
Hostility towards groups from an evolutionary perspective

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Published: April 04, 2026 | DOI: 10.66670/iqvr.2026.0020

Abstract

This paper examines group-based hostility using the concept of evolutionary mismatch. This concept is based on the hypothesis that behaviors shaped by evolution become dysfunctional in modern environments. The study argues that anthropological phenomena such as nationalism, ethnocentrism, and systematic group hostility can be explained not primarily by ideology, but by the interaction of three factors. The analysis integrates findings from evolutionary psychology, neuroscience, historical system dynamics, and political ecology. It demonstrates that extreme dominance behavior generates systemic instability in the long term and is thus self-limiting. At the same time, the study argues that only humans, through prefrontal-limbic integration, possess the ability to overcome this evolutionary misprogramming.

Keywords: Evolutionary mismatch, group-focused hostility, self-construction, territorial behavior, hate displacement, systemic instability, prefrontal-limbic integration, evolutionary psychology

Introduction by Prof. Dr. Elsa Anderson

My work as an ecologist is fundamentally concerned with how systems behave when they are pushed beyond the conditions that shaped them. Populations overshoot carrying capacity, species introduced to novel environments lose the regulatory pressures that once kept them in check, behaviors that conferred advantage in one context become liabilities in another. These are patterns I have observed repeatedly in the field, and they form the conceptual backbone of how I understand living systems.

What this piece does, and what I find worth engaging with seriously, is apply that logic to human social behavior. The argument that in-group preference, resource accumulation, and dominance behavior represent evolutionary adaptations now operating outside their original context is not a new one, but it is made here with care and with appropriate citation of the relevant literature. The mismatch framework is well-established in evolutionary medicine and psychology, and its extension to phenomena like nationalism and intergroup hostility is a legitimate and underexplored direction.

I would not describe myself as a science purist. Ecology has always been a field that sits at the intersection of the empirical and the interpretive. We model complex systems knowing that our models are incomplete, and we draw conclusions about processes we can never fully observe. This piece operates in a similar register. Where it moves into territory that exceeds what the data can strictly support, it acknowledges that it is doing so. I find that honesty more valuable than a narrower claim that stayed safely within its lane.

1. The evolutionary perspective

Group-focused hostility is often viewed from the perspective of ideologies and interests, but rarely with regard to evolutionary influences.

Humans are subject to two conflicts in their self-identity: on the one hand, they possess animalistic/evolutionary prehistoric instincts, in which they act like puppets of nature; on the other hand, modern humans are trapped in their mental self-image - the concept of the «self» and all its values and foundations of existence. These two aspects overlap, creating an all-the-more-dangerous cocktail.

1.1 Evolutionary Foundations of Group Preference

From an evolutionary biological perspective, humans follow an ancient instinct. Many animal species, especially those that live in social groups (such as primates or wolves), exhibit a strong bond to their own group and aggression toward individuals who do not belong. This often serves to protect resources, territory, or the genetic integrity of the group.

But humans go even further: the group becomes a state, and in extreme cases, group loyalty turns into ethnocentrism or even racism. This is happening all over the world.

These tendencies also follow the natural principle of an evolutionary mismatch, which is ignored and leads to the belief that one must preserve one's «own group.» Even infants show preferences for familiar facial types (Kubota et al., 2012). What was an advantage in small groups in the Paleolithic era, has become a challenge in our modern societies with millions of people. While the release of dopamine, serotonin, and oxytocin once promoted cohesion by rewarding us for group membership, these neurological mechanisms fail to fulfill their original adaptive functions today and thus have a counterproductive effect. (See, for example, Nave et al., 2015, regarding the controversial discussion surrounding oxytocin and its role in ingroup/outgroup dynamics).

1.2 The Mismatch Phenomenon and Its Consequences

Such hostile behavior contradicts natural patterns of life: behavior reminiscent of war scenarios in the human world has been documented in less than 0.001% of all known animal species. Even in chimpanzees, it occurs only under specific ecological conditions. In humans, however, group-based hostility is widespread across cultures. This raises the question of what drives the human species to decouple itself so completely from evolutionary selective pressure and to inflict such dysfunctional harm upon itself and the Earth. Since Stone Age instincts continue to frame scarcity, loss of territory, and outgroups as existential threats, humanity will likely remain under

this «curse» until it takes control of itself - a process for which nature would otherwise likely allow hundreds of thousands to millions of years to pass.

2. The Modern Age and Self-Awareness

Today, people in almost every region of the world have not only sufficient essential resources such as food and clothing at their disposal, but often even more than is necessary for survival, and yet the «unconscious animal» within humans always wants more. If humans are not already nature's puppets in this regard - to the extent that they do not even realize what they are actually doing - mechanisms such as endless greed, which has also taken an evolutionary wrong turn, come into play as well. The ingrained tendency to secure resources and maximize status, shaped by a time when there was never enough, can no longer be turned off. This leads to even those with power and wealth - whether individuals, corporations, or states - being systemically driven to continually accumulate more.

The evolutionary drive for more, once crucial for survival and reproduction, can become an insatiable and ultimately self-destructive quest in this context. (Stearns, S. C. (2012); Sapolsky, R. M. (2017); Gluckman, P. & Hanson, M. (2006))

2.1 The Narrative Construction of the Self

Amid this evolutionary discrepancy lies the human ego - in short, the modern self.

Humans must acknowledge that the human «I» is a narrative or mental construct that has not yet received real recognition from evolution. Regardless of how much recognition and validation one receives within one's social worlds for the reality of one's «I» thoughts, this I remains merely a thought in the echo of the universe. This is not a cruel gesture toward humanity, but rather reflects its alienation from nature. When humans look hard, coldly, and directly at their true roots, such constructs do indeed represent an intellectual legacy that they could pass on during their lifetime; however, they lack any real permanence supported by nature.

2.2 Neuroscientific Perspectives on the Self

Brain research finds no single self-center. Instead, the sense of self arises from the complex interplay of various brain regions and neural networks that integrate sensory perceptions, memories, emotions, and action planning. It is an emergent phenomenon that emerges from these processes but cannot be reduced to a single entity.

In fact, even if only philosophically tenable, a human being is certainly more than a temporally limited being if they were to extend their self to all of humanity and ultimately

to the universe. When a person ceases to limit their self solely to what they can feel and do, they come closer to their inner nature. While this nature has destined them to focus only on themselves, it also reveals that they are more than that and that perception is not necessarily the primary means of self-identification.

One could go even further here and describe the «true self» as the only real self, if there must necessarily be a sense of self. While a person is focused solely on themselves and defines themselves through their thoughts, feelings, pains, and sensory perceptions, this is merely an expression of a «function» in which what is called consciousness is reflected. The human perspective on these experiences alone divides the individual: humans view their thoughts and experiences as something happening outside of themselves. They are not their thoughts, but rather they think them. Consequently, they limit themselves solely to the body, which they in turn refer to merely as «their body.» But who or what, then, is the self? The more one probes here, the clearer it becomes that this self does not exist as a single entity at all.

Human self-identification, the I, manifests as a neurocognitive construct that is inseparably linked to the limited capacities of our perceptual systems and the interpretive activity of the brain (see Metzinger, 2003; Damasio, 1999). This subjective reality is a dynamic, narrative self-model that is adaptive for survival and social interaction, yet does not represent the organism's complete ontological reality. From a deeper biological and evolutionary perspective, the true self of every living being can be understood as an expression of the emergent phenomenon of life and the ongoing process of evolution. From this perspective, the organism is a complex, temporary vehicle for the transmission of genetic information that has been shaped over billions of years by natural selection. Persistence thus lies not in the static, conscious I, but in the continuity of biological processes and genetic inheritance, which have produced us as a product of evolution and constitute the molecular basis of every individual life.

2.3 Identity as a Source of Threat and Aggression

This brings us back to the danger of modern humans identifying too strongly with their thoughts. In reality, all humans can be traced back to the same species.

Precisely because humanity as a species bears the responsibility to overcome such destructive dynamics, it is essential to understand the deeper psychological roots of racism and exclusion. From a psychological perspective, a mechanism of compensation is often evident: those who possess a true sense of worth and superiority generally feel no need to demonstrate this by devaluing other groups. Yet humans carry within them a deeply unconscious, low sense of self-worth, resulting from the painful gap between their grandiose self-image as rulers of nature and the humbling realization that, from an

evolutionary perspective, they are merely one mortal, biological being among many - a truth from which they flee their entire lives.

Hierarchies and the denigration of other groups can therefore be interpreted as an expression of insecurity or a threatened sense of self-worth. When governments or other groups demonstrate superiority and insult others, this can fuel precisely the dynamic on the opposing side that refuses to be «less.» This gives rise to a dangerous will, fueled by the feared hatred of self-assertion, which manifests itself in such structures - a grim pattern found in many conflicts, including those between belief systems, and which ultimately contributes to the endless suffering in human history.

3. Hate as an Emotion: Adaptive Function and Dysregulation

As an animal in nature, humans could have been superior, and other mammals would likely have submitted to them. Humans, however, react to this with hatred. This is an underestimated emotion bestowed by evolution to teach a lesson: Humans cannot do as they please with others simply because they might actually be able to do so due to their superiority. Nature has turned humans into «monsters» by giving them hatred and vengeance as tools for self-assertion. Yet the harm this hatred inflicts is meant to demonstrate to humans that humanity, as a whole, is not functioning optimally in this world. Even though personal responsibility cannot be avoided here - and a victim remains a victim who is never given the power to act - hatred is always an expression of a wound inflicted by others.

This brings us back to the core message: Humans certainly harm themselves as well when they harm others. Scientific studies by Prof. Dr. Rachel Yehuda also show that traumatic experiences of ancestors can pass down a biologically sensitive stress system, which, together with stressful family histories, can reinforce the tendency toward aggressive retaliatory behavior in the next generation.

As an intense negative emotion, hatred fulfills an important social regulatory function in evolutionary terms by signaling violations of norms and unfair treatment and enforcing social boundaries. In modern, anonymous societies, however, this originally adaptive teaching function of hatred is often misdirected and is aimed at uninvolved third parties or entire groups rather than at the actual perpetrators of the harm. This displacement dynamic leads to a destructive cycle in which the original social-psychological lesson of hatred loses its corrective effect and instead victimizes new innocent parties. This displacement dynamic, which was already documented in early studies on the frustration-aggression hypothesis (Dollard et al., 1939), leads to a destructive cycle in which the original social-psychological 'lesson' of hatred loses its corrective effect and instead victimizes new innocent parties.

Modern research on the psychology of hatred confirms these displacement mechanisms (Sternberg, 2003), while studies on self-regulation show how such maladaptive behavioral patterns arise and are maintained (Baumeister & Vohs, 2004).

3. The Underestimation of Evolution

Although natural selection is considered a blind process, when one considers the result of millions or even billions of years of this selective pressure, an immanent tendency of life toward self-preservation and reproduction becomes apparent, at least from an objective perspective. This may not be scientifically interpretable as a conscious «will of the universe,» yet the phenomenon itself is undeniable: Organisms are geared toward surviving and perpetuating their existence. No empirical measurement is needed to recognize that humans have successfully survived as a species. This success is an expression of the fact that life, through this ongoing process of adaptation and selection, sustains itself and is evolutionarily persistent.

3.1 Historical Patterns and Systemic Instability

The history of humanity, on the other hand, illustrates an endless cycle of powers that have ultimately always been replaced. Once-dominant empires, such as those of the Persians, Romans, or Mongols, all repeat the same pattern of misguided evolution, which ultimately brought their persistence into fundamental conflict with the fundamental laws of the universe. The human brain may believe it is doing the right thing when it extols the virtues of infinite resources; yet evolution did not anticipate that humans, through their rapid development, would come to possess resources in excess. This leads to systemic dysfunction within the overarching cosmic and biological framework of which it is a part.

Human history and geological time reveal a recurring pattern: extreme, reckless behavior aimed at dominance - whether in social, ecological, or global power structures - is systemically unstable in the long term. Scientific evidence strongly suggests that extreme tyrannical and collectively harmful behaviors do not survive because they generate systemic instability, undermine cooperation and resilience, and lead to negative feedback loops that weaken the system itself or cause it to collapse. Nature (in the sense of the systemic laws of the universe and biological evolution) resists this in the very long term by eventually filtering out or transforming such systems. This is not a conscious decision, but a consequence of principles of sustainability and adaptability. These dynamics follow systemic feedback mechanisms as described in complexity theory and systems ecology. Historical examples of the collapse of unsustainable social systems are well documented (Tainter, 1988; Diamond, 2005), while the analysis of cyclical patterns in complex systems is supported by mathematical models (Turchin, 2003; Scheffer et al.,

2009). However, these empirically verifiable feedback processes differ fundamentally from teleological interpretations of a conscious universal regulation.

3.2 Human Dominance as a Disease

Although one might think that human dominance behavior represents nature, human dominance has gone far beyond the threshold set by evolution. Human dominance and territorial behavior is no longer an expression of a healthy nature, but a disease that has plunged the entire Earth into chaos.

4. Dominance and Responsibility

If we view humans as puppets of nature, it is their responsibility to rise above their own nature, which chains them here. Thanks to the prefrontal cortex, humans are the only living beings granted this ability. Instead, they abuse it to create and elevate fictional self-images and to place themselves above others. Eventually, they do this collectively as a group and ultimately as an entire government. Although humans possess the technologies and means to rise above this, within the context of great power they remain victims of evolutionary discrepancy, and thus harm not only others.

This includes territorial behavior as well as dominant and aggressive impulses influenced by archaic neural systems such as the amygdala or the basal ganglia. From an evolutionary perspective, the identity of the «group leader» plays no decisive role: likely, any actor in a position of power-political dominance would exhibit comparable behavioral patterns. And if we go back even further, we find an example of how one of the most powerful ecological eras of all time came to an end: the age of the dinosaurs. Metaphorically and philosophically, the end of the dinosaurs could be interpreted as a correction of a system in which megafauna predators strongly influenced ecological cycles. Whether cosmic events function as stochastic regulatory forces in planetary ecosystems remains an open teleological question that goes beyond current models.

4.1 Cosmic Perspectives on Regulation

Beyond a strictly scientific perspective, in a more philosophical or existential view, it can be assumed that the laws of the universe and nature do indeed protect the well-being of the collective in the long term.

Furthermore, this omnipresent «self-regulating mechanism,» which encompasses all fundamental phenomena such as gravity, the laws of evolution, and the complex feedback loops at all levels of the universe, would be named differently from various perspectives: Religious people would call God the creator, atheists the expression of the universe's evolution, and spiritual seekers the True Self.

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April 04, 2026, Navid Bayani

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