

## [A Neurophilosophy of Conflict, War, and Peace](#)

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*Editor's Note: This is the second in a three-part series exploring the relationship between neuroscience, philosophy, and society.*

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Theories of conflict in the social realm have a long history dating back to Ancient philosophy. In modern philosophy, Marxist approaches made debates about conflict and, subsequently, about justice, central to their theorizing. Generally speaking, political philosophy and philosophy of human nature is underscored by a preoccupation with conflict, its causes and resolution. So what is it that drives humanity and why does conflict arise at all? This post, part of a series on neurophilosophy and political theory and governance, explores conflict from a neurophilosophical perspective. It complements a previous post on conflict in global politics and engages with existing approaches to conflict (as a perennial element in social and political life), as well as with the future of conflict in the age of enhancement technologies.

### **Conflict – a contested notion**

The ideal state in [Plato's Republic](#) is a state where justice is achieved by avoiding overstepping one's function and role, therefore having and doing what belongs to oneself. Plato's idea of justice went hand-in-hand with a rejection of excess, which meant not going against one's nature. Accepting that everything in nature is part of a hierarchy, and that every individual and species must contribute to general harmony, also means accepting that each and every one must fulfil their purpose and not disrupt the position into which they have been placed in the social hierarchy. Anarchy was the ultimate wrong because it was a state of unjust and unnatural state of affairs.

Such ideas are opposed by philosophers of accountable and open societies. [Karl Popper considered Plato's ideas](#) of an ideal state to be no less than totalitarian, harboring little freedom and diversity of thought. Moreover, for Plato, everyone's transgression was an act of unjust tyranny because it disrupted the natural order – an idea profoundly contrasted to everything professed later by liberal ideals. For Plato, instead, the collective took precedence over the individual and any notion of self-determination in such a system was considered dangerous, if not heresy. The three major classes of this ideal state had to duly remain within their designated limits. The guardians had to govern the city, the auxiliaries had to defend it and the producers were the lowest class who could in no way claim to live a free life. In Plato's utopia, conflict occurred when this rigid social ordering was broken apart, thus committing not only an act of injustice but also of disequilibrium to global harmony.

Platonic ideas are in opposition both to liberal and equitable ideas and to Marxist conceptions of conflict and the state. Marx argued for a utopia of no social classes, which would result from the struggle between workers and the proletariat, a conflict born out of injustice and exploitation by the ruling class. However, [Chris Wright](#) makes a fair point by not placing Plato and Marx in total opposition because, firstly, they employed different definitions of 'class' and, secondly, they shared a common goal, which was to preserve the wholeness of the community and give it priority over "the behaviour of atomized individuals".

Max Weber later refined Marx's idea of [conflict](#) further, stating that more than one conflict over property existed in society at any given point. To this, Weber added an emotional element to conflict because different groups were affected differently by inequality and they shared different perceptions of legitimacy vis-à-vis those in power.

Feminist accounts described conflict in terms of gender roles whereby men benefitted from wealth and status at the expense of women, whom they kept in oppression.

Without over-simplifying, theories of conflict in society have defined it in terms of some form of injustice: conflict was either a form of unjust disruption of global harmony, or it was a necessary process for mending injustices in society. Critically, however, theories of conflict looked at 'human nature' through abstract, tragic or highly humanistic lenses. In the 21<sup>st</sup> century, we can amend theories of conflict based on neuroscientific evidence, which provides direct insight into the workings of the human brain.

In the international realm, theories of international politics have placed excessive emphasis on conflict as a manifestation of (the search for) power. Moreover, according to Classical Realism (the most influential traditional approach to international politics to date) the origins of international conflict were to be found in highly materialistic motivators, such as resources geopolitics, but – more significantly – this had a primary and underlying motivation in human nature.

In classical Realism, man is selfish, power-driven and competitive and, as Hans Morgenthau concludes, driven by an insatiable *animus dominandi*, or lust for power and domination. Conflict is, as a result, unavoidable in any social system because of the eternal flaws and weaknesses of man. By analogy, states on the international stage mirrored the characters of individuals in society: power-driven and competitive, and by definition, bound to clash. The state was therefore an anthropomorphized embodiment of man.

Yet, this understanding of the nature of states as analogous to human nature departed from a very minimalist Hobbesian understanding of the latter: man was defined in simplistic terms as selfish and competitive, making cold calculations driven by an impetus to survive and dominate. If we are to accept this analogy, for states *are* human entities after all, this understanding of human nature must be revisited as well. States, just like humans, are not defined solely by rationality, but also by [emotionality](#). The emotionality of states has been a constant feature of global politics, and it has been a determinant factor for international conflict throughout history. In various degrees, states have initiated or entered conflict not only for land and borders but also for the emotional significance of those material resources or for deeply emotional factors such as identity. This aspect of emotionality coalesced during the Cold War in the paradigm of [strategic culture](#), which looked at strategic doctrines and security policies holistically, accounting for all the elements that shaped a nation's vision of its position in global politics, including material resources, as well as idiosyncrasies such as national myths, shared historical narratives, and patterns of behavior or patterns of alliances and [habits](#).

Most theories of conflict seek to explain it in relation to human nature and basic wirings. The main shortcoming in some of these paradigms is not the reference to human nature at the origin of conflict, but rather the polarized nature of these explanations, seeing humans as either innately immoral and violent (and deterministically prone to fight each other) or as kind, generous and perfectible.

### **Neurophilosophy of conflict**

Humans can be both moral and immoral and the distinction between the two is most often dictated by circumstances. In other words, there is nothing innately inbuilt in us except a basic predisposition for survival (see a [previous article](#)). For the most part, our moral compass will develop and evolve depending on our environment, on the nature of institutions and conditions we are faced with. Simply put, conditions of deprivation, fear and insecurity will breed further fear and increase the likelihood of pre-emptive violence or pro-survival actions. By contrast, the existence of accountable institutions, which ensure not only the basic conditions for human survival, but also human dignity, are sure to guarantee a climate where morality and social cooperation can thrive, and conflict can be minimized.

In recent decades, evidence from neuroscience, especially in the field of cognition, decision-making and emotionality, has been increasingly taken up by philosophers and political theorists in an attempt to better understand 'human nature' and the correspondence between brain chemicals on the one hand, and human traits, such as morality, altruism and ethical values on the other. Studying the neurochemical underpinnings of moral behavior, for example, revealed new facts about how the brain processes moral judgment and about the extraordinary malleability of our brains. Because our brains are malleable, morality must not be seen as a 'static' concept either.

One chemical in particular, [serotonin](#), has been studied at length in recent years, in connection to moral behavior. Serotonin is a monoamine neurotransmitter that is evolutionarily speaking, ancient, and very widely distributed across the mammalian nervous system, with highest densities of serotonin concentrations in some limbic structures, regions of the striatum and the medial orbitofrontal cortex. The role of serotonin in moral behavior has been demonstrated on multiple occasions, including for pro-social behavior such as grooming and affiliation – [precursors](#) to human

morality. Experiments conducted by a team of neuroscientists in the UK showed that serotonin levels are positively correlated with [‘harm-avoidant traits’](#) in humans and that imagining harmful acts committed against others engages regions of the brain with dense serotonergic projections. (Individual differences and attitudes play a role too, but that does not preclude the results of the findings.)

This example shows that alterations in brain chemistry have a bearing on how the brain will process moral judgment. Because our brains are highly malleable, there is very little in our nature that is not vulnerable to changing circumstances. To create the premises for peace and harmony, both domestically and internationally, it is important to account for the fragility in our nature and build accountable institutions that guarantee human dignity for all, at all times and under all circumstances. This is not an idealistic call for global harmony, but a very pragmatic one. Political contexts that frequently assault the human need for dignity are bound to collapse because they feed a climate of hostility, breeding social disruptions and conflict. Plato’s Republic could not have survived for long because it was premised on deep class divisions, which overlooked a commonality across our species: our universally shared neurochemistry. Any political system that would disregard this basic fact can only devolve into conflict.

There are two other areas of conflict studies where neurophilosophy – and neuroscientific evidence – can enrich the debate not only intellectually, but also normatively.

### **Neurophilosophy and divisive politics**

In today’s highly polarized world, neuroscience can further guide us to understand the profound origins of divisive politics. Politics premised on [“us versus them”](#) narratives have been resurgent in recent years, although this is hardly a new phenomenon, and hardly unique to the way we have, historically, functioned as social entities. Divisive politics appeal to ancestral fears and to some of the most basic neurocircuitry in the human brain. This predisposition to barricade ourselves from outsiders is driven by the desire for survival and reproduction. Non-invasive methodologies for studying the neurocircuitry of ‘tribal behavior’ revealed that the distinction between “insider” and “outsider” occurs in the prefrontal cortex (PFC) and is expressed neuroanatomically through [responses](#) in different brain regions: when asked to judge people considered “similar”, areas in the ventromedial PFC are active (a core function of the [ventromedial PFC](#) is to aid in value-based decision making, including assessments of risk). while people considered “dissimilar” elicit activation in areas in the dorsomedial PFC (the [dorsal medial PFC](#) is closely associated to social cognition and with the ability to reason about other people’s mental states). Moreover, this distinction in the brain is made in a ‘split second’ – quite literally, as it takes the brain [170 thousandths of a second](#) to recognize someone as being part of “our group” or an outsider – although the good news is that what happens after that almost instant recognition, in terms of actions or reactions, is *learned*.

However unsettling this picture may seem, it does *not* have to mean we are locked in the perpetuity of our biases. Given the extraordinary plasticity of the human brain, and its response to conditions in the environment, the brain is capable of subduing unconscious prejudice. Egalitarian norms, for instance, can gradually change that. A [study](#) at Harvard and Yale analyzing perceptions of race in the US showed how *reflective processes*, cultivated through positive messages and egalitarian beliefs, can assuage the automatic process of ‘out-group devaluation’. In this study, participants presented for only 30 milliseconds to black faces showed greater amygdala (the brain structure most analyzed in

relation to fear and emotional learning) activation compared to white faces. However, when the same faces were presented for 525 milliseconds, the brain region that showed greater activity was not the amygdala but areas of the PFC and the anterior cingulate – regions also associated with inhibition and control. While the study focused on race relations in the US, it is telling in a wider discussion on conflict.

Still, such findings should not be used to make deterministic conclusions about all social and political processes – not in the least because neuroscience is a fast-evolving discipline – but we must heed to insights made possible with the tools of neuroscience. Conflict cannot be separated from human nature and no other discipline charts human nature better than the study of the brain.

### **Potential Future Societal Conflicts**

Finally, a few remarks on a *future*, and unprecedented, kind of conflict. I discussed ethical aspects of [transhumanism](#) in a previous post and so I will only briefly recall here the potential for conflict brought about by trans- and post-humanism. Interventions to enhance human physical and cognitive capacities beyond normal levels will deal a blow to the social contract and the fundamental notion that we are entitled to inalienable rights by virtue of being all *human*. As the very least, milder forms of enhancements can widen the gap between haves and have-nots (presuming that the wealthy will access enhancements long before others), and create tensions in the workplace, academia and warfare.

Concerns of [meritocracy and fairness](#), already compromised by other forms of inequalities, will become even more acute. In more [extreme forms](#), in a future when neurotechnologies permit more radical forms of intervention to the mind and body, the very essence of what it means to be *human* will be thrown into question, and with this, the underlying presumption of an equality in dignity of all human beings, grounded in their shared *humanity*. A [hierarchical ordering](#) of humanity along categories of enhanced and non-enhanced would most likely entail a denial of certain rights and increase the chances of social conflict. Our nature, driven by powerful motivators which I previously called the *Neuro P5*: power, profit, pleasure, pride and permanency, will push us to adopt technologies that promise to enhance one or more of these motivators. The only way to avoid bleak scenarios is to regulate the market for enhancements because we cannot leave it to our ‘rationality’ to prevent such outcomes.

The next post in this series will look at the legacy of the Enlightenment, and proposes a new more accountable and sustainable form of Enlightenment, with insights from neuroscience and neurophilosophy.

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