled, preventing a dampening of the process. The battalions were forced to mount real attacks on the enemy, the retaliation was undampened, and the process echoed out of control.

Ironically, when the British High Command undertook its policy of raiding, it did not do so in order to end the live-and-let-live system. Instead, its initial goal was political, namely, to show their French allies that they were doing their part to harass the enemy. Their image of the direct effects of raiding was that it increased the morale of their own troops by restoring an offensive spirit and that it promoted attrition by inflicting more casualties on the enemy in the raids than the raiding troops themselves would suffer. Whether these effects on morale and casualty ratios were realized has been debated ever since. What is clear in retrospect is that the indirect effect of the raids was to destroy the conditions needed for the stability of the tacit restraints widely exercised on the Western Front. Without realizing exactly what they were doing, the high command effectively ended the live-and-let-live system by preventing their battalions from exercising their own strategies of cooperation based on reciprocity.

The introduction of raids completed the cycle of the evolution of the live-and-let-live system. Cooperation got a foothold through exploratory actions at the local level, was able to sustain itself because of the duration of contact between small units facing each other, and was eventually undermined when these small units lost their freedom of action. Small units, such as battalions, used their own strategies in dealing with the enemy units they faced. Cooperation first emerged spontaneously in a variety of contexts, such as restraint in attacking the distribution of enemy rations, a pause during the first Christmas in the trenches, and a slow resumption of fighting after bad weather made sustained combat almost impossible. These restraints quickly evolved into clear patterns of mutually understood behaviour, such as two-for-one or three-for-one retaliation for actions that were taken to be unacceptable. The mechanisms of the evolution of these strategies must have been trial and error and the imitation of neighbouring units.

The mechanisms for evolution involved neither blind mutation nor survival of the fittest. Unlike blind mutation, the soldiers understood their situation and actively tried to make the most of it. They understood the indirect consequences of their acts as embodied in what I call the echo principle: "To provide discomfort for the other is but a roundabout way of providing it for themselves" (Sorely 1919, p. 283). The strategies were based on thought as well as experience. The soldiers learned that to maintain mutual restraint with their enemies, they had to base that restraint on a demonstrated capability and willingness to be provoked. They learned that cooperation had to be based upon reciprocity. Thus, the evolution of strategies was based on deliberate rather than blind adaptation. Nor did the evolution involve survival of the fittest. While an ineffective strategy would mean more casualties for the unit, replacements typically meant that the units themselves would survive.

The origins, maintenance, and destruction of the live-and-let-live system of trench warfare are all consistent with the theory of the evolution of cooperation. In addition, there are two very interesting developments within the live-and-let-live system which are new to the theory. These additional developments are the emergence of ethics and ritual.

The ethics that developed are illustrated in this incident, related by a British officer recalling his experience while facing a Saxon unit of the German Army.

I was having tea with A Company when we heard a lot of shouting and went out to investigate. We found our men and the 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 1934, p. 29)

This Saxon apology goes well beyond a merely instrumental effort to prevent retaliation. It reflects moral regret for having violated a situation of trust, and it shows concern that someone might have been hurt.

The cooperative exchanges of mutual restraint actually changed the nature of the interaction. They tended to make the two sides care about each other's welfare. This change can be interpreted in terms of the Prisoner's Dilemma by saying that the very experience of sustained mutual cooperation altered the payoffs of the players, making mutual cooperation even more valued than it was before.

The converse was also true. When the pattern of mutual cooperation deteriorated due to mandatory raiding, a powerful ethic of revenge was evoked. This ethic was not just a question of calmly following a strategy based on reciprocity. It was also a question of doing what seemed moral and proper to fulfill one's obligation to a fallen comrade. And revenge evoked revenge. Thus both cooperation and defection were self-reinforcing. The self-reinforcement of these mutual behavioural patterns was not only in terms of the interacting strategies of the players, but also in terms of their perceptions of the meaning

of the outcomes. In abstract terms, the point is that not only did preferences affect behaviour and outcomes, but behaviour and outcomes also affected preferences.

The other addition to the theory suggested by the trench warfare case is the development of ritual. The rituals took the form of perfunctory use of small arms, and deliberately harmless use of artillery. For example, the Germans in one place conducted "their offensive operations with a tactful blend of constant firing and bad shooting, which while it satisfies the Prussians causes no serious inconvenience to Thomas Atkins" (Hay 1916, p. 206).

Even more striking was the predictable use of artillery which occurred in many sectors.

So regular were they [the Germans] in their choice of targets, times of shooting, and number of rounds fired, that, after being in the line one or two days, Colonel Jones had discovered their system, and knew to a minute where the next shell would fall. His calculations were very accurate, and he was able to take what seemed to uninitiated Staff Officers big risks, knowing that the shelling would stop before he reached the place being shelled. (Hills 1919, p. 96)

The other side did the same thing, as noted by a German soldier commenting on "the evening gun" fired by the British.

At seven it came – so regularly that you could set your watch by it... It always had the same objective, its range was accurate, it never varied laterally or went beyond or fell short of the mark.... There were even some inquisitive fellows who crawled out... a little before seven, in order to see it burst. (Kipper 1931, pp. 135-37)

These rituals of perfunctory and routine firing sent a double message. To the high command they conveyed aggression, but to the enemy they conveyed peace. The men pretended to be implementing an aggressive policy, but were not. Ashworth himself explains that these stylized acts were more than a way of avoiding retaliation.

In trench war, a structure of ritualised aggression was a ceremony where antagonists participated in regular, reciprocal discharges of missiles, that is, bombs, bullets and so forth, which symbolized and strengthened, at one and the same time, both sentiments of fellow-feelings, and beliefs that the enemy was a fellow sufferer. (Ashworth 1980, p. 144)

Thus these rituals helped strengthen the moral sanctions which reinforced the evolutionary basis of the live-and-let-live system.

The live-and-let-live system that emerged in the bitter trench warfare of World War I demonstrates that friendship is hardly necessary for cooperation based upon reciprocity to get started. Under suitable circumstances, cooperation can develop even between antagonists.