War, Peace, and Progress: Militarism and Pacifism in Evolutionary Thought, 1898-1920

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Abstract: Much of the academic literature written about the First World War has tended to revolve around questions of diplomacy, foreign policy, and the International System as it existed in Europe in the decades before the war began. To balance this, I analyze the intellectual history of evolutionary thought as it applied to the question of war, peace, and the alleged “pugnacity” of man before and during the war years. Many people viewed the world of international conflict through the lens of socio-biological progress and a “struggle for existence” among humans, nations, and races. By identifying three broad intellectual trends, I argue that these evolutionary narratives of the war question were diverse. Some used the language of human evolution to argue that war was an inevitable engine of progress whereas others stressed different concepts in evolutionary science, such as cooperation, to make pacifist arguments. A third school of thought, the pessimists, argued that man was inherently warlike but that this instinct could be tamed. As the centennial anniversary of the July Crisis and the beginning of the First World War approaches, it is worth investigating the ideational “mood” of the era and the intellectual climate which allowed for such a devastating war to take place.

The path of progress is strewn with the wreck of nations...yet these dead peoples are, in very truth, the stepping stones on which mankind has arisen to the higher intellectual and deeper emotional life of today.1

Karl Pearson, 1900

Confident that we were at last civilised, we awakened, as in the clutch of an earthquake, to discover that we were still barbarians.2

John Haynes Holmes, 1916

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1 Karl Pearson, National Life from the Standpoint of Science: an Address Delivered at Newcastle, November 19, 1900 (London: A. and C. Black, 1901), 62.
War, Peace, and Progress

As the centennial anniversary of the beginning of the First World War approaches, it is worth revisiting our understanding of the factors that led to the outbreak of war in August of 1914. The costliest and most devastating war up to that point in the history of the world is all too often explained as simply the failure of diplomacy in the tense final years of balance-of-power politics. While the most immediate causes can be said to be the political maneuverings during the July Crisis and the decisions by some policymakers in the years before 1914, this analysis only scratches the surface.

In order to more fully understand the causes of the war, we need to examine the way in which those policymakers (and, certainly, the nameless faces that make up what historians call “public opinion”) understood the world in which they lived and how it operated. In the Victorian age of science and progress, many thinkers proposed that international relations could be understood in biological terms; that is, that war was not solely a question of economics or calculated national interests, but that man’s propensity for war—or conversely, potential for peace—rested on certain biological laws that could be rationally known.

These arguments tended to rest on teleological assumptions about human progress. For some, war was understood as a natural mechanism by which humans came to evolve into more efficient, or simply “better,” species. Spencerian views of evolution as a competitive struggle for existence fit perfectly with militarist policies and those who supported increased national arms expenditures after the turn of the nineteenth century. According to this view, nations and races that were better able to compete militarily would vanquish weaker ones and supplant them, leaving “the fittest” to remain.

On the other hand, many thinkers used the language of evolution and biology to put forward pacifist arguments. These tended to stress other intellectual schools of thought within evolutionary theory, especially Peter Kropotkin’s notion of mutual aid. For them, war was neither a desirable mechanism of progress, nor was it an inevitable consequence of biological laws. The anti-war evolutionists argued that organisms generally cooperated for their protection and survival, especially among the same species, and that war was of no inherent value to humanity. A number of eugenicists also made the claim that the mass slaughter of strong, virile men on the battlefield decreased the fitness of the racial stock.

The experience of the First World War, however, had a strong impact on these views. A third current of thought, which I will call the pessimists, was largely centred on the ideas of the new psychology and pointed to an innate “pugnacity” in men. Against this natural inclination for aggression and fighting, they contrasted the codes
of civilization that compelled men to behave otherwise—what they understood as the “split personality” of humanity. The disconcerting consensus among many after the “war to end all wars” largely stemmed from their ideas: that there was something instinctive about man’s violent propensity, but it was necessary to progress towards a society without war.

Despite the fundamental differences in the evolutionary arguments put forward by pacifist, militarist, and pessimist thinkers, they share a number of conceptual ideas. Their appeal to scientific rhetoric—specifically, evolutionary biology—was possible because it existed as a discourse, or a system of meaning by which authoritative statements could be made about the world and the people that occupied it. They also deployed the idea of progress towards a new human destiny—either one of increased efficiency and biological fitness by way of the struggle for existence or the cooperative advancement towards a world that had evolved beyond war. Similarly, others—even before the start of the war—echoed the decline of Victorian optimism in progress and civilization by concurring that man was still a savage beast at heart.

This paper will provide a survey of the main currents in evolutionary thought as they pertained to the question of war. By definition, the concept of evolution is a narrative of time, seeking to either link humanity to its primitive past or the prospect of future development, or both. For many policymakers in Europe, notably the pro-war camp in Germany and Austria-Hungary, the decisions made in the years preceding 1914 partially reflected a fear of relative decline vis-à-vis other powers and a desire to transcend the status quo. Germany’s dream of building a global empire and Austria-Hungary’s designs for the Balkans fit into a kind of competitive mindset that formed the basis of the new imperialism and, in the mind of some intellectuals, was part of an evolutionary contest in which some nations would rise and others would fall on the world stage.

In dissecting the intellectual climate of the prewar and wartime West, therefore, we may be able to read into some of the attitudes and decisions that led to the “catastrophe” of the First World War. But this is a difficult task, and one that would, by necessity, have to presuppose a certain level of influence by intellectuals on the events that took place. The question of how the historical actors of 1914 read into things such as Social Darwinism and the “Nietzschean mood,” and whether or not these paralleled public opinion, have been investigated by Talbot Imlay. The search for causation in vague intellectual and cultural trends of the era present a number of theoretical issues that are not easy to resolve.

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4 Ibid.
This question must be placed aside for the moment. The history that I will address is a conventional intellectual one, and I will discuss the influence of certain ideas only insofar as they pertain to how the question of war was framed within a biological context by an epistemic community. For a number of commentators, war and conflict between human societies could be explained through the fact of evolution, a teleological worldview that bridged the present with the past and the future. It bound humanity to its past and offered a lens through which to view its future, placing man in the natural world and subjecting him to certain biological laws. My concern is therefore to unmask what H. W. Koch calls “some of the ‘unspoken assumptions’ of the era,” if not to offer clues as to how and why people behaved in certain ways then to at least chart the narratives and signs by which they constructed meaning in a period of growing scientific prestige.  

Setting the Stage: Biologism, Conflict, and Cooperation Prior to 1898

Before proceeding into a discussion about war as viewed through the lens of evolutionary theory at the turn of the twentieth century, it is necessary to retrace some intellectual steps. The views of war and peace biologists in this period borrowed from larger epistemic traditions—indeed, even during their own time, their arguments were mere footnotes in the broader discussions about what the evolutionary history and future of man meant for human societies in the present. While the new science of the Victorian period framed the debates about war and peace in evolutionary terms, the war question and its relation to human nature was rooted much earlier in the Western intellectual tradition.

The Hobbesian view of war was grounded in the concept of the “state of nature,” something from which the militarist school would draw inspiration in the prewar period. Its assertion that warfare was inherent in human nature was challenged by Jean-Jacques Rousseau and a number of Enlightenment thinkers who argued otherwise; he, Immanuel Kant, and Jeremy Bentham all concurred that warfare was not ingrained in the human psyche, but rather was one more evil that plagued humanity and that could be cured through the application of reason.  

Thomas Malthus’s demographic theories, especially pressures such as overpopulation and the availability of food and other resources, both provided a metanarrative for war—whatever the details, demographic factors would lead to conflict once they reached the breaking point—and inspired evolutionary theory more

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These arguments would also later be deployed by the war biologists. The intellectual climate in which they operated, however, was heavily influenced by thinkers who conceived of an essential “human nature” in evolutionary terms, especially those who applied the language of evolution to the behavior of human societies.

I will be attempting to avoid the term “Social Darwinism” here as it is a bit of a misnomer. The publication of Charles Darwin’s *On the Origin of Species* certainly proved to be a watershed moment in the way that scientists and the lay public understood the essential nature of humanity, its history, and its relation to the natural world, even if these ideas took time to spread and to become accepted. On the other hand, Darwin’s ideas were heavily influenced by those of Jean-Baptise Lamarck, and were later reinterpreted or extrapolated upon by other thinkers. Rather than being a self-contained theory, evolutionary thought was significantly diverse. While the basic tenets of “evolution” were uncontested among its adherents (humans are a part of the natural world; they are therefore subject to the laws of nature, including biological change through a process referred to as evolution), there was considerable disagreement over the mechanisms that drove evolutionary change.

Lamarck’s theories were centred on the premise that organisms could acquire traits and pass them off to their offspring, a method sometimes called “soft evolution.” His ideas were most popular in France, although they also had an influential following in Britain. Darwin concurred with this model to a certain extent, as did many evolutionary theorists up until the early twentieth century, but he believed that natural selection was the primary mechanism of evolution. At the turn of the century, however, Gregor Mendel’s theories of genetics, which stressed “hard” evolution—that the interaction of genes was responsible for inherited traits—rose to prominence when they were popularized years after his death. Mendelism also differed in that it suggested evolutionary “leaps” as an important factor in change, in contrast to the gradualism of Darwin.

Herbert Spencer’s theories also became influential, borrowing much from Darwin but framing the concept of “natural selection” within his own views of evolutionary theory, themselves sharing much in common with his economic views. These stressed the “survival of the fittest” as the driving engine of evolutionary change. This simple idea would have a profound influence on the biological debates related to war in the

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7 Ibid., 7.
War, Peace, and Progress

prewar period. “Conflict” theorists such as Spencer (who was a pacifist) and W. G. Sumner, however, were concerned with competition within, and not between, societies.9

By contrast, others in the late nineteenth century suggested different readings of evolutionary theory. T. H. Huxley, in his later years, differentiated between “ethical,” or civilized man, and his developmental counterpart, the “non-ethical” primitive man. Civilization abolished the struggle for existence by way of ethics—a trait acquired through evolution—while the uncivilized man was locked into a Hobbesian natural state where he fought for his survival.10 The conflict paradigm, for Huxley, was therefore not applicable to human societies. At the very least, it was not a biological law to which they were bound.

Similarly, others pointed to the “mutual aid” aspect of Darwin’s theories. Peter Kropotkin, one of the pre-eminent anarchist thinkers in the last quarter of the nineteenth century, stressed cooperation as an evolutionary mechanism that differed starkly from the individualistic model of competition championed by Spencer. Just as wolves and other animals grouped together for survival, such as in hunting, foraging, and protection—observations which Kropotkin made as a natural biologist—he argued that it was essentially natural for humans to join together for mutual benefit.11

Thus, social theorists drew upon various strands in evolutionary theory to support their visions of human society. The powerful language of biologism, and of evolution in particular, could stand (ostensibly) as an irrefutable truth in a rapidly changing world; whatever the state of the industrial and urban social landscape, essential truths about human nature—grounded in biological fact—could not be changed. The power to make millennial pronouncements about the world and the way that it operated, especially in terms of international affairs, was appealing to trained scientists just as much as it was to political leaders and other lay commentators.

Biological Solutions for Peace? The Development of Pacifist Biology

Ivan Bloch, a Polish financier who studied and wrote about modern warfare around the turn of the century, predicted many of the dimensions of the war that would take place in 1914. For him, conventional military tactics and battles were obsolete. “War” would be little more than a kind of industrial conflict between two sides, depleting massive amounts of troops and resources until one of the belligerents could not continue fighting. Furthermore, he pointed to the possible social unrest that these wars would cause; this led him to argue that war itself was therefore of no further value to

9 Paul Crook, Darwinism, War, and History: The Debate over the Biology of War from the “Origin of Species” to the First World War (Cambridge: Cambridge University Press, 1994), 29.
11 Ibid., 73.
humanity. In The Wars of the Future, written in 1901, he argued that “Science and
civilisation have turned over a new leaf, but the man of arms keeps his eyes fixed on
the old and faded page, neither learning nor forgetting.”

Bloch, though not using explicitly biological language, suggested that a socio-technological evolution of
humanity had taken place to the point that war was simply not worth the cost.

This argument, however, did not imply that humans could biologically evolve past conflict—merely that war, at this stage of development, was not beneficial for civilized societies. The writings of Norman Angel, as put forward in his influential book, The
Great Illusion (1909), shared many of the economic points of Bloch’s theories about the
obsolescence of war but also addressed the growing influence of pro-war biologism by
that time:

War has no longer the justification that it makes for the
survival of the fittest; it involves the survival of the less fit.
The idea that the struggle between nations is a part of the
evolutionary law of man’s advance involves a profound
misreading of the biological analogy.

In this sense, Angell’s anti-war arguments as they corresponded to evolution were more of a reaction against what would later be called “Bernhardism” than a central part of his theory. Angell therefore deployed what might be called “restrictionist” arguments (implying that the biological basis of pro-war evolutionary theory was invalid or had been misinterpreted) and put forward his own pacifist arguments using the same evolutionary language. These emphasized cooperation rather than conflict. These two major trends in pacifist biology were rooted in Huxley’s separation of civilization and savagery (the “ethical man” and the “primitive man”) and Kropotkin’s notion of “mutual aid,” respectively.

Angell offers the example of Britain as a group of different people (“Scots, English, Welsh, Irish”) working together, as well as with others, through commerce for mutual benefit rather than fighting in a competitive struggle against each other. He also attacked the assumption of pro-war biology that nations were analogous to organisms:

That mankind as a whole represents the organism and the
planet the environment, to which he is more and more
adapting himself, is the only conclusion that consorts with

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13 Norman Angell, The Great Illusion (London: William Heinemann, 1912), X.
14 Crook, Darwin’s Coat-Tails, 66 and 72.
15 Angell, 187.
the facts. If struggle between men is the true reading, those facts are absolutely inexplicable, for he is drifting away from conflict, from the use of physical force, and towards co-operation.16

Indeed, Darwin theorized that species survived by adapting to their environments. In the process of natural selection, those organisms unfit for their environment would become extinct. The mechanisms for that extinction, however, relied heavily on a number of Malthusian factors such as food, resources, and population pressures, as well as competition with other organisms (predators, for example). Angell’s argument therefore reconceptualized humanity as one species in the contest of survival, rather than being composed of various races or nation-states who competed amongst themselves. Similarly, the “enemy” with which the species had to fight against in the struggle for existence became the environment.

Still, Angell deployed the language of biologism as one of many to advance his pacifist arguments, which were otherwise economic, political, or part of a more general attack against imperialism and the status quo of international affairs. As the tense years of the prewar era came to a close and the war dragged on in Europe, however, the war question attracted the attention of a number of evolutionary biologists and eugenicists who became increasingly vocal in the debate.

Among was these David Starr Jordan, an American eugenicist who was a strong advocate for pacifism. Although eugenics has since been interpreted by historians as essentially harmful, racist, and a pseudo-scientific kind of apologetics for middle class Anglo-Saxon privilege—and rightly so—Jordan stressed that war was degenerative to the racial stock. He looked favorably upon the fitness of soldiers who, he claimed, had a number of desirable physical and mental traits, such as “strength, agility, courage, dash, patriotism.”17 Paradoxically, it was the men who possessed these traits that were sent into the killing fields; the net result was the overall quality of the race would decline, given that fit men who would otherwise produce healthy offspring were killed. Other eugenicists argued that war was a beneficial process by which the most savage and violent elements of society were killed off, thereby benefitting society in that respect. They and Jordan both cited mainstream eugenics arguments, such as allusions to the breeding of dogs and horses, and appealed to the growing influence of the science of heredity.

Jordan’s argument was fairly distinct from the principles of mutual aid and restrictionism that formed the basis of other kinds of peace biologism, but nevertheless

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16 Ibid., 187-188.
relied, at its centre, on the evolutionary teleology espoused by the new biology. Eugenics and the fear of degeneracy were prominent trends in Progressive Era America as well as in late Victorian and Edwardian Britain. Theodore’s Roosevelt’s infamous warning of Anglo-Saxon “race suicide” was not unlike Jordan’s own arguments in suggesting that there would be negative consequences at a future point if the race lost the masculine, martial virtues. By contrast, however, Roosevelt’s solution was to train boys and men to be soldierly and to prepare them for war. For him, the prospect of fit men dying in combat was not nearly as abhorrent as the decline of a race’s military power more generally. In one chapter of The Strenuous Life, he stressed that

The Greeks were famous athletes, and as long as their athletic training had a normal place in their lives, it was a good thing. But it was a very bad thing when they kept up their athletic games while letting the stern qualities of soldiership and statesmanship sink into disuse.\(^\text{18}\)

Roosevelt was a pro-war hawk before and during the First World War, believing that a race’s ability to fight—tied into his larger metanarrative of virile masculinity—was what allowed them to survive and resist falling or disappearing in the Spencerian evolutionary struggle. He and Jordan can therefore be said to represent the malleability of evolutionary arguments; given that humanity and the races of the world were constantly evolving (either biologically, socio-culturally, or both), the direction of that change and the future state of a given species depended on factors in the present. Evolutionary theory, especially where eugenics was concerned, could be employed as a discourse of power that warned against the future consequences of war or pacifism, depending on who had the final say.

It is also worth pointing to the case of Peter Chalmers Mitchell, an English zoologist. Originally a war biologist who saw the races and nations of the world in a Spencerian struggle that took the form of the new imperialism, he changed his views in the years before the war.\(^\text{19}\) He argued against international conflict as something that was either desirable or inevitable, and embraced the restrictionist and mutual aid arguments. Given that science had not completely solved the question of the biology of man and his relation to the natural order, he maintained that a certain skepticism was necessary towards biological models of human society.\(^\text{20}\) Interestingly, he did not appear to hold any obvious political leanings other than his opposition to the First World War and the pacifism that his evolutionary views entailed. Even if numerous biological pacifists leaned towards the left and their pro-war counterparts had a tendency towards the pro-war and hawkish right, it is difficult to point to concrete

\(^{19}\) Crook, Darwin’s Coat-Tails, 113.
\(^{20}\) Ibid., 121-122.
political dimensions in the divide. This is problematized by the fact that there was diversity in the extent to which these thinkers employed strictly biological arguments. As historian Alfred Kelly states, “it is useful to distinguish between those who occasionally appropriated a Darwinian phrase or two and those who undertook a sustained and detailed application of Darwinism to human society.”

Given the outbreak of war in 1914, the dynamics of the pacifist and militarist debate would change substantially, at least in Britain, the United States, and France. The prominence of war biology among the powers that would eventually find themselves fighting against the Central Powers would wane in light of their association with Germany. It is difficult to place, however, the extent to which ordinary Germans, decision-makers, and even intellectuals took to heart militarist theories of human evolution. While conflict-centred Spencerian views—what has often been called “Social Darwinism”—were popular in Germany, its perception by Anglo-American and French intellectuals was mitigated by the polarizing atmosphere of the war. For them, “Bernhardism” was an essentially Prussian idea, a product of the militarist mindset that brought the Huns across the Rhine every few generations to march off to war.

Conflict and War as Metanarrative of Progress: The Rise of Militarist Biology

Even before Spencerian evolutionary theory gained a foothold in the German universities, early ideas about conflict in the natural world paralleling those in human society could be found. One poem from 1854 reads “For the big eat the little and the biggest eats the big, and so in nature the social question is easily solved.” The important point in interpreting the development of biologically-derived notions of war and international affairs in this case, as Kelly suggests, is in deciding where to draw the line between superficial allusions to quasi-evolutionary language and narratives of conflict that are essentially evolutionary. I will therefore focus on the writings of General Friedrich von Bernhardi and some of his counterparts in Britain and France. In wartime debates about the war question in evolutionary thought, Bernhardi would feature prominently as a symbol to which the pacifist biologists would rally against.

Although he developed his views earlier and caused friction among other members of the German General Staff—if anything, because its unapologetic support for war could, and did, end up villainizing German foreign policy—Bernhardi received a great deal of attention in 1912 when he published Germany and the Next War. It had a wide readership, was a bestseller, and was translated into numerous languages.

22 Ibid.
23 Crook, Darwinism, 82-32.
dedicating only a paltry few pages to biological arguments for war (the majority being about his political and military theories), he established a definite and precise theory for conflict between nations and races as a mechanism of evolutionary progress. Placing the conflict theory as a universal metanarrative, he argued that “The struggle for existence is, in the life of Nature, the basis of all healthy development. All existing things show themselves to be the result of contesting forces.”

While he called this paradigm an “unconscious tragedy,” Bernhardi explained that this was a biological law that could not be altered. Even if it could, he argued, “an unhealthy development will follow, which excludes every advancement of the race, and therefore all real civilization.” Conflict was therefore both desirable (even if some of its consequences were unfortunate) and inevitable; although his arguments pertained to Germany’s case in particular, his theories dictated that nations should prepare for war to the best of their ability. Unpreparedness was, in this sense, weakness, while those nations who could compete best in the struggle would become stronger and “advance”.

Bernhardi’s language therefore implied a progression that orthodox Darwinism had tried to avoid, but was embraced—at least subtly or implicitly—by other schools of evolutionary thought. Darwin did not necessarily distinguish between higher or lower organisms (humans, for example, were not more highly evolved than monkeys, but simply evolved in different ways), but Bernhardi implied that those races that performed better in the struggle would become more efficient. The exact fate of those who lost in the struggle was unclear, although he used ambiguous words such as “conquest” and “succumbing.” Presumably, they would be supplanted by the more efficient.

Another important influence on his theories was Fredrich Ratzel’s concept of Lebensraum. Bernhardi stressed that, as other organisms in nature, humans competed for space to expand. This was the natural result of the struggle:

Strong, healthy, and flourishing nations increase in numbers. From a given moment they require a continual expansion of their frontiers, they require new territory for the accommodation of their surplus population... new

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25 Ibid.
26 Ibid.
territory must, as a rule, be obtained at the cost of its possessors—that is to say, by conquest, which thus becomes a law of necessity.\textsuperscript{28}

To put it simply, war was the natural result of population growth and the test that would determine who would win and lose in the contest over territory. While Bernhardi’s explicitly biological arguments were not the norm among hawkish intellectuals in Germany, he became a wartime symbol in French and Anglo-American thought of savage \textit{Kultur}.\textsuperscript{29}

On the other hand, these kinds of ideas were not confined to German intellectual schools. Even before the publication of \textit{Germany and the Next War}, British imperialist Harold F. Wyatt borrowed heavily on the Spencerian conflict notion in his periodical piece entitled “God’s Test by War” in 1911. His arguments bore a stark resemblance to Bernhardi’s, including competition for resources, conflict as the mechanism of increasing efficiency in evolutionary progress, and that nations formed groups analogous to organisms in competition with each other.\textsuperscript{30} Interestingly, both Wyatt and Bernhardi had room for appeals to a divine teleology, combining it with their evolutionary portrayal of human progress. Still, they were both attacked under the label of “Bernhardism” by Christian intellectuals in Britain during the war.

Wyatt, a staunch supporter of the new imperialism, also shared with Bernhardi a lack of training as a biologist or scientist. By contrast, many of the thinkers who formed the anti-war circles in evolutionary thought were either zoologists, eugenicists, or evolutionary biologists. Georges Valois, a French political activist, was a rather interesting case; although his political views had shifted considerably from the far left to the far right and various points in between, his biological conception of war remained relatively stable. He wrote \textit{L’Homme Qui Vi	extsuperscript{e}nt} in 1906, forecasting the concern with efficiency that Bernhardi and Wyatt would later promote. At their centre, his arguments were concerned with economic efficiency in particular, but he spoke of “the decline, the death of every living being which abdicates, which renounces, effort.\textsuperscript{31}” Similarly, he viewed nations as being essentially organisms; war was the process by which they evolved into more efficient types, and he argued that the displacement of workers in vanquished nations by victorious ones was one model by which humanity as a whole could be improved. Simply put, those nations who had an energetic economy and labour force would prevail over those who were inefficient.\textsuperscript{32}

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\item \textsuperscript{28} Bernhardi, 21.
\item \textsuperscript{29} Kelly, 102.
\item \textsuperscript{30} Hawkins, 209-210.
\item \textsuperscript{31} Quoted in Hawkins, 212.
\item \textsuperscript{32} Ibid.
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The outbreak of war in 1914 and its quick transformation into a stalemate would change the way that the debate was framed in the intellectual landscape. The theories of Bloch and Angell were, to a certain extent, validated in the sense that the war was seen as terribly costly and an utter catastrophe by virtually all observers. Hawkish biology was seen as being part of the militant vein in the German psyche that had to be subjugated if similar wars were to be avoided in the future. And, perhaps most importantly, the war provoked a fundamental rethinking among some intellectuals about man and the question of his inherent pugnacity.

Intellectuals at War: the “Germanization” of Evolutionary Thought

“He is, in fact, really a kind of Red Indian in a Prussian uniform, but without the Red Indian habit of silence,” claimed A. Clutton-Brock of Bernhardi in 1915. In Bernhardism in England, part of a series of publications written by Christian authors entitled “Papers for Wartime,” Clutton-Brock claimed that

If he were unique he would be merely a curiosity; but unfortunately he is not, and that is why the word Bernhardism has been coined, to express not merely what he says but what is said and thought by all those in every country who believe in his doctrine of war.33

These words were published in the context of anti-German wartime sentiment. The paper, while being motivated by a series of “convictions,” including "That the war is none the less an outcome and a revelation of the un-Christian principles which have dominated the life of Western Christendom," was an attack not only upon Bernhardi but the very idea that war was a desirable mechanism of progress.34

In 1918, Jordan labeled “Social Darwinism” as a set of ideas that had been produced in German intellectual schools, attacking it as an ideology that championed the mighty destroying the feeble and twisted evolutionary theory for its own designs.35 Even more damningly, Vernon Kellogg, an American evolutionary biologist, condemned what he saw as the “Germanization” of Darwin and other thinkers, citing his own experiences having “lived in and traveled about all over German occupied

34 Ibid., 2.
Belgium and France, seeing and hearing many incredible things.” In an article published in March of 1918, he reported that

In books about war and its relation to the evolution of man, especially in books written by Germans, I had often read the somber declarations that war takes the place in human life that the rigid and ruthless Darwinian struggle for existence holds among the lower animals, and that the Spencerian survival of the fittest, as applied to human groups, was to be determined chiefly, if not solely, by the outcome of wars to extinction.

Kellogg claimed that he had spoken with German officers in occupied France who spoke of war in these terms—something he called “tiger biology”. On the other hand, he took the opportunity to reassure his readers that the Germans had gotten it all wrong, and that mutual aid and a number of others factors were of more importance than the conflict principle as evolutionary mechanisms.

Certainly, the galvanization of intellectual opinion against war biology during the war years was largely a matter of anti-German (or at least anti-militarist) wartime fervor. Certainly, thinkers such as Wyatt and Valois must have felt a significant degree of pressure to recant their views or keep quiet, as “Bernhardism” was attacked as something essentially German. In the French case, mainstream Lamarckian intellectuals attacked their colleagues who had Spencerian leanings, depicted Germans as bloodthirsty militants who had twisted evolutionary theory, but muted their criticisms of “Social Darwinism” among the British.

Paul Crook theorizes, however, that pacifist biology held more sway even before the beginning of the war as “its value system” was more in line with “entrenched military culture” than those who put forward militant readings of human evolution. Thinkers like Wyatt, at least in Anglo-American thought, were relatively sparse. Spencerian-inspired evolutionary theory tended to be popular in Germany, however; with the decision to adopt a Machtpolitik style of foreign relations after the dismissal of Bismarck as Chancellor, Allied intellectuals could point to Bernhardi and others as

37 Ibid., 364-365.
38 Ibid., 365.
39 Ibid., 369.
40 Clark, DD1041-DD1042.
41 Crook, Darwinism, 3.
being representative of Prussian militarist Kultur, regardless of how widespread his theories were. Certainly, this was the case as far as the war biology question was concerned.

**Man the Savage Beast: Psychology and the Pessimist School**

The “pacifist” and “militarist” schools of biological thought did not represent a binary division in the debate. A number of psychological theorists found a sort of middle ground between the two, arguing that pugnacity might be an inherently human instinct, but that war was not desirable between civilized societies. This, in the words of American psychologist William James, was caused by the “double personality” of civilized man. Drawing upon a trend in Western thought and literature (Beauty and the Beast, The Strange Case of Dr. Jekyll and Mr. Hyde) that portrayed man as a savage beast under the thin veneer of civilization, he suggested that

Our ancestors have bred pugnacity into our bone and marrow, and thousands of years of peace won't breed it out of us. The popular imagination fairly fattens on the thought of wars. Let public opinion once reach a certain fighting pitch, and no ruler can withstand it. In the Boer war both governments began with bluff; but they couldn't stay there — the military tension was too much for them.

The “double personality” of man was prominent in the writing of other psychologists, including Sigmund Freud and J. R. Angell (no relation to Norman Angell). Its ominous acceptance of “hard” evolution (human instincts could not be easily “bred out”) was an implicit rejection of Lamarckian theories about the malleability of physical and mental traits as an evolutionary mechanism.

William McDougall, a British psychologist, concurred that pugnacity was a strong instinct, but theorized that war might be in the process of being replaced by other kinds of competition, such as the capitalist market. The question, then, was how best to mitigate the instinctive aggressiveness of man; James put forward a solution in a paper entitled “The Moral Equivalent of War,” suggesting that a conscripted labour force of men could be put to work in lieu of a military life. His language bears some of the signs of the cult of masculinity that Roosevelt and others embraced, although framed in a pacifist context:

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44 Ibid.
War, Peace, and Progress

Such a conscription, with the state of public opinion that would have required it, and the moral fruits it would bear, would preserve in the midst of a pacific civilization the manly virtues which the military party is so afraid of seeing disappear in peace.\textsuperscript{46}

The experience of the First World War lent credence to the basic elements of the pugnacity theory. While the militarist and pacifist schools of thought survived in some form or another, the pessimist arguments reflected a wider cultural and intellectual shift away from the optimism of the Victorian period. On the other hand, arguments that derived from biological determinism more generally slowly fell out of favor, attacked by cultural anthropologists such as Franz Boas during the interwar period. The popularity of eugenics in the United States and Germany proved to be a notable exception—the last sigh of the beast before being discredited after the Second World War.

Before and during the First World War, however, a number of thinkers sought to explain war and peace in evolutionary terms. Appealing to the powerful language of biological science and new developments in evolutionary theory during the second half of the nineteenth century, they used a variety of trends in the thought of Spencer, Lamarck, Darwin, and others to make the case for war preparation, peace activism, or utilitarian solutions to the darker side of human nature.

While some of the people who made these arguments had a career background in some aspect of biology, many simply used biological language to reinforce their other pronouncements about international conflict. As these evolutionary theories of war and peace both influenced, and were influenced by, corresponding understandings of how the international system operated and should have operated, it is difficult to pinpoint any one theory or intellectual authority as having shaped the prewar mood.

In an ironic way, the destruction of the First World War made a strong case for the need for international peace. The trends in evolutionary theory, such as “conflict,” “mutual aid,” and “pugnacity” were all interpreted within the realm of human possibility, confining or liberating the potential for future visions of civilized society. Nearly a century after the debate about the biology of war reached a crescendo during the First World War, international conflict still plagues mankind, peace still lies just beyond reach, and cynicism towards “human nature” is as strong as ever. Even if the discursive rhetoric surrounding these issues has changed over time, the debate has yet to be resolved in theory or in practice.

\textsuperscript{46} James 468.


War, Peace, and Progress


