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Essay

# How to Solve the Problem of Inherited Behavior Patterns and Increase the Sustainability of Technological Civilization

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**Abstract:** The inherited behavior patterns (IBPs) that are incompatible with the technological civilization could present challenges which all emerging intelligences and civilizations must confront, and that may help explain Fermi paradox, at least in part, why we have not yet detected any alien civilizations. The civilizations that cannot solve the problem of incompatible IBPs may inevitably become extinct shortly after the appearance of advanced technologies. The current technological civilization is addressing the dangers posed by IBPs too ineffectively to ensure the long-term survival of civilization. One of the first steps that can be taken currently is to increase public awareness of the threats posed by incompatible inherited behavior patterns (IBPs). This can be achieved through widespread education, aimed at both the general population and key decision-makers. Looking toward the future, one potential solution to the problem of incompatible inherited behavior patterns (IBPs) is genetic reprogramming, which could be developed over the next 50 to 100 years. Through advanced genetic engineering techniques, we could potentially modify human behavior to be better suited for conditions prevailing in a technological civilization.

**Keywords:** Evolutionary behavior; inherited behavior patterns; sustainability of technological civilization; genetic engineering of behavior

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## Introduction

All intelligent biological organisms initially possess a range of inherited behavior patterns (IBPs) that are not well-suited for the conditions of civilized societies. In fact, some of these IBPs may be highly incompatible with such environments and have the potential to lead to self-destruction.<sup>1</sup> Human civilization is shaped by various inherited behavior patterns (IBPs), many of which form the basis of human values, such as leadership (status within a group) and material wealth (control over energy resources)<sup>1</sup>. However, some of these IBPs are not well-suited to modern society and can result in negative consequences. For instance, the drive to acquire and display dominance over energy resources and social status can contribute to the overconsumption of resources, leading to ecological crises, and violent conflicts between groups, such as wars.<sup>1</sup> Other human impulses, while generally less harmful, still present risks. These include curiosity (which may prompt the premature use of dangerous technologies), the sex drive (which can lead to overpopulation), parental instincts (focused on nurturing offspring), and the desire for shelter (nesting), which can push individuals to acquire disproportionately large shares of resources, leading to further conflict.<sup>1</sup>

Almost all biological species have countermeasures against self-imposed threats, but these are designed to work in their natural habitats, which are savannahs and rainforests for humans. The problems we face in technological civilization are so different from those in the rainforest that they do not trigger evolutionary regulatory mechanisms in the right way. Thus, most likely IBP-s do not work up to a specific limit.

It is likely that IBPs were more functional and adaptive in less advanced civilizations, where these instincts could have played a crucial role in survival. In primitive or less educated communities, the evolutionary mechanisms that shaped these behaviors helped individuals navigate immediate

threats, resource scarcity, and social dynamics. However, as societies evolved and technology advanced, many of these behaviors became maladaptive, contributing to existential risks that could threaten the sustainability of our civilization.

According to Vinn<sup>1</sup>, incompatible inherited behavior patterns (IBPs) could present challenges that all emerging intelligences and civilizations must confront, which may help explain Fermi paradox, at least in part, why we have not yet detected any alien civilizations. Vinn<sup>1</sup> suggested that emerging civilizations that cannot solve the problem of incompatible IBPs may inevitably become extinct shortly after the appearance of advanced technologies.

## **The Current Situation in Dealing with Incompatible IBPs**

The major countermeasures that current technological civilization uses to mitigate the adverse effects caused by IBPs are religious in nature, particularly in the Western world. Christianity condemns the excessive need for energy resources, labeling it as the sin of greed. It also condemns the killing of conspecifics, which can be seen as the foundation for pacifism. Christianity does not endorse the pursuit of excessive power either. In contrast, in Western capitalist societies, the need to possess excessive material resources is celebrated and termed entrepreneurship. Individuals who accumulate irrationally large amounts of wealth, such as billionaires, are often presented as positive role models for students in schools and universities. The desire for power is viewed as leadership and considered a positive trait. As a result, the current Western educational system is more likely to exacerbate the problem than to mitigate the outcomes of IBP-driven decision-making. The consequences include the over-exploitation of natural resources, ecological crises, and widespread violence, such as wars. The former is driven by the excessive desire for energy resources or, in religious terms, greed; the latter stems from IBP-driven leadership behaviors, or more specifically, the excessive need for power. While the religious stance on some of the most dangerous IBPs is accurate, it seems ineffective in preventing the collapse of civilization. On the other hand, the Western educational system has largely failed to suppress IBP-driven dangerous behaviors. In summary, current technological civilization is addressing the dangers posed by IBPs too ineffectively to ensure the long-term survival of civilization.

## **What Can Be Done More Currently?**

One of the first steps is to increase awareness of the threats posed by incompatible inherited behavior patterns (IBPs). This can be achieved through widespread education, aimed at both the general population and key decision-makers.

Education must emphasize the understanding of IBPs, their origins, and their potential consequences in modern societies. It should not only focus on the harmful effects of IBPs but also promote strategies to mitigate them, especially in the context of modern technological and ecological challenges. This could include the incorporation of evolutionary psychology into educational curricula, helping individuals understand how our natural instincts often conflict with the needs of a sustainable civilization.

Additionally, we can encourage the development and implementation of alternative value systems that better align human behavior with the species' long-term survival and the planet's health. This might involve promoting values like cooperation, sustainability, and empathy over the traditional emphasis on competition, accumulation of wealth, and power. Such shifts could be reinforced through social policies and cultural initiatives.

The role of leadership will be crucial in this process. Political and business leaders, educators, and influencers should actively model behaviors that reflect the awareness of the dangers posed by IBPs. They must prioritize long-term sustainability over short-term gains and encourage others to follow suit. In this way, leadership can become a tool for reshaping societal values and directing collective efforts toward solutions that align with the survival and flourishing of civilization.

Another key approach is the use of technology itself as a means to regulate and offset the negative impacts of IBPs. For example, we can develop systems of artificial intelligence and data-driven governance that monitor and guide societal behaviors, ensuring that decisions made at both individual and collective levels are more aligned with sustainability goals. Such systems could analyze trends and predict potential outcomes of current actions, allowing for more informed decision-making that takes into account the broader consequences for the environment, social stability, and future generations.

Finally, fostering a global sense of interconnectedness is essential. As human beings become more aware of the shared nature of the planet's resources and the interdependence of all nations, it may become easier to shift away from self-destructive IBP-driven behaviors. Promoting global cooperation, especially in resource allocation and environmental conservation is what we can do now.

## Future Solutions

Looking toward the future, one potential solution to the problem of incompatible inherited behavior patterns (IBPs) is genetic reprogramming, which could be developed over the next 50 to 100 years. Through advanced genetic engineering techniques, we could potentially modify human behavior to be better suited for the challenges of a technological and sustainable civilization. Such genetic alterations would aim to reduce the negative impacts of IBPs, such as the excessive drive for power, greed, and overconsumption, by reshaping the underlying instincts that drive these behaviors. Genetic reprogramming could be targeted at enhancing traits such as cooperation, long-term thinking, empathy, and sustainability-focused decision-making while reducing impulsive or short-sighted behaviors that contribute to ecological and social crises. By carefully reengineering these inherited behaviors and eliminating some, we could create a population that is better adapted to the challenges of living in a complex, technological civilization. Genetic enhancement of human intellectual capacities could compensate for the decrease in motivation caused by eliminating greed and excessive need for power as brilliant individuals always have other motivations than money and/or power.

A hypothetical species that has reached a very advanced technological stage could have found a way to overcome IBPs entirely. Such species might have developed the means to manipulate or even eliminate the influence of inherited behaviors through sophisticated technologies. Whether through genetic engineering, brain-computer interfaces, or other advanced methods, these civilizations could have solved the problems posed by IBPs by partially or completely reprogramming their behavior.

In summary, the future may hold solutions to the problem of incompatible inherited behavior patterns through genetic reprogramming and technological interventions. While these solutions are not yet within reach, they provide hope that humanity can evolve in ways that will better align our innate drives with the demands of a sustainable, technologically advanced civilization.

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## References

1. Vinn O. Potential incompatibility of inherited behavior patterns with civilization: Implications for Fermi paradox. *Sci Progr* 2024;107(3). doi:[10.1177/00368504241272491](https://doi.org/10.1177/00368504241272491)

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