

# Both War and Peace Are in Our Genes

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I am not a neurobiologist and can say nothing serious about DNA, neurons, or the brain. Still, because the biological underpinning of war and peace has been the subject of much confusion and heated controversy—among neurobiologists, anthropologists, psychologists, political scientists, and others—it is in great need of clarification.

The root of the confusion is this: people habitually assume that if widespread deadly violence has always been with us, it must be a primary, “irresistible” biological drive that is nearly impossible to suppress. Many find in this conclusion reason enough to object to the idea that human fighting is as old as our species while others regard it as compelling evidence that war is inevitable. Both sides are wrong. Contrary to fashionable 1960s notions, traced back to Freud’s latter-day theorizing about a death drive or instinct, violence is not a primary drive that requires release, like hunger or sex. The Swiss or Swedes, for example, who have not fought for two centuries, show no special signs of deprivation on this account. But try to deny them food for more than a few hours or sex for more than a few days, and their reaction would be quite predictable.

On the other hand, the fact that violence is not a primary drive does not mean that we are not hardwired for it. Studies on “warless” prestate societies usually intend to prove that, neither primordial nor natural to humankind, warfare was probably a late—and in any case, wholly contingent—cultural

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phenomenon. Margaret Mead's framing of the problem in her 1940 essay "Warfare Is Only an Invention—Not a Biological Necessity" is the mother of all mistakes.<sup>1</sup> It expresses the widespread assumption that violence must be either a primary drive or entirely learned, whereas in reality its potential is deeply ingrained in us as a means or tool, ever ready to be employed. People can cooperate, compete peacefully, or use violence to achieve their objectives, depending on what they believe will serve them best in any given circumstance. In cooperation, the parties combine efforts, in principle because the synergic outcome of their efforts divided among them promises greater benefit to each of them than their independent efforts might. In competition, each party strives to outdo the other in order to obtain a desired good by employing whatever means it has at its disposal except direct action against the other. Competition runs parallel. By contrast, in a conflict, direct action against the competitor is taken in order to eliminate it or lessen its ability to engage in the competition. If physical injury is inflicted, then a conflict becomes a violent one.

Cooperation, competition, and conflict are the three fundamental forms of social interaction. People have always had all three options to choose from, and they have always assessed the situation to decide which option, or combination of them, seemed the most promising. People are well equipped biologically for pursuing any of the above behavioral strategies, with conflict being only one tool, albeit a major one—the hammer—in our diverse behavioral tool kit. Furthermore, *Homo sapiens* is a social species whose local and regional groups—universally and uniquely bound together by ties of both kinship and shared cultural codes, including language and customs—cooperate within themselves in a variety of group activities. The latter include fighting, which is pursued for the attainment of collective goods—above all, hunting territory and other scarce sources of food.

Thus, neither a late invention nor a compulsive inevitability independent of conditions, group fighting is part of our evolution-shaped behavioral menu. It is in this sense that *both war and peace* are "in our genes," which accounts for their widely fluctuating prevalence in different sociohistorical contexts. As the "Seville Statement on Violence" (1986), issued by an international group of scientists under the auspices of the United Nations Educational, Scientific and Cultural Organization (UNESCO), rightly put it in rejection of the view that human biology makes violence and war inescapable, "There is nothing in our neurophysiology that compels us to react violently. . . . We conclude that biology does not condemn humanity to war." However, the statement fell into the

opposite fallacy, proclaiming that warfare “is a product of culture” and solemnly prescribing that “IT IS SCIENTIFICALLY INCORRECT to say that war or any other violent behaviour is genetically programmed into our human nature” (emphasis in the original). The statement carelessly concludes that “violence is neither in our evolutionary legacy nor in our genes.”<sup>2</sup>

In reality, the potential for *both war and peace* is embedded in us. Although activated interchangeably and conjointly in response to the overall environmental and sociocultural conditions, all three behavioral strategies—violent conflict, peaceful competition, and cooperation—are not *purely* learned cultural forms. This naïve nature/nurture dichotomy overlooks the heavy and complex biological machinery that is necessary for the working of each of these behavioral strategies and the interplay among them. Certainly, these deep, evolution-shaped patterns are variably calibrated to particular conditions through social learning. However, the reason they are all there, very close under our skin and readily activated, is that they were very handy during our long evolutionary history. They all proved highly useful and advantageous, thereby becoming part and parcel of our biological equipment.

Wars have been fought for the attainment of the same objects of human desire that underlie the human motivational system in general—*only by violent means*, through the use of force. Politics—domestic and international—is the activity intended to achieve these evolution-shaped human desires at the intra- and interstate levels. International relations theory has increasingly lost sight of human objectives as the engine of conflict and war, focusing almost exclusively on “enabling conditions” such as international anarchy (which in any case ceased to be conducive to war among countries that participate in the modern liberal political and economic order, as in North America and Western Europe). Nor is it true that all sides in a war lose, are “tragically” caught in some sort of a prisoner’s dilemma—a claim that constitutes another huge misstep taken by international relations theory. Although all sorts of prisoner’s dilemmas are found in conflict situations, throughout human history there have been many winners and losers in war.

On the other hand (and here I take issue with Steven Pinker’s *The Better Angels of Our Nature*, with which I am otherwise in much agreement), particular human quests such as dominance or ideology are not “demons” with which the blame for war rests.<sup>3</sup> Dominance or ideology, no less than the desire for love and sex, can just as well be counted on the side of the “angels” when pursued by peaceful means and for peaceful ends. Furthermore, the distinctions that Pinker draws between different categories of violence, respectively related

to the above “demons,” are also questionable. He cites studies showing that separate parts of the brain may trigger violent behavior, which is true of nearly all behaviors. But this does not mean that all violent behaviors are not subject to, and regulated by, a unified evolutionary calculus originally designed to advance survival and reproduction.

The “problem” of war is not these or other human desires—desires that make us what we are, that are the stuff of life. Rather, violence and war occur when the conflictual behavioral strategy is judged to be more promising than peaceful competition and cooperation for attaining objects of human desire. *Both* our basic desires *and* the conditions that channel the efforts to fulfil them to the conflictual path are necessary for understanding why war occurs. Thus, state authority and coercion have tilted the menu of human behavioral strategies in the direction of the peaceful options in the domestic arena. Furthermore, changing economic, social, and political conditions are generating a similar effect in the international arena, most notably where a modern liberal economic and political order prevails and peaceful behavioral options become that much more rewarding than the violent option.

#### Notes

1. Margaret Mead, “Warfare Is Only an Invention—Not a Biological Necessity,” *Asia* 40, no. 8 (August 1940): 402–5.
2. “The Seville Statement” (Paris: UNESCO, 1986), <http://www.unesco.org/cpp/uk/declarations/seville..pdf>.
3. Steven Pinker, *The Better Angels of Our Nature: Why Violence Has Declined* (New York: Viking, 2011).

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