

The Calculus of Civilization and Barbarism

Hong Sheng

Unirule Institute of Economics, Beijing, China

Email: shenghong54@vip.sina.com

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Abstract

This paper categorizes “self-interest” into two distinct forms: “immediate and direct self-interest” and “future and indirect self-interest”. The former is violent and thus barbaric, while the latter is non-violent and thus civilized. Organisms make choices based on which behavior yields higher marginal gains. In non-human biological societies, characterized by short time horizons and limited group sizes, immediate and direct self-interest serves as the optimal choice and constitutes their natural order. In contrast, human society features extended time horizons and social scales that transcend tribal boundaries, making future and indirect self-interest the optimal strategy. This shift has fostered the development of civilized rules, including prohibitions against killing, property rights and exchange, trust, classical canons, and literature and art. The results of natural selection demonstrate that human society is far superior to non-human biological societies, proving that civilized rules are the natural order of humanity. While the natural orders of both non-human and human societies represent their respective optimal choices, one must not use the natural order of non-human species to justify barbaric behavior in human society, nor should one disparage future and indirect self-interest in human society as being immoral or barbaric.

Keywords

Civilization, Barbarism, Self-Interest, Calculation, Natural Order

1. Introduction

People often refer to both the order of the natural world and the spontaneously generated human order as “natural order”. This characterization is both accurate and misleading. In his book *Mind and Matter*, Erwin Schrödinger noted: “For a solitary animal, egoism is a virtue that tends to preserve and propagate the species; but in a community, it becomes a destructive factor. A species that starts to form a community without making efforts to curb egoism will perish before it has even

begun to flourish.” (Schrödinger, 2022: p. 126). The choice of which “ism” or order to adopt depends on the mode of survival. For solitary beings, egoism favors survival and is therefore “right”; for social beings, appropriately overcoming egoism and fostering collective cooperation is “right”. If egoism is considered a natural order, then “overcoming egoism” would mean overcoming that natural order—yet, paradoxically, this restraint is itself the natural order of social organisms.

2. Two Distinct Forms of “Self-Interest”

In reality, human society and non-human biological societies follow the same broadly applicable rule: the facilitation of survival and reproduction. This is precisely what Professor Richard Dawkins meant by the “selfish gene”. However, this does not imply that one must be “egoistic” in an immediate and direct sense; sometimes, altruistic behavior is conducive to the survival and propagation of genes in a longer-term and more holistic sense. Mencius once remarked, “That which distinguishes humans from animals is but a small margin,” referring to morality. Yet, this only describes the result. Morality is the code of conduct within human society; it differs from the rules of other animal societies because it adapts to the specific needs of the human condition and is validated and reinforced by the utilitarian outcomes it produces. Judging by the results of human development, human morality is indeed “egoistic”—humans have been more successful than any other non-human species. This, too, is a product of natural selection.

To facilitate a more rigorous discussion, we shall categorize “self-interest” into two finer types: “immediate and direct self-interest” and “future and indirect self-interest”. The former refers to the direct transfer of survival resources from others to oneself, such as through outright robbery or theft, or by driving away or killing others who compete for or occupy a territory, thereby securing exclusive access to its resources. It goes without saying that “behavior” here refers to the act of acquiring resources, while “immediate” or “future” refers to the timing relative to that acquisition. Generally speaking, immediate and direct egoistic acts involve violence. Conversely, “future and indirect self-interest” refers to obtaining benefits through cooperation with others. It is termed “future” because such behavior does not yield instant gains but usually requires a period of waiting—such as waiting for a collaborative hunt to succeed. It is termed “indirect” because it involves exchanging one’s own goods or labor for those of others, which requires consultation or negotiation. This mode of “self-interest” is non-violent. Consequently, we may simply refer to the rule of immediate and direct self-interest as the “Rule of Violence” and the rule of future and indirect self-interest as the “Non-violent Rule”.

However, the difference between these two sub-categories of “self-interest” is vast. Immediate and direct egoistic behavior does not require consultation with others; one simply employs one’s own violence. Here, “oneself” refers not only to a biological individual but also to any allies or organizations it may utilize. It is direct and simple. The only obstacle is the comparison of violence; if the other

party's violence is superior, this option is unfeasible. In contrast, implementing future and indirect self-interest is far more difficult. First, there is a massive chasm between the future and the present: the uncertainty of costs and benefits—that is, the uncertainty of interest. This uncertainty stems from both nature and from others. Even if natural uncertainty is predictable or dismissed as *force majeure*, the uncertainty of others remains elusive. Being “indirect” means that the success of cooperation cannot be decided by one's will alone; it depends on others. Others are not oneself, and one cannot directly dictate their will. To reduce the uncertainty of others, it is necessary to establish predictable institutions and culture. This requires both wisdom and time.

Suppose the parties involved have no memory and no concept of the future, calculating only immediate costs and benefits. In such a case, immediate and direct self-interest is clearly superior to future and indirect self-interest. This is because the former yields immediate results—by appropriating others' goods or territory, one directly increases one's own resources or wealth. Conversely, future and indirect self-interest yields zero gain in the present. Assuming the gain from immediate and direct self-interest is ΔId , the comparison between the two behaviors is ΔId versus 0. For a biological individual lacking a sense of temporal continuity, the former is the obvious choice.

Naturally, this is conditional upon whether the actor's violent advantage outweighs that of their opponent. The cost of implementing this strategy decreases as one's relative advantage rises and increases as it falls. Let ΔP be the gain from immediate and direct self-interest and ΔC be the cost; thus, $\Delta Id = \Delta P - \Delta C$. Given a constant ΔP , a smaller ΔC results in a larger ΔId , while a larger ΔC results in a smaller ΔId . When $\Delta C > \Delta P$, ΔId becomes negative. To simplify the discussion, we assume the actor generally possesses a high relative advantage, meaning $\Delta P \gg \Delta C$, resulting in a net gain of ΔId for immediate and direct self-interest.

However, if biological individuals possess a temporal concept of past and future and extend their time horizons, the results of their calculations change. If the “other” might cooperate with the actor, a cooperative increment, ΔIa , is generated. If $\Delta Ia > \Delta Id$, then future and indirect self-interest is superior to immediate and direct self-interest, as the gains from cooperation significantly outweigh those of violent confrontation. Yet, because the other party's cooperation is uncertain—due to potential deception or a lack of confidence in their sincerity—there exists an information entropy value S ($0 < S < 1$). This results in a situation where $\Delta Id > \Delta Ia S$, meaning violent confrontation remains superior to cooperation. To this day, instances of breach of trust are ubiquitous in human society and even more so throughout history; thus, people must apply an “information entropy discount” to future indirect gains. Since it is unclear whether a current collaborator will be unfaithful, the entropy value is an expected value based on past experience. We may call this information entropy the “cost of futurity”—a coefficient that must be applied whenever future and indirect self-interest is adopted. More strictly, if entropy represents uncertainty, we call S negentropy, representing certainty. As

Claude Shannon stated, information is negentropy.

From another perspective, although immediate and direct self-interest focuses only on present interests, it also generates future costs and benefits. For instance, violent acts invite retaliation, forcing the actor to pay a price in the future. Retaliation can take many forms, from direct violent reprisal to passive resistance. Consequently, the gain from immediate and direct self-interest must be discounted by a retaliation coefficient $R < 1$. In cases of doubled retaliation, R may even be less than zero. Thus, the comparison between the two behavioral strategies becomes:

$$\Delta IdR : \Delta IaS$$

When $\Delta IdR > \Delta IaS$, the choice is immediate and direct self-interest;

When $\Delta IaS > \Delta IdR$, the choice is future and indirect self-interest.

The magnitude of the retaliation coefficient R also depends on the duration of time. In some violent conflicts where the parties are evenly matched, retaliation occurs almost instantly. However, some acts of violence are so brutal and heinous that they linger in the victim's memory for a long time; if the victim lacks the immediate capacity to strike back, the retaliation may be significantly delayed. Crucially, perpetrators often overlook acts of revenge that involve long time intervals. King Goujian of Yue "slept on brushwood and tasted gall" (endured hardships) for twenty years before finally avenging his grievances and destroying the Kingdom of Wu—yet such a long-term consequence likely never entered the initial calculations of King Fuchai of Wu¹. Consequently, biological individuals who adopt the Rule of Violence frequently underestimate the total cost of their actions. This is one reason why the biological world, including humanity, remains prone to violence.

In the following discussion, several key concepts are introduced: time horizon refers to the temporal span, both forward and backward, of which an organism is conscious; social scale denotes the size of a group within which individuals share a common life or exchange relationships; cooperation is defined as the interaction between two or more individuals or groups to enhance mutual interests; trust represents a state in which individuals believe that others will act cooperatively; and violence refers to the act of using or threatening to use physical force to acquire resources.

3. Barbarism as the Optimal Strategy in Non-Human Societies

Generally, we equate the use of violence with barbarism and the absence of violence with civilization. Thus, the rule of immediate and direct self-interest is the

¹This is a famous story from Chinese history during the Spring and Autumn period. After King Fuchai of Wu defeated the State of Yue, King Goujian of Yue was captured and forced to serve as Fuchai's stableman, enduring profound humiliation. Later, Goujian was allowed to return to his homeland. To keep his resolve, he "slept on brushwood and tasted gall" (Wo Xin Chang Dan) while rebuilding his nation's strength. Eventually, he led his army to victory, defeating Fuchai in a decisive war against the State of Wu.

Rule of Violence, which is also the Rule of Barbarism; conversely, the rule of future and indirect self-interest is the Non-violent Rule, which is the Rule of Civilization. I have previously defined civilization from an economic perspective: 1) people believe that cooperation is better than non-cooperation, and 2) they calculate costs and benefits based on the outcomes of repeated games (Sheng, 1999: p. 23). This definition is derived precisely from the rule of future and indirect self-interest. Here, “indirect” corresponds to the notion that “cooperation is better than non-cooperation”, while “future” corresponds to “calculating based on repeated games”. Therefore, the rule of future and indirect self-interest marks the inception of civilized rules.

In practice, the cognitive abilities of non-human animals are indeed lower than those of humans, approaching the state mentioned earlier of lacking memory and a concept of the future. While many animals do possess memory—sometimes even long-term memory—the duration is typically insufficient. Even when the duration is long enough, they lack the capacity to systematically discern the causal relationships between events occurring at different times. Thus, they cannot be equated with humans. They are capable of assessing the immediate benefits brought by direct self-interest, yet they fail to perceive or incorporate the advantages of future, indirect self-interest to guide their behavior. Consequently, they adhere only to the violence-barbarism rule. This strategic choice is validated by their success in survival and reproduction, as well as by the outcomes of both individual and group selection (which will be discussed in detail later). This is further corroborated by the fact that they tend to choose immediate and direct egoistic behaviors. Their survival through mutual competition indicates that natural selection validates this choice. Even if their competitors or partners had chosen future and indirect self-interest, they failed to survive, proving that such a strategy is at a disadvantage under the social conditions of these animals.

In this context, it is assumed that the actors possess a violent advantage; those individuals or groups lacking such an advantage are eliminated. It is not that they choose to forgo immediate and direct self-interest, but rather that they lack the necessary conditions to exercise it. In non-human biological societies, members of the same species compete for similar resources. Their primary means of competition is violence, and the rule they follow is that of immediate and direct self-interest. In this struggle, weaker individuals or groups—being at a disadvantage in terms of violent resources—become the victims of this rule. They are marginalized, defeated, and ultimately driven to extinction by those with superior violence. This is the “barbaric” side of nature as we perceive it. Yet, through this very process, competition selects for stronger individuals or groups, who then occupy larger territories, command more resources, and rear more numerous and robust offspring, thereby surviving the process of natural selection. From a species-wide perspective, immediate and direct self-interest—violent behavior—is the optimal strategy. Thus, we say that non-human societies are barbaric, yet this barbarism constitutes their natural order.

In non-human societies, cooperation that transcends kinship is not non-existent, but it is exceedingly rare. Consequently, the group sizes in non-human societies remain relatively small. According to E.O. Wilson's summary, primate groups generally consist of anywhere from a few to a dozen or so members, with territories spanning 50 square meters or more (Wilson, 2021: pp. 614-628). Chimpanzee groups are somewhat larger, typically comprising 30 to 80 members with territories covering approximately 5 to 20 square kilometers (Wilson, 2021: pp. 628-633). Within a group, cooperative behaviors do occur, such as "mutual begging and food sharing". On a slightly broader scale, "small groups that find fruit trees announce the discovery to other chimpanzees with a celebratory performance", and "the response of various subgroups within earshot is to run toward the sound". Chimpanzees can also collaborate in hunting. For instance, "a notable aspect of the pursuit is that some chimpanzees remain quiet and still until the prey is caught". "Teleki distinguished three modes of pursuit", each requiring "the cooperation of a portion of the hunters". Furthermore, "when different subgroups of the same troop meet, there is usually a ceremony, especially among adult males", where "they embrace and groom one another before settling down to feed" (Wilson, 2021: p. 630). However, it seems their cooperation extends no further than this.

More common are the violent conflicts between chimpanzees. According to biological observations, approximately 30% of adult male chimpanzee deaths are caused by violent conflict (Wrangham & Peterson, 1996: p. 68). Among these conflicts, one-fourth to one-third are internal—struggles for power within the group—while two-thirds to three-fourths are external, typically manifesting as "border patrols" or "raids" aimed directly at defending or expanding territory. The most extreme case, observed by Jane Goodall, involved one chimpanzee troop killing all the males and one female of another troop, subsequently absorbing the remaining females and completely seizing their territory (cited in Morris, 2015: p. 417). Another observation in Uganda recorded that between 1998 and 2008, a single chimpanzee troop launched dozens of raids, killing 21 individuals from other groups and eventually annexing the neighboring land (Morris, 2015: p. 419). Whether internal or external, these conflicts boil down to a struggle for resources; they are acts of immediate and direct self-interest.

In primate societies where immediate and direct rules prevail, violence serves as a primary means of acquiring sexual resources. In Chapter 9, "Sex", of *Through a Window*, Jane Goodall recounts how a male chimpanzee named Evered used physical beatings to force two different females into submission (Goodall, 2017: p. 118). Wrangham and Peterson conclude that three of humanity's closest relatives—chimpanzees, orangutans, and gorillas—are all "demonic male species". They note that "most female orangutans are raped regularly... Every female chimpanzee gets battered, some are raped... Many even most gorilla mothers experience infanticide..." (Wrangham & Peterson, 1996: p. 151). "The underlying premise of relationship violence is that it works best (that is, it increases the reproduc-

tive success of the individual using it) where animals are intelligent enough to learn each other's personality." (Wrangham & Peterson, 1996: p. 152). All these acts of violence against females can be defined today as rape in a broad sense. Rape increases a male's opportunity to impregnate a female, thereby enhancing the probability that the rapist's genes will be successfully passed on (Wrangham & Peterson, 1996: p. 138). The reason rape is favored by natural selection is that, relatively speaking, the perpetrators are physically stronger. Consequently, the genes for both physical strength and rapacious behavior are more frequently inherited, rendering the population physically more robust.

While people may lament the brutality of chimpanzees, such behavior may well be the optimal choice given their current intellectual and physical capacities. The fact that these behaviors have been passed down through generations proves they are products of natural selection and thus constitute a natural order. A chimpanzee group is a bisexual community primarily composed of males born within the troop, immigrant females, and their immature offspring, generally numbering in the dozens. This structure persists because the males of two different groups cannot accept one another. They lack trust in "others" with distant kin relations. To determine whether they could coexist or hunt together would require reciprocal interactions as a guarantee. However, such future and indirect behaviors are difficult to identify and carry high uncertainty; in other words, the cost of confirming a friendly or cooperative stance is prohibitively high. They have not devised methods such as fixed inter-group marriage alliances, as these belong to the category of roundabout, future, and indirect behaviors. The process of systematically marrying off sisters to the males of another group and waiting for them to bear children takes a long time, and the outcome is highly uncertain. Consequently, the net gain from cooperation, ΔI_a , approaches zero. To increase or expand one's interests, the most effective method remains the direct use of violence.

This rule of immediate and direct self-interest is "optimal" in the sense that it prevails across the population, but it does not benefit every individual or group. Within a group, individuals are not equal in their violent resources; the elderly, the young, the female, and the infirm are bullied and marginalized by the strong. The powerful claim more food and mates, while the weak are left with scraps and fewer reproductive opportunities. Furthermore, the status of the "Alpha"—the king—must be seized through violence. Social Darwinism prevails within the group. Between groups, the Law of the Jungle reigns; smaller and weaker groups falter in violent competition, are driven from their territories, and eventually face extinction due to a lack of resources. From a modern human perspective, all these phenomena are considered barbaric. Yet, their consequence is the selection of the most robust individuals and groups to meet even harsher challenges. Thus, it remains the optimal choice.

Since violence is the most effective means of immediate and direct self-interest, violent advantage becomes the most critical factor in maintaining the survival and reproduction of a population. It is preserved and propagated through the strength

of the species. Consequently, through generations of inheritance and reinforcement, the genes responsible for physical structures that manifest violent advantage, as well as the behavioral genes inclined toward the use of violence, become increasingly consolidated. Thus, so-called “barbaric” traits are passed down from generation to generation. This does not exclude the fact that the use of violence also relies on technology and institutions; for instance, the invention and improvement of weapons, and the creation of armed organizations along with the refinement of their rules, all enhance violent advantage. Therefore, this Social Darwinian natural selection ultimately fosters the development of robust bodies and the “intelligence for killing”. In turn, these physical and intellectual traits further reinforce the tendency to resolve problems through violence. Notably, this “intelligence for killing” is not a different type of intelligence from “intelligence for cooperation”; the difference lies solely in the direction of its application. In human society, we can see the distinction between the two more clearly. Of course, “intelligence for killing” is not purely hereditary. Rather, it is a product of the integration between “the behavioral genes inclined toward the use of violence” and the advanced intelligence developed by humans. It is the result of the synergistic interplay among genetic, social, technological, and institutional factors.

4. How Humanity Embarked on the Path of Civilization

Since humans evolved from chimpanzee-like ancestors, they inevitably inherited remnants of the natural order found in chimpanzee groups. In their early stages, humans were not significantly different from other primates. They attacked one another to acquire more goods or territory; thus, their rules regarding the ownership of goods were also Rules of Violence. The rate of violent death was not much different from that of other primates. Edward O. Wilson pointed out that the lethality of human violent events “is comparable to that of warfare between chimpanzee groups”, providing a table of data to support this. Among the examples, five cases showed a war mortality rate exceeding 20%, mostly dating from 10,000 to 5,500 years ago (Wilson, 2021: pp. 122-123). Observations showing that 30% of male chimpanzees die from aggression are mirrored by findings that approximately 30% of men in primitive human societies also died from violence (Wrangham & Peterson, 1996: p. 68, 70). Other studies have reached similar conclusions (Wrangham et al., 2006).

However, this mortality generally declined with the development of human civilization. It dropped from 10% - 20% in the Paleolithic era to 2% - 5% during the age of ancient empires (c. 1000 BCE), and from 5% - 10% during the Migration Period (200 - 1400 CE) to 2% in the 20th century and 1% in the 21st century (Morris, 2015, p. 482). This indicates an evolutionary bifurcation beginning with humanity: they departed from the original natural order and embarked on the path of civilization.

The characteristics of civilized rules are rooted in the process of continuous social expansion, becoming increasingly vital and evident over time. Conversely,

the expansion of social scale is made possible precisely because people adopt future and indirect egoistic behaviors. Broadly speaking, the distinction between civilization and barbarism lies in four key areas: first, whether killing is prohibited; second, the existence of property rights; third, the presence of credit and trust; and fourth, the establishment of a set of universally applicable civilized principles, often codified in classical canons and expressed through aesthetic forms. These hallmarks of civilization are derived directly from the rules of future and indirect self-interest. Societies characterized by killing as the primary means of securing interests, and which lack property rights, credit, civilized principles, and aesthetic expression, are the products of immediate and direct egoistic rules. They persist in this state because, for them, it remains the “optimal choice”. From a purely utilitarian perspective of nature, whether one kills or not is merely a strategic choice for maximizing interests, devoid of inherent “civilization” or “barbarism”. Based on the discussion in this paper, adhering to the rules of immediate and direct self-interest is, by definition, adhering to the Rules of Barbarism. Under such rules, a society cannot expand.

The aforementioned decline in human violent mortality rates demonstrates two points: first, humans have created rules that allow them to avoid the choice of mutual slaughter—the hallmark of immediate and direct self-interest; second, the residual violent behavior in humanity is a continuation of the old natural order. One method of changing these rules was the development of inter-group alliances. Imagine the immense improvement in life when patrols are no longer needed at the borders between two groups, and the fear of being killed while alone vanishes. Humans achieved this partly by inheriting sexual cooperation genes from a common ancestor shared with chimpanzees—genes that led Bonobos to adopt sexual cooperation between tribes (Morris, 2015: pp. 420-421)—but more importantly, because the human brain granted them the capacity for future-oriented judgment. As Mr. Zhang Yan noted, the benefits of inter-group alliances are: “First, ending the state of antagonism and conflict between members prior to the alliance; second, granting members a collective advantage in future conflicts with other groups” (Zhang, 2004: p. 8). To this, we must add the benefit of shared territorial resources. However, the difficulty lies in implementing three major institutions: inter-group marriage, cultural integration, and a guarantee system for these two innovations (Zhang, 2004: p. 7).

The institutional prerequisite for inter-tribal alliance is the existence of marriage. Marriage represents the application of the rules of future indirect self-interest to gender relations. Its fundamental nature is defined by two characteristics: mutual consent and long-term stability. This paradigm implies that the use of violence to acquire sexual and reproductive resources is no longer tolerated. However, since humans evolved by diverging from great apes, the process of transforming the latter’s natural order was a gradual one. Many of the sexual exploits of the Greek god Zeus would be defined as rape by modern standards. The most iconic tale is that of Zeus transforming into a swan to force a sexual encounter

with Leda. His relationships with Europa, Alcmene, Danae, and Ganymede also involved elements of “coercion”. In ancient Rome, the “Rape of the Sabine Women” occurred—a historical instance of collective abduction and sexual violence. The emergence of marriage serves as an institutional rule designed to prohibit the act of rape. Marriage is the result of an agreement between two individuals (or two families or clans), often solemnized through ritual; it is clearly a form of voluntary cooperation. Naturally, the institution of marriage matured only gradually. The subsequent arrangement following the abduction of the Sabine women was to take them as wives, which can be viewed as a form of “marriage by capture”. As human civilization developed, the practice of marriage by capture gradually vanished. In human society, rape is strictly prohibited and punished by law. Evidence proves that while the offspring of voluntary sexual relationships may not necessarily become physically “stronger” in a primal sense, they become increasingly excellent in terms of civilized traits. Thus, marriage is the Natural Order of human society.

The difficulty of implementing inter-group marriage lies in the fact that since it involves the “exchange of women”, exogamy (marrying outside the group) must be enforced. This means that men and women within the same group are forbidden from marrying; otherwise, the inter-group alliance would be weakened or rendered obsolete. Yet, since emotional bonds form most easily between members of the same group, these internal sexual relations must be suppressed. “Those who break these rules face severe punishment, typically execution” (Zhang, 2004: p. 22). This clearly contradicts the primal natural order and creates interpersonal tension or even social instability within the group. Another difficulty is that because marriage occurs between two different moieties and must respect generational lines, a complex matrimonial order is required. Creating such a sophisticated system demands highly developed intelligence. Most importantly, the purpose of establishing an entire inter-group marriage system is long-term; it requires foresight of the consequences, recognition of the benefits, and unwavering conviction. All of this demands profound wisdom. For chimpanzees, such feats are beyond their cerebral capacity and thus remain outside their range of choices.

Zhang Yan’s concept of “cultural integration” should be understood in a broader sense as institutional integration—the creation of systems to rearrange resources across merged territories. Since different tribes previously held distinct totems (usually animals or plants), members were generally forbidden from eating their own totem but could consume those of other tribes. Two allied tribes could thus exchange totemic resources as food. Traditionally, they practiced “totem multiplication rituals” to pray for the abundance of their respective totems, which conveniently provided food for the members of their allied tribe. Termed the “Sorcery Cooperation System”, this arrangement fostered mutual dependence and solidified the alliance (Zhang, 2004: pp. 28-33). Such clever institutional techniques significantly reduced the uncertainty of the alliance, raising the information negentropy of future and indirect self-interest, thereby granting it a competitive edge over the

immediate and direct self-interest of violence. Conversely, making such arrangements required a higher level of intelligence, far beyond the reach of chimpanzees. As a result, the group sizes formed by humans through tribal alliances far exceeded those of chimpanzees. Modern primitive tribes in Australia, for instance, average around 600 members, with territories ranging from thousands to tens of thousands of square kilometers (Zhang, 2004: p. 8).

The competitive advantage in resource acquisition and reproduction afforded by these two-tribe alliances through exogamy allowed for rapid development. Lewis H. Morgan noted that “once differentiated into several tribes”, they would “recombine into a higher organization—the confederacy”. His account of the Iroquois Confederacy (the League of the Five Nations) shows that tribal alliances required three foundational conditions: kinship sentiment, a common lineage, and a shared language (Morgan, 1964: p. 121). They possessed an emotional foundation, were descendants of common ancestors, and understood each other’s language, which facilitated negotiation and agreement. Beyond this, superior intelligence was required. Morgan pointed out that the success of the Iroquois Confederacy was “attributed to a mythical personage” who provided the “structure and principles of the League” before “mysteriously disappearing” (Morgan, 1964: pp. 124-125). The key rules of the League included: 1) leadership by a General Council of Sachems; 2) equality and autonomy for each tribe; 3) the establishment of 50 Sachemships distributed among the tribes; and 4) the requirement of unanimity for Council decisions, ensuring that despite varying numbers of Sachems, each tribe held equal power (Morgan, 1964: pp. 125-126). The Iroquois population may have reached 20,000, with territory encompassing much of present-day New York, Pennsylvania, Ohio, and the northern shore of Lake Ontario (Morgan, 1964: p. 123).

Building upon tribal alliances, human social organization expanded to even larger scales. The “Canon of Yao” in the *Classic of History* (*Shangshu*) briefly records this process occurring roughly 5,000 years ago: “He was able to manifest his lofty virtue, and thereby brought affection to the nine branches of the family. The nine branches being in harmony, he regulated and enlightened the people (the ‘Hundred Surnames’). The people being well-informed, he harmonized the myriad states.” (Trans. Wang, 1998: p. 2). The “nine branches” likely refer to nine tribes of the same lineage. Once allied, they extended their rules to tribes of different lineages—the “Hundred Surnames”. Following the success of this larger alliance, they generalized these rules and organizational experiences to integrate even more alliances, forming the earliest proto-state (the “Myriad States”) covering a vast area. By the early 20th century, this nation possessed nearly ten million square kilometers of territory and 400 million citizens. Morgan recorded that in 1755, the Iroquois suggested to the American colonists that they “unite some of the colonies together, just as they themselves had formed an alliance” (Morgan, 1964: p. 129). While the wisdom of the Americans at that time should not be underestimated, the Iroquois’ suggestion at least provided inspiration for the crea-

tion of the American Federation. In 1988, the 100th U.S. Congress passed a resolution acknowledging the contribution of the Iroquois Confederacy to the development of the U.S. government. A House report stated that “some of the democratic principles advocated by the Iroquois Confederacy were eventually incorporated into the U.S. Constitution” (Feathers & Feathers, 2006). In the 20th century, the United States rose to become the most powerful nation in the world.

Tribal alliances and the emergence of states expanded the scale of human society, but this was merely a preliminary step. In non-human societies, “social scale” is manifested intuitively as a group—a collection of animal individuals living directly together. These groups generally consist of a few dozen to over a hundred individuals, though in exceptional circumstances, they can number in the tens of thousands, such as the million-strong herds of African wildebeest during migration. However, the most significant difference between human and non-human social scales is that humans have broken through the boundaries of the group. The most distinct manifestation of this is the ability to exchange goods between groups. Exchange can occur between any two tribes or individuals, leading to a chain of transactions. Consequently, through exchange, an individual can establish a connection with anyone else on Earth, making the scale of human society truly global. Once people can trade with total strangers on the other side of the planet, the resources of any location on Earth become potential survival resources for them. Human access to resources expands exponentially, with the entire planet’s wealth serving all of humanity. In contrast, non-human animals are restricted to the spatial resources of the territory occupied by their specific group. The gap between the two is immense; no matter how large a group may be, it remains bounded.

5. Transcending the Group: Property Rights and Exchange

The prerequisite for the exchange of goods is property rights. Only when individuals possess something can they use it as a condition for exchange with others. While non-human animals exhibit motives and behaviors to control or possess objects, they lack both the enduring concept and the actual capacity for ownership. As Adam Smith observed: “Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog. Nobody ever saw one animal by its gestures and natural cries signify to another, this is mine, that yours; I am willing to give this for that” (Smith, 1981: p. 13). The reason for this fundamental difference lies in the cognitive disparity between humans and non-human animals—specifically, the continuity and extensibility of cognition both forward and backward in time. Backward continuity and extension manifest as memory—the prolonged focus on and retention of an object, allowing for a continuous recognition of the relationship between the object and oneself. This makes the concept of “ownership” possible. Forward continuity and extension manifest as foresight. In John R. Commons’ view, this is “futuraity”. The concept of property rights is only complete when one holds the belief that the ownership of an object will remain

unchanged in the future to meet future needs.

Admittedly, using cognitive ability to explain the expansion of human social scale may seem abrupt. Where did this cognitive ability come from? It did not appear suddenly; rather, it evolved gradually through a series of contingent events. For instance, the transition to bipedalism expanded the adaptive range of human survival and offered a larger space for choices, placing higher demands on the brain. Furthermore, as group sizes gradually increased, more energy was required to manage interpersonal relationships, leading to the development of the “social brain”. Similarly, in establishing tribal alliances, brain capacity and institutional refinement reinforced each other, as did the need to judge and discern the reliability of exchange partners. This process unfolded over an immense span of time, with each interactive step producing only minute changes. Yet, through cumulative growth, a significant leap in cognitive ability emerged. Since humans diverged from their common ancestor with chimpanzees approximately 8 million years ago, the human “Encephalization Quotient” (EQ) surged. By the era of *Homo habilis* about 2 million years ago, it had reached approximately 4. Taking a typical mammal’s EQ as 1, modern humans possess an EQ of 6 (Dawkins & Wong, 2019: pp. 148-149)—a change that can only be described as remarkable.

Accompanying the growth of the Encephalization Quotient was the development of linguistic ability. To enhance cooperation, mutual communication is essential; the more accurately intentions are expressed, the higher the probability of successful cooperation. Conversely, linguistic ambiguity can lead to misunderstandings and cooperative failure. The evolution of language relied on two factors: first, the anatomical refinement of the human vocal apparatus, which allowed for the production of complex and subtly distinct sounds that combine into diverse meanings; and second, the evolutionary pressure of cooperative needs, which compelled humans to seek and create language better suited for expressing intent. Language advanced through this interaction between supply and demand. Biologists observing primates have analyzed their vocalizations and found that they possess a rudimentary “language” used for evading predators and individual recognition. However, this has clearly not evolved to a level capable of facilitating complex cooperation. The establishment of property rights requires, at the very least, mutual recognition, where a linguistic commitment provides reinforced certainty. Exchange requires negotiation over terms, necessitating a refined language that allows for the precision of prices down to the smallest fraction.

Beyond conceptualization, the capacity for action also influences the ownership of objects. Non-human animals, especially primates, certainly possess a sense of collective belongings at the tribal level, which they guarantee through physical force. The threat to this “property” comes from neighboring tribes, who may attack at any time to seize goods. The most significant “good” is the tribe’s territory—the space that contains resources and generates goods, functioning much like a capital asset. Consequently, wars frequently erupt between primate tribes to contest or defend goods and land. In their societies, there are no legally protected

property rights; all goods and territories are perpetually subject to the Rule of Violence. Whichever tribe prevails in violent competition gains belongings. Because the concept of property rights is absent, exchange based on such rights does not exist. Exchange is not the basis for the legitimacy or actual security of possession—violence is. This is the hallmark of the rule of immediate and direct self-interest.

The decline of violent mortality in human society is essentially the history of the birth, formation, and development of property institutions, as well as the continuous expansion of the scope of human exchange. The difference from primate societies lies in the fact that humans estimated the costs of direct violent confrontation and discovered that a truce might be a superior alternative. Taking it a step further, they found that establishing alliances or marriage ties to expand society to a larger scale was even better. This not only reduced the costs and losses associated with mutual defense and warfare but also expanded the scope of resources and cooperation. This judgment regarding the prospects of peace and cooperation is built upon a concept of temporal depth (time-horizon). This mirrors models in institutional economics regarding the formation of property rights: endless conflict over ownership leads to mutual destruction, whereas a negotiated agreement to respect mutual property rights allows those rights to be born. Only on the foundation of property rights can exchange occur. Such risky endeavors first took place among those most intimate—such as the exchange of labor between males and females within a family, trading game for gathered fruits. With the experience gained from this beginning, they could extend the scope of exchange to neighbors, fellow villagers, and eventually to strangers.

Jared Diamond pointed out that as early as 40,000 years ago, during the era of the Cro-Magnons, long-distance trade had already emerged: “High-quality stones for toolmaking, such as obsidian, jade, and flint, were often sourced from quarries hundreds of kilometers away. Amber from the eastern Baltic coast could be found in Southeast Europe; Mediterranean shells appeared in inland Europe, such as in France, Spain, and Ukraine” (Diamond, 2016: p. 65). The most secure form of trade was the simultaneous exchange of goods between two parties. However, since parties did not always possess the required items at the same time, this presented logistical challenges. One solution was to acknowledge the time lag in exchange. Due to the conceptual continuity of time, people could reach agreements on transactions involving a temporal gap. They had practiced this through mutual aid and unilateral gift-giving—waiting for a reciprocal gift in return—and they could take the risk of waiting for the other party’s next delivery. Another solution was the invention of money. Money not only facilitated exchange but also enhanced trust and security, minimizing suspicion toward strangers. As E.O. Wilson remarked, “Money is a quantification of reciprocal altruism” (Wilson, 2021: p. 641). In this context, “reciprocal altruism” is synonymous with indirect self-interest.

Observations by anthropologists of primitive Australian tribes also reveal highly developed inter-tribal trading relationships. The primary items of trade in-

cluded two categories: “raw materials” and “artifacts”, such as “stone axes, boomerangs, shields, spears, spear-throwers, stone knives, animal skins, woven goods, shell ornaments, red ochre, narcotics, and many other things. Australians had long been accustomed to providing and obtaining all these items through exchange with neighboring and distant tribes. Simultaneously, each region had a long-established inter-tribal division of labor, where almost every tribe served as a supplier of a specific product or raw material” (Tokarev et al., 1980, p. 256, cited in Zhang, 2004: p. 78). In Australia, “common trade routes and established traditional exchange centers” had long since formed (cited in Zhang, 2004: p. 79). It can be inferred that long before entering Axial Age civilizations, humanity had already broken through the boundaries of the group via exchange.

Only with intellectual development was it possible to grasp the concept of futurity. This required an understanding of natural variables and the ability to respond to potential uncertainties; the capacity to predict the nature and motives of others to identify potential collaborators; and the mastery—or even innovation—of technologies to increase future certainty. Such innovations include physical structures like houses, locks, and walls, as well as institutions that ensure the certainty of property rights and interpersonal relationships, such as marriage, family, ancestral rites, religion, and the state. In commerce, this includes the creation of currency, bookkeeping techniques, paper money, bills of exchange, and business organizations. Only as these capacities developed and these technologies and institutions matured could the information negentropy of future and indirect self-interest continue to rise. As certainty increased, the choice of future and indirect self-interest became more likely to succeed. Concurrently, the scope and depth of cooperation expanded, yielding greater cooperative dividends. In short: immediate and direct self-interest requires little to no wisdom, whereas future and indirect self-interest demands it.

6. Thou Shalt Not Kill

E.O. Wilson observed in chimpanzee societies that “the side that wins in boundary conflicts experiences an increase in both survival and reproductive levels” (2021, p. 122). After countless generations, the rules of violence we observe today must be the “optimal” strategy for them; otherwise, these rules would not persist. Professor Richard Dawkins refers to biological organisms as “selfish machines”, stating that “this machine is programmed to do whatever is best for its genes as a whole” (Dawkins, 2018: p. 125). Whether an organism adopts immediate and direct self-interest or future and indirect self-interest depends on its cost-benefit analysis. The calculus for the former is direct and simple: it requires no waiting, no negotiation with others, and no roundabout methods. While not perfectly certain, its predictability is relatively high. As previously discussed, this immediate self-interest generally employs violence because violence bypasses the need for consensus. However, violence may meet violent resistance, failing to increase net gains. In such cases, the analysis involves weighing the cost of using force against

the probability of success. The more lopsided the violent advantage over the “other”, the lower the cost and the higher the probability of success.

Conversely, future and indirect self-interest encompasses various cooperative behaviors, all of which can be viewed as forms of exchange—such as inter-group marriage (exchanging women or men), collaborative hunting (exchanging labor), and the trade of goods. Their common trait is non-violence, thereby avoiding the costs or failures associated with violent confrontation. These behaviors yield significant returns: tribal alliances expand shared resources and strengthen the collective; cooperative hunting improves efficiency or enables the capture of large prey; and trading goods allows for the acquisition of non-local items and an increase in marginal utility. However, the success of these behaviors depends on the “other” also keeping their promise—which introduces uncertainty. If an allied tribe refuses to share resources, fails to defend against invaders, or uses the alliance as a ruse to seize territory (such as when Zhao Xiangzi invited his brother-in-law, the King of Dai, to a banquet only to kill him and annex his state during the late Spring and Autumn period²), or if traded goods are deficient or delayed, the expected returns are discounted. Because these outcomes can only be confirmed in the future, the individual must subtract an information entropy value from the perceived benefits of cooperation, or multiply them by a negentropy coefficient (S)—which is invariably a value less than 1.

Humans have made both random and deliberate efforts to increase this information negentropy, beginning with their most intimate relations. For example, the division of labor between men and women in a family—men hunting and women gathering—involves the exchange of products. They can exchange because they share children and a household. Though simple, this laid the psychological foundation for interpersonal exchange. Another example is the care for the elderly. Under the old natural law, once an organism passed its reproductive prime, its continued existence was deemed meaningless. Thus, many animals, such as mantises, fish, and elephants, actively move toward death; even early human societies practiced the abandonment of the elderly. This was because low productivity could not support non-productive members. However, by chance, some offspring—driven by emotional or moral reasons—chose to consume less to support their parents. This changed the situation: the elderly lived longer (Sheng, 2023a). Their longevity unexpectedly brought about the “Grandmother Effect”—families with grandmothers had more and healthier children (Hawkes, 2003). Furthermore, the accumulated experience of the elderly extended the time horizon of the group and reinforced the concept of the future. This example implies that motivations beyond immediate utility can produce profound utilitarian results.

Gradually, as humans gained confidence in adopting future and indirect self-interest, they continued to evolve in this direction, creating more robust institutional safeguards along the way. In the primordial exchange between men and

²This historical account is recorded in the “Hereditary House of Zhao” section of the Records of the Grand Historian (Sima, 2016: p. 466).

women, people discovered that exchange is inherently a self-securing act: the consideration one provides is met by the counter-performance of the other, rendering the transaction relatively safe. As exchanges spanned greater distances or longer durations, auxiliary arrangements were introduced to mitigate risk. For instance, marriage was created to consolidate the bond between men and women; money was invented to eliminate the risks associated with long-term temporal gaps; courts were established to deter and punish those who breach contracts; and a culture of credit and trust was fostered to encourage voluntary adherence to agreements while subjecting violators to social condemnation. From the “Grandmother Effect” resulting from elder care, humans learned that pursuing emotional, moral, or aesthetic goals—rather than immediate utility—could unexpectedly yield profound utilitarian benefits. These non-utilitarian ends possess independent value, which in turn modifies the cost-benefit calculus, making people more inclined to choose future and indirect self-interest.

Viewed in isolation, the civilized rules and moral values of human society facilitate the choice of future and indirect self-interest, leading to the prosperity and improvement of both individuals and society as a whole. Thus, they are critical factors that render human society superior to non-human societies. From an evolutionary standpoint, these values are themselves products of natural selection. Although they appear starkly different from the natural order found in non-human societies, they remain part of a more general and expansive natural order. The more civilized rules develop and gain widespread acceptance, the more individuals choose future and indirect self-interest, resulting in a society that is more efficient, harmonious, and civilized. In contrast, in non-human societies or early human history, individuals primarily adopted immediate and direct self-interest—namely, violence. This not only caused immediate losses in lives and resources but also forfeited opportunity gains—the benefits of future and indirect self-interest and the chance to evolve into a large-scale society. The disparity between the two is vast.

Conversely, as people increasingly adopt future and indirect self-interest, the necessity for immediate and direct self-interest—violence—diminishes. This explains why “barbaric” acts of killing decrease as civilization advances. Initially, this shift occurred because the calculus changed: killing was simply no longer “worth it,” rather than because people had suddenly become “civilized”. As this calculus solidified into habit and tradition, it gave rise to a new conceptual framework: the belief that killing is inherently wrong and uncivilized. This led to what I term “Second-Order Morality” (Sheng, 2023b)—where one refrains from killing not because it is unprofitable, but because it is immoral and barbaric. Today, with a deeper understanding of biological evolution and the intrinsic value of life, we cherish the meaning of existence more than ever. “Thou shalt not kill” has transcended calculation to become our faith.

Human society itself has undergone a transformation from “killing as glory” to “killing as a crime”. The commandment “Thou shalt not kill” in the Decalogue

represented a world-shaking shift in rules. Prior to this, the Israelites had decimated the original inhabitants of the land “flowing with milk and honey” to occupy the “Promised Land”. The Shang Dynasty practiced human sacrifice involving tens of thousands of prisoners of war and slaves; yet, by the Zhou Dynasty, burial customs had changed, and human sacrifice almost vanished. When asked whether one could “kill the wayless to approach the Way”, Confucius replied, “In your administration, sir, what need is there for killing?” Similarly, Liu Bang’s “Three-Chapter Code” explicitly established the legal principle that “he who kills shall die”—a decree that predates the final compilation of the *Pentateuch* in 70 CE. On the surface, this transition marks the journey from barbarism to civilization; in reality, it was a necessity for human society to expand to a larger scale. Its rationality is as inherent as the “barbarism” of a non-human society.

7. Without Trust, the People Cannot Stand

Naturally, this shift in egoistic behavior is built upon our conceptual frameworks. The more deeply these concepts are believed, the lower the uncertainty they present to individuals. When more people believe that others will cooperate, the number of people who actually cooperate increases. This, in turn, confirms the certainty of that belief, creating a positive feedback loop that encourages more people to choose future and indirect self-interest. Consequently, the emphasis on “Xin” (Trust/Credit/Good Faith) is one of the core cultural concepts driving future and indirect self-interest. Confucius once stated that among the three essentials of a state—military force, food, and trust—if one were forced to forgo two, one should abandon the military and food, retaining only trust. He said, “From of old, death has been the lot of all men; but if the people have no trust, the state cannot stand.” Military force is necessary for defense against invasion, and food is the basic condition for survival. Why does trust take precedence over them? From the preceding analysis, we see that trust is the most vital factor in what makes a human *human*; thus, it naturally takes precedence over the immediate survival of the individual or society. Conversely, if a society retains its military and food but discards trust, it remains at the level of a chimpanzee society, characterized by constant conflict and heavy casualties.

The state is, in essence, a form of future return. People believe that the state will protect their security and property rights, and in return, they agree to surrender a portion of their production to the state as an equitable exchange. All of this is built upon the foundation of Trust (*Xin*). However, it is not only the state that requires trust; all other human organizations and institutions are established upon it as well—be they individuals or organizations outside the family, such as corporations or religions. Confucius said, “Be faithful to your friends”, which means one must keep promises to their collaborators. A corporation is a form of cooperation among strangers; why would partners or shareholders believe that profits will inevitably be distributed as dividends? It is because they trust that the managers are men of their word; otherwise, they could resort to voting rights or even the courts.

Religion, too, is founded upon faith and trust. Believers not only have faith in doctrines and the protection of the divine, but they also trust that the clergy will remain incorruptible and make good use of their donations. Consequently, Trust is a transcendent and universal concept in human society; it is the fundamental element that allows humanity to exist as a cohesive whole.

In the *Mahabharata*, keeping one's oath is the supreme virtue of a king or noble. At times, this adherence was so extreme that the five Pandava brothers refused to forsake their vows even when subjected to malicious treatment, most notably during the public humiliation of Draupadi. Similarly, the *Old Testament* records the word of Jehovah: "I will deal with you as you have done, you who have despised the oath by breaking the covenant" (Ezekiel 16:59). The *Quran* states: "Allah will not impose blame upon you for what is meaningless in your oaths, but He will impose blame upon you for [breaking] what you intended of oaths. So its expiation is the feeding of ten needy people from the average of that which you feed your [own] families or their clothing or the freeing of a slave. But whoever cannot find [or afford it]—then a fast of three days. That is the expiation for your oaths when you have sworn. But guard your oaths" (Surah Al-Ma'idah 5:89). These texts all emphasize the gravity of keeping promises and the certainty of punishment for their breach. This demonstrates that Trust (Xin) carries decisive weight across all types of human societies, proving once again that it is a foundational element for the existence of humanity.

Returning to our aforementioned cost-benefit analysis: because of the existence of trust, when individuals compare the returns of immediate and direct self-interest against future and indirect self-interest, the value of information negentropy increases, tilting the scales toward the latter. Let Sc represent the information negentropy with credit/trust, and Sn represent that without it. Since $Sc > Sn$, it follows that $\Delta IaSc > \Delta IaSn$. Under a culture and conceptual framework of trust, people are empowered to choose future and indirect self-interest more frequently and immediate direct self-interest—violence—less frequently, opting instead for peaceful cooperation. Furthermore, futurity is not a fixed quantity; it is a variable that extends alongside the development of human institutions and technology. Examples include property rights, where some private holdings have persisted for over a millennium, and legal systems, such as Roman Law and the Chinese Ritual System (Li), which have endured for over two thousand years. On one hand, there are coercive institutions like courts and prisons that prohibit and punish dishonesty; on the other, religious and cultural traditions continuously reinforce the consciousness of trustworthiness, framing it as a matter of honor and its breach as a matter of shame. As faith grows stronger and the number of believers increases, the overall credit of society rises, the uncertainty of anticipated dishonesty diminishes, and humanity becomes increasingly civilized.

8. Civilized Rules: The Natural Order of Large-Scale Societies

As previously noted, future and indirect self-interest drives the expansion of social

scale. Because these behaviors link different individuals through cooperation, a society is formed wherever people collaborate. Cooperation is inherently open-ended; an individual can cooperate with many different parties, thereby weaving together people from all directions. Consequently, the scale of a society linked through cooperation grows ever larger. Conversely, a larger social scale grants future and indirect self-interest a greater competitive advantage, further encouraging such behavior. A positive feedback loop is thus established, where scale and indirect self-interest mutually reinforce each other's growth. In contrast, immediate and direct self-interest, characterized by violence and mutual infringement, fundamentally fails to facilitate the connection of diverse groups. Therefore, it cannot, by its nature, drive the expansion of social scale. Even in an already large society, the adoption of such violent behavior causes the social scale to contract at the margin compared to the potential gains of future and indirect self-interest.

Around the Axial Age, humanity underwent a momentous transition from small-scale to large-scale societies. In China, through the Xia and Shang dynasties, the Well-field system (Jingtian) established the earliest form of agriculture protected by property rights. Agricultural society brought higher certainty and sustained larger populations, eventually forming a "Son of Heaven" (Tianzi) level state that controlled vast territories. Commercial interactions between various states also flourished; indeed, the Chinese word for "merchant" (Shangren) originates from the people of the Yin-Shang dynasty. By that time, the Huaxia civilization had already formed a large-scale society. However, the individuals within this society had emerged from a long history of small-scale living and were accustomed to the rules of small groups. These rules were characterized by a stronger egoism, tribal xenophobia, and a lack of interpersonal moral norms. The social elites of the time realized that the order of small-scale societies conflicted with the existence of the newly formed large-scale society. They strove to create and promote rules adapted to large-scale living to ensure that people could benefit from this new social structure. These moral rules reinforced trust in future and indirect self-interest, making it superior to immediate and direct self-interest, thereby benefiting both society and its members and ensuring the rules' own dissemination and consolidation.

This effort reached its zenith with Confucius. He synthesized and expanded upon the civilized rules already established by earlier Confucian elites, such as the Duke of Zhou. We can interpret the behaviors of the "Junzi" (Superior Man/Gentleman) and the "Xiaoren" (Small Man/Petty Person) in Confucius's lexicon as the rules of large-scale and small-scale societies, respectively. Here, a "small-scale society" refers not only to a small population but also to a lack of external exchange. The behaviors of the Xiaoren that Confucius despised and criticized embody the natural order of small-scale societies. For instance, "The petty man is conversant with gain (Li)," and "The petty man is similar to others but does not harmonize with them (Tong er bu he)." In a small-scale society with few members, one can survive simply by focusing on immediate interests. In contrast, practicing "Yi"

(Righteousness/Justice) involves following a morality of self-restraint during conflicts of interest—a practice that has little function in small-scale societies and offers few direct benefits to the individual practitioner. Furthermore, because individuals in small groups exist in similar environments, they tend to be highly alike; their cooperation lacks the complementarity of comparative advantage, leading them to be “alike but not harmonious”. This means they pursue the same resources in similar ways, resulting in competition rather than cooperation.

One could say that in a small-scale society, the behavior of the Xiaoren conforms to the natural order of that context. Before the emergence of humans, most species created by nature developed only small-scale societies. Even “eusocial” animals like bees and ants, while forming relatively large groups, remain small-scale compared to human societies. Of course, these eusocial animals exhibit more cooperative and sacrificial behaviors and follow less egoistic rules than non-social animals, allowing them to build larger colonies. The natural order of small-scale societies has undergone hundreds of millions—or at least tens of millions—of years of evolution and inheritance; it is deeply rooted in the natural world. As humans evolved within nature, they naturally carried the inertia of the natural order followed by their animal ancestors. Using violence to contest resources and territory was the optimal choice for their chimpanzee relatives, while the altruistic behaviors of bees and ants are rooted in genetically fixed physiological foundations. If humans wish to choose a different path—future and indirect self-interest—they must use something other than genes to compensate: Culture.

Human wisdom and capability have propelled humanity forward, surpassing the wonders created by all previous animals and rendering the old natural order increasingly ill-suited to the scale of human society. To expand the social scale, new rules for interacting with outside strangers must be established, treating diverse individuals with a unified sense of goodwill. However, from the perspective of a small-scale society, such rules of goodwill appear perilous; if goodwill is betrayed, the practitioner faces potential catastrophe, whereas the egoistic “petty man” (*Xiaoren*) suffers no significant loss from his betrayal. The rules that prevail in large-scale human societies—the rules of future and indirect self-interest—are what we call Civilized Rules. As a set of norms that has broken away from the natural order of the animal kingdom, civilization offers not only utilitarian benefits but also manifests as a powerful concept. This concept makes individuals feel that adhering to civilized rules is noble and worthy of respect, even if it does not yield immediate utilitarian gains. In a large-scale society, while some “petty men” may temporarily succeed through deceit, the sheer scale of society and the ubiquity of civilized rules ensure that violators are eventually punished, thus preventing them from altering the overall direction of civilization.

In large-scale societies, the “rules of the gentleman” (*Junzi*)—which are the rules of future indirect self-interest and civilization—manifest as universally followed norms. For these to function as universal rules, they require a specific medium: Civilized Classics. These classics are condensed narratives and proclama-

tions of basic social rules preserved in writing. They are mostly collections, systematizations, interpretations, and refinements of existing customs, habits, and conventions. Examples include the Confucian classics of traditional China—the *Three Rituals* (*Book of Rites*, *Etiquette and Ritual*, and *Rites of Zhou*), the *Book of Documents*, the *Classic of Poetry*, the *I Ching*, the *Spring and Autumn Annals*, and the *Classic of Filial Piety*; in India, the *Mahabharata*, *Ramayana*, and *Upanishads*; for the Jewish people, the *Pentateuch*; in Ancient Greece, the works of Herodotus, the *Homeric Epics*, the *History of the Peloponnesian War*, the *Republic*, *Metaphysics*, and various plays and geometric treatises; and in the Christian world, the *Old and New Testaments*. Despite low literacy rates in antiquity, a cultural elite emerged who mastered these classics and served as the backbone of society—clergy or government officials—to implement these civilized rules.

It must be noted that the “petty man” (*Xiaoren*) mentioned here is not a “bad person”, but rather an ordinary individual—the *Homo Economicus*. The “gentleman” (*Junzi*) refers to those with moral self-discipline who are willing to sacrifice their own interests for the sake of civilized rules. Even in a large-scale society, not everyone is a “gentleman”. Civilized rules prevail primarily because the gentlemen occupy dominant positions in society, promoting the moral codes contained within civilized classics and customs. They appeal not only to cultural traditions to encourage voluntary compliance but also to the law, using the coercive power of the state to punish violators and deter potential offenders. The reason ordinary people (*Xiaoren*) can consciously follow civilized rules is rooted in Second-Order Morality: they believe that failure to comply will lead to social condemnation, and actual violations will result in legal penalties—both of which are perceived as losses. This remains within the realm of rules followed by the *Homo Economicus*. Therefore, a society composed of many “petty men” can still be a society where civilized rules flourish.

Civilized classics enable the expansion of social scale; conversely, this expansion makes the classics more effective. This is the economies of scale of civilized classics. The creation of such classics is an arduous process, requiring long historical periods, the emergence of rare cultural heroes and geniuses, rigorous debate and selection among cultural elites, and the testing through the rise and fall of successive dynasties before they finally take shape. In short, civilized classics incur significant costs. Once they emerge, they serve society by disseminating among the populace and gaining acceptance. The larger the social scale and the greater the population, the lower the average cost of these classics becomes. Their dissemination becomes more thorough—versions are printed in greater numbers, schools proliferate, and the civilized principles inherent within them become more widely accepted and followed. This leads to a higher information negentropy value (S), strengthening the inclination of individuals to choose future and indirect self-interest.

The “Republic of Letters” described by Joel Mokyr is a modern illustration of this phenomenon. Emerging in Europe after the 17th century, the Republic of Let-

ters consisted of individuals of different nationalities who shared a common language—Latin. The establishment of postal systems allowed them to correspond and debate, while the development of printing enabled academic research to spread rapidly across Europe. The political fragmentation of Europe was bridged by this intellectual commonwealth; books banned in one country could be published in another, and universities competed to hire prestigious scholars who traveled and migrated freely between states. Consequently, the fundamental rules of the Republic of Letters took shape: “contestability, internationalism, independence from authority, and openness” (Mokyr, 2020: p. 188). By exploring both nature and human society, this republic not only expanded the effective scale of society but also pushed the human understanding of order toward Natural Law. The result was a breakthrough for Europe in science, philosophy, and industry.

9. The Form of Civilization: Literature and Art

For civilized rules to be accepted and followed, they must first be correct—or at least appear reasonable—and second, their form of expression must be beautiful. Aesthetics is a primary motive for human behavior; because something is beautiful, people are willing to act, even to take risks. We can assume this aesthetic effect to be an aesthetic coefficient ($A > 1$). When the expected return (ΔIa) is multiplied by A , the resulting value (ΔIaA) is invariably greater than ΔIa . Thus, a beautiful classic is more easily accepted, and the expression of civilized classics naturally tends toward the aesthetic. For instance, the *Classic of Poetry* (*Shijing*), one of the Confucian classics, is expressed in poetic form, which captivates and delights the reader, making the civilized rules it contains more likely to be internalized through subtle influence. Other traditional Chinese classics also lean toward aesthetic forms. The *Tao Te Ching* is often viewed as a work of poetry. Other Confucian classics are written in concise Classical Chinese, where conciseness itself represents a beauty of simplicity. Confucius said, “When substance exceeds refinement, one is rustic; when refinement exceeds substance, one is pedantic. Only when substance and refinement are balanced does one become a gentleman (*Junzi*).” Aesthetic beauty does not mean excessive rhetorical flourish, but rather a balance of substance and style. Similarly, Sima Qian’s *Records of the Grand Historian* (*Shiji*) is not only a historical record but is also celebrated as a masterpiece of literature. The poetry of the Tang and Song dynasties is largely characterized by exquisite yet measured diction—beauty in perfect proportion.

The synchronization of civilized principles with the development of art appeared early in history, marking the divergence between Cro-Magnons and Neanderthals. According to Jared Diamond, the most critical distinction was language. He posited that Neanderthals lacked language, or at least a language capable of effective communication. Consequently, they lacked cooperation, and innovations spread with agonizing slowness. Over tens of thousands of years, their tools remained virtually unchanged. In contrast, Cro-Magnon tools were highly sophisticated, and they were capable of collaborative hunting for large game—all

of which stemmed from mature linguistic expression. Among them, future and indirect self-interest became more prevalent, suggesting the formation of rudimentary civilized principles. Simultaneously, their art reached a high level of development: “The most famous are the cave paintings of Lascaux, where many extinct animals left their colorful silhouettes, leaving us in awe. Equally impressive are the bas-reliefs, necklaces and pendants, clay sculptures, ‘Venus’ figurines (small female statues with exaggerated breasts and hips), and musical instruments like flutes and castanets” (Diamond, 2016: p. 67).

Ancient Indian civilized classics were also largely expressed through poetry; the *Rigveda* and *Samaveda* are in verse, while the *Ramayana* and *Mahabharata* are themselves grand epics. The Greek classic, the *Homeric Epics*, employed dactylic hexameter, creating beautiful and moving language. The tragic beauty sculpted by Greek drama, such as the poignant aesthetic of *Oedipus Rex*, remains unique in human history. Greek sculpture and painting likewise reached the pinnacle of their time. Similarly, the poetic books of the *Old Testament*—*Psalms*, *Song of Songs*, *Job*, and *Proverbs*—possess a unique form. Rather than relying on rhyme, they utilize parallelism and acrostic structures to create a poetic order and rhythm that is easy to recite. Alongside the Greek epics, they stand as the dual origins of the Western poetic tradition and, together with ancient Chinese works like the *Classic of Poetry*, serve as the literary ancestors of civilization.

Religious or quasi-religious cultural traditions serve as the organizational forms for generating, preserving, and disseminating civilized classics. Joel Mokyr points out that “the role played by religion in Smithian growth and Schumpeterian growth is immense”, including the promotion of human capital investment, the enhancement of literacy and communication, the establishment of commercial laws, and the fostering of credit and industriousness (2020, pp. 118-126). Here, “Smithian growth” refers to growth driven by the specialization of the division of labor, while “Schumpeterian growth” refers to growth resulting from innovation. Both are manifestations of future and indirect self-interest. To be more effective, these traditions universally emphasized the aesthetic dimension, making significant efforts in architecture, painting, sculpture, and music. Christianity, Buddhism, Confucianism, Taoism, and Islam have all made monumental contributions to art. It could even be argued that the history of human artistic development is, to a large extent, the history of religious art. Religious sites—cathedrals, mosques, Buddhist temples, Confucian temples, Taoist abbeys, and synagogues—with their magnificent architectural styles, frescoes, and sculptures, serve not only as places of worship for believers but also as venues for non-believers to appreciate art. Their artistic achievements, in turn, enhance the charisma and allure of the faiths themselves.

The role of literature and art in the history of civilization is rooted in human subjective aesthetic sense. Although Kant argued that beauty does not depend on the properties of the object but is rather a universal subjective feeling, this does not negate the fact that such subjective feelings lead people to project goodwill

onto the object itself. We frequently observe people planting pleasing flowers in their courtyards or placing artworks in their living rooms. Similarly, the linguistic beauty of civilized classics enhances the appeal of the civilized principles they contain. Epics and dramas subtly reinforce the public's acceptance of these principles, and the aesthetic sense of solemnity evoked during religious rituals is a primary reason people embrace religious tenets. In other words, if the majority of people cannot clearly discern the truth or goodness of a concept—perhaps because correct ideas are often too abstract or remote—they may decide whether to accept or reject them based on the beauty or ugliness of their expression. Consequently, the generation of civilized classics tends toward elegant expression; or rather, less aesthetic texts are ignored or lost, while those that endure and exert profound influence are invariably beautiful. What, then, of incorrect texts expressed beautifully? While their beauty may initially incline people to believe them, the frustration and failure experienced by those who follow them will ultimately lead to their abandonment.

From another perspective, beautiful art itself hints at correct concepts. Schopenhauer asked: “What kind of knowledge is concerned with the Idea? With the thing-in-itself, with the Will, and with the Idea that is fully objectified? Our answer is ‘Art’, the work of genius.” Although human ideas are not yet the thing-in-itself (*Ding an sich*), artists among us come close to penetrating it. Their “art reproduces the eternal Ideas grasped through pure contemplation, the essential and abiding element in all the phenomena of the world” (Schopenhauer, 2015: pp. 187-188). Here, the “thing-in-itself” refers to the essence of things—the correct structure or program. By revealing this inner essence and awakening human understanding, art increases the degree to which people comprehend and adhere to civilized principles.

Furthermore, because Beauty, Truth, and Goodness are fundamentally identical at their source, beauty serves as a shortcut for discovering truth or goodness. For example, the scientist Henri Poincaré noted that some of his mathematical discoveries were the result of sudden inspiration, recognized as correct through an intuition of their formal beauty. Jacques Hadamard, in his book *The Psychology of Invention in the Mathematical Field*, states that mathematical invention involves choosing among numerous combinations, and the rule governing this choice is “extremely beautiful and subtle” (Hadamard, 2023: p. 20), noting that “the choice is controlled by the sense of beauty” (Hadamard, 2023: p. 21). Poincaré wrote: “I mean that more intimate beauty which comes from the harmonious order of its parts, and which a pure intelligence can grasp. It is this that gives the body, a structure so to speak, its rainbow-like appearance that satisfies our senses... On the contrary, intellectual beauty is self-sufficient, and it is for it, more perhaps than for the future good of humanity, that the scientist condemns himself to long and tedious labors” (Poincaré, 2010: p. 25). This same aesthetic sense applies to civilized principles, manifesting as symmetry, harmony, rhythm, and logical self-consistency.

Apart from their aesthetic delivery, the civilizational principles within these classical expressions hold an inherent beauty rooted in morality and meaning. Consider the *Analects*' "Do not do to others what you would not have them do to you"; the *Doctrine of the Mean*'s "Supreme sincerity is ceaseless"; or the *Mahabharata*'s "Victory is not won by weapons alone, nor by brute force; it is won by righteousness, courage, leadership, and the power of the narrative". There is the *Pentateuch*'s "Whoever sheds human blood, by humans shall their blood be shed" (*Genesis* 9:6); the *New Testament*'s "Love your neighbor, love your enemy"; the Buddhist "Equality of all sentient beings"; and the *Tao Te Ching*'s "Tao follows nature". These classics serve as maxims for ordinary people, etched into their memory. The moral beauty they express resonates deeply with the innate ideas of the human heart—what Mencius called the "sprouts of goodness", Wang Yang-ming termed "innate conscience", Plato described as the "beauty of the soul", and Kant identified as "synthetic a priori judgments". When civilized classics are beautiful in both form and content, readers are more inclined to believe their proclamations, choosing civilized rules over barbaric ones in their internal deliberations.

10. The Race between Barbaric and Civilized Rules

However, even after humanity entered the era of civilization, the formula comparing immediate direct self-interest with future indirect self-interest remains in effect. Generally, when the costs of the former are lower, people still opt for it. Technological or institutional shifts in warfare can grant one side a decisive advantage; when the cost (ΔC) of immediate direct self-interest (violence) decreases while the scale of violence and the resulting gains (ΔP)—especially land—increase, the net profit ($\Delta Id = \Delta P - \Delta C$) grows larger. In such cases, actors are more likely to choose immediate direct self-interest. For instance, the significant modern advancements in Western weaponry and military organization, though appearing to be symbols of civilization, were sufficient to prompt the choice of barbaric rules—exemplified by the slaughter of indigenous Americans and the enslavement of Africans. Large-scale military aggressions remain frequent, from the invasions by Germany and Japan in World War II to the current Russian invasion of Ukraine. Through violence, they attempt to seize not just the land of a neighboring tribe, but entire continents. Of course, miscalculations occur, which is why aggressors often ultimately fail.

Because this comparative formula between civilization and barbarism persists, human behavior in modern societies can still be barbaric. As previously stated, this occurs when the gains from immediate direct self-interest outweigh those of future indirect self-interest. Human society only appears civilized because, in most instances, people choose civilized rules. This formula also explains the persistence of barbaric rules within civilized eras. When a nation is large and possesses vast human and material resources for war, its leaders may believe that adopting barbaric rules is more advantageous than civilized ones, leading to wars of aggression. Similarly, a ruler who controls the state apparatus—essentially a

machinery of violence—may believe they hold such overwhelming force over the populace that they can implement tyranny to plunder resources. Furthermore, due to the importance of force in barbaric rules, nations engage in arms races, continuously refining weaponry. Consequently, the destructive power of weapons has surged since the early modern period, evolving from swords and spears to nuclear armaments.

In the modern world, there are still numerous periods and regions where the disparity in force is so extreme that “genocide” occurs. Well-known examples include the extermination of Native Americans by white Europeans and the Holocaust perpetrated by Nazi Germany—instances where armed governments or government-backed settlers slaughtered unarmed civilians or poorly armed indigenous peoples. Many other less publicized massacres have occurred in places such as Bangladesh, Brazil, Burundi, Cambodia, East Timor, Equatorial Guinea, Indonesia, Lebanon, Paraguay, Rwanda, Sudan, Uganda, and Zanzibar (Diamond, 2016: p. 356). The typical forms of these massacres have animal precedents: “Kill everyone, male and female—as seen in chimpanzees and wolves; kill the men and keep the women—as seen in gorillas and lions” (Diamond, 2016: p. 348). This demonstrates not only the persistence of the natural order of non-human animals within humanity but also that advancements in killing technology can create scenarios where immediate direct self-interest becomes a “rational” choice in the moment, despite being antithetical to civilized principles.

Furthermore, in human society, immediate direct self-interest—barbaric behavior—often takes mutated or concealed forms. The occupation of foreign territories is rebranded as “colonialism”; direct plundering is transformed into the enslavement of labor. Individual military cliques may seize state power and, under the guise of government, impose exorbitant taxes on the populace, or use state authority to legally convert private property into the assets of the government (the ruling clique). Individual officials may abuse their power to seize public wealth or illegally amass gains through corruption and bribery. A monopoly group may leverage political power or market dominance to extract more wealth from consumers through monopolistic pricing. Even religious groups may use faith to mobilize followers into wars against other religious groups to forcibly convert them—essentially seeking to expand their own religious interests. All these can be viewed as behaviors under Barbaric Rules. They merely appear in the modern forms of human society, making them difficult to identify. In reality, they are identical to the immediate direct self-interest of the non-human world; they are fundamentally barbaric.

Sometimes, these barbaric acts manifest as the fruits of civilized behavior, making them hard to decouple from civilization and often allowing them to operate under its banner. For example, modern science and industrialization are the cumulative results of past future indirect self-interest. However, when the improvements in weaponry brought by science and industry are applied to war, they widen the power gap between adversaries. This drastically lowers the cost of immediate

direct self-interest, making actors more inclined to follow barbaric rules—the law of the jungle where the strong prey on the weak. Such behavior is often even labeled as “civilization triumphing over barbarism”, allowing it to persist without moral critique. Those practicing such barbarism may still appreciate literature and art—the forms of civilization—further blurring the boundary between the two. This confusion persists to this day. The widespread fear of AI today is not a problem with AI itself, but with the people who use it. It is the same issue as with any modern technology: the key lies not in the technology, but in how its use alters the balance of power between an actor and their opponent, potentially inclining the actor toward barbaric rules.

The phenomenon of using modern technology or civilized forms to mask barbaric behavior is far more pervasive than we imagine. Because military resources and technological advantages are unevenly distributed, those with the upper hand emphasize that the gains they derive from this disparity are both just and rational. This manifests in various discriminatory ideologies, such as sexism, racism, and ethnic prejudice. Across civilizations, ideas and institutions that discriminate against or restrict the rights of women have existed for long periods. This actually originated from the fact that women possessed fewer resources for violence than men, a gap that men then extrapolated to all other domains, including intelligence and morality. However, when the freedom and rights of women are suppressed, their talents are stifled; this is equivalent to refusing cooperation in favor of direct deprivation. The development of human society in the modern era has moved in tandem with the degree of women’s liberation—female scientists, entrepreneurs, politicians, and religious leaders have all made indispensable contributions to human progress. Similarly, racism is built upon a disparity in force, which is then extended to claims about intelligence, morality, and other traits. Once racial discrimination is eliminated, the exceptional talents of all races contribute across all fields, a fact demonstrated most fully in the United States.

In our calculations, immediate direct self-interest and future indirect self-interest possess fundamentally different natures. The former is intuitive; its costs and benefits are directly linked to the actor. The latter is less intuitive: its costs and benefits are, first, future-oriented and thus inherently vague, and second, dispersed among numerous members of society, making them difficult to aggregate. Specifically, if a social leader considers only their own interests, they may overlook the total social benefits and costs, leading to a calculative error—believing that immediate direct self-interest is superior to future indirect self-interest and thus replacing civilized behavior with barbaric acts. Furthermore, because barbaric behavior employs violence while civilized behavior employs non-violence, the former is more coercive and thus offers a sense of certainty in its execution. This is why certain political leaders prefer immediate direct self-interest; for instance, Donald Trump places his faith in U.S. military might rather than the efficacy of NATO. A contributing factor here is also his disdain for the civilized rules proclaimed by the U.S. Constitution.

Moreover, a paradox exists between civilized and barbaric rules: the more people follow civilized rules, the more profitable it becomes for a single individual to adopt barbaric ones. For example, in a society where everyone is trustworthy, a single person who breaks a promise stands to gain immensely. Likewise, in a world where peaceful cooperation is the norm, an armed group that adopts immediate direct self-interest would be virtually invincible. Consequently, future indirect self-interest can only increase slowly, and civilized rules can only expand in a gradual and tortuous manner; they can never completely or permanently replace barbaric rules. When immediate direct self-interest directly confronts future indirect self-interest, the latter is often defenseless. Conversely, to solve the problem of permanent world peace, it is insufficient to merely exhort national leaders to avoid war. A more effective method is to develop institutions and cultures that facilitate peaceful cooperation and reduce the costs of future indirect self-interest, which may gradually diminish the occurrence of war.

Furthermore, civilized rules do not absolutely prohibit the use of violence. To restrain violent behavior, a society requires legitimate violence. Against external aggression—wars of invasion—organized violence is necessary for defense. Against established tyranny, people possess the right to overthrow it via violent revolution. To stop infringements or conflicts between individuals or organizations that employ violence, legitimate force must be used to intervene. All these necessitate the establishment of an organization for the rational use of force: the State. However, the use of such violence must remain within reasonable bounds. This means the state government must be confined within a legal framework—a government of constrained power. Once a government oversteps the limits of the constitution and the law, the violence it exercises becomes barbaric. Yet, the boundary between the legal and the illegal is often blurred, making it difficult for people to discern when a government has crossed the line, especially when that government plunders its citizens under the banner of “legality” while actually practicing barbarism.

Therefore, even as social scales expand, horizons lengthen, and civilized rules align more closely with Natural Law and become more aesthetically elegant, the choice between civilization and barbarism remains uncertain. This is because, for the reasons mentioned above, the net gain of choosing barbaric rules can actually increase within a civilized society. On the whole, while the net gain of future indirect self-interest continues to grow, in certain localized instances, improvements in technology and institutions—along side the increased scale of extractable interests—make immediate direct self-interest more profitable. The two sets of rules exist in a state of competition, contingent upon which yields higher returns. If the net gain of barbaric rules exceeds that of civilized rules, expressed as $\Delta IdF > \Delta IaG$, barbaric behavior will still emerge within the broader environment of a civilized world. Here, F represents functions that increase ΔId , such as relative military advantage (M) and the scale of extractable interests (V), written as $F(M, V)$. Meanwhile, G represents functions that increase ΔIa , such as the negentropy coefficient (S) and the aesthetic coefficient (A), written as $G(S, A)$.

However, this is a general judgment, and there are exceptions. Thinking in reverse: why are there significant counter-examples in human society where future indirect self-interest prevails even when immediate direct self-interest—violence—holds the advantage? Specifically, why have major powers with overwhelming military superiority chosen *not* to attack others? Traditional China offers such examples. This is not to say that traditional China never attacked neighboring small states, but rather that there were notable instances of restraint. For example, the Confucian tradition includes the principle of “not attacking a state in mourning” (*Bu Fa Sang*). In 57 BCE (the first year of the Wufeng era under Emperor Xuan of Han), when the Xiongnu fell into internal strife following the death of their Chanyu, the minister Xiao Wangzhi proposed this principle, and the Han dynasty did not send troops. Similarly, during the reign of Emperor Taizong of Tang, after the death of Illig Qaghan of the Eastern Turkic Khaganate, the Tang did not launch a full-scale opportunistic invasion but instead integrated them into the *Jimi* (loose rein) system through titles and marriage alliances.

In contexts where states or rulers typically employ violence to suppress dissent, there are notable instances where ruling cliques or those in power chose to cede authority or compromise with their opponents. For example, despite the armed resistance of the barons, King John signed the Magna Carta, and his successors, such as Edward I, voluntarily reaffirmed this document. This suggests that their actions were not merely a result of coercion but also stemmed from a cognitive realization that the consequences of compromise might be more advantageous. In such moments, ideas prove more powerful than violence. According to William McKechnie, Edward I's constitutional ideas were influenced by his uncle, Simon de Montfort, even though they later became mortal enemies. McKechnie noted that “all such schemes... if accepted by the monarch himself, ensured their success” (McKechnie, 2016: p. 197). Another quintessential example is George Washington, who surrendered his military commission to Congress after the victory of the Revolutionary War. According to the rules of violence, he could have easily ascended to a throne backed by his military power.

These historical anomalies demonstrate that, at times, internalized ideas and concepts can alter human choices, leading individuals to reject immediate direct self-interest as the optimal path. This involves a profound recognition of the aggregate benefits of future indirect self-interest. While achieving such a cognitive state is difficult, it is not impossible. This represents the civilized principles forged during the Axial Age. These principles involve interest-based analysis, but more importantly, they represent the flourishing of a “universal good” and the ultimate expression of the human “sprouts of goodness”. The results of these two paths—rational interest and moral inclination—are identical. Having traversed a long history, humanity has developed a historical consciousness; they have seen the consequences of both immediate direct self-interest and future indirect self-interest. While the former can instantly alter the distribution of interests, it cannot control the subsequent choices of people, ultimately leading to decline or failure. The Qin

Dynasty serves as a classic example: while it relied on violence to conquer the six states and imposed heavy taxes on the populace, it collapsed after only two generations.

11. The Degree of Barbarism or Civilization

From the preceding analysis, we can conclude that both barbarism and civilization are optimal choices under different conditions. Although these conditions are numerous, they essentially boil down to two: Time and Space. Here, “Time” refers to the length of the horizon over which costs and benefits are calculated; “Space” refers to the social scale—the size of the population—covered by these calculations. Even when accounting for discount rates, the longer the time horizon, the closer the calculation comes to correctness, and the more likely it is to conclude that the net gain of future indirect self-interest exceeds that of immediate direct self-interest. Similarly, the larger the space covered, the more people are reached by the civilized principles and aesthetic forms inherent in the classics, thereby lowering the unit cost of these classics and increasing the net gain of civilized rules. In summary, the longer the human vision and the larger the social scale, the more civilized classics align with the Way of Heaven (*Tiandao*) and the more beautiful their expression becomes, the more humanity will incline toward future indirect self-interest over immediate direct self-interest.

The progress of civilization is characterized by the continuous lengthening of the human horizon. This is driven by enhanced cognitive capabilities and the creation of more effective institutions designed to secure future returns, thereby increasing the certainty humanity faces regarding the future. Simultaneously, the scale of human society has steadily expanded—from primitive tribes to ancient city-states, to classical nations, and finally to modern international engagement and globalization. Human civilization thus exhibits a clear upward trend. However, this does not imply that we have achieved a state of high civilization. If we were to represent the spectrum between barbarism and ideal civilization numerically, with barbarism at 0 and ideal civilization at 100, humanity currently stands at approximately 50. The specific scoring criteria should perhaps be based on the proportion of “civilized rules” chosen relative to the total number of choices made at a specific level of human interaction (such as the international level).

Even in today’s world, barbaric phenomena persist. Within nations, there are still ruling cliques that exploit power (backed by violence) to infringe upon the rights of the people and plunder their interests. As long as they use force to tilt the distribution of rights and interests in their own favor, they are engaging in immediate direct self-interest and following Barbaric Rules. Between nations, despite the phenomenon of globalization, powerful anti-globalization forces remain. Barriers between states persist in the form of institutional obstacles that restrict free trade, free migration, and the free flow of capital. The use of military force to invade other nations continues; the deliberation over whether to go to war remains a direct calculation of immediate military advantage. The world still lingers under

the shadow of the terror of nuclear conflict.

In reality, civilized and barbaric behaviors are often intertwined, making them difficult to distinguish. Examples include violence used for self-defense, coerced transactions, or cooperation within violent organizations. Violence for self-defense is violence used to counter violence; it is, in itself, a negation of the rule of violence. Thus, from the perspective of future indirect self-interest, it aligns with civilized rules. A coerced transaction occurs when one party uses the threat of violence to reach an agreement. This violates the very nature of a transaction—a voluntary agreement between equals. Because one party is forced, it can no longer be considered civilized behavior. Whether cooperation within a violent organization is civilized depends on the organization's purpose. If its goal is to plunder the resources of others, the more effective the internal cooperation, the more barbaric its actions become. Conversely, if the purpose is to defend a homeland, effective cooperation serves to repel invaders and protect the territory, thereby constituting an act that upholds civilized rules.

In fact, the degree of civilization or barbarism can be measured at the individual level. Throughout thousands of years of history, there have been both extremely brutal individuals and those who strictly adhere to morality, remaining unmoved by immediate temptations or even choosing death over violating civilized principles. In Chinese history, tyrannical figures include King Zhou of Shang, Qin Shi Huang, and Emperor Yang of Sui; in the West, figures like Nero, Hitler, and Stalin. Conversely, sages who “restrained themselves and returned to rites” (*Keji Fuli*) and patriots who upheld righteousness are by no means rare. In China, those who adhered to Confucius's spirit of “sacrificing one's life to achieve virtue” (*Shashen Chengren*) and Mencius's “giving up life for righteousness” (*Shesheng Quyǎ*) have appeared in every generation. The most prominent among them is Wen Tianxiang. In his final self-eulogy, he wrote: “Confucius spoke of achieving virtue; Mencius spoke of choosing righteousness. Only when righteousness is fulfilled is virtue attained.” Undeterred by the Mongols' threats or lures, he met his execution with dignity. In his *Song of Righteousness* (*Zhengqi Ge*), he praised twelve “civilized heroes”—such as the Grand Historian of Qi, Dong Hu of Jin, Zhang Liang of Qin, and Su Wu of Han—all of whom defended civilized principles in the face of violence and death.

Such individuals are also ubiquitous in the West. First among them is Jesus. His first words upon being nailed to the cross were: “Father, forgive them, for they do not know what they are doing.” Spoken of his executioners, these words reveal his pity for those using violence to end his life; to him, their reliance on force was proof of their lack of wisdom and thus rendered them objects of compassion. This reflects a sense of civilized superiority that disdains violence from a higher spiritual plane. Others, such as St. Stephen, St. Paul, Socrates, Giordano Bruno, Abraham Lincoln, and Mother Teresa, either defied authority and violence or rejected the pursuit of fame and wealth. Even in the face of the most overwhelming force or the most alluring interests, they refused to betray civilized principles.

The actions of these heroes and sages demonstrate that civilized rules had become ingrained in their very marrow and fused with their blood. They possessed an unwavering faith in the holistic and long-term efficacy of the civilized principles that span the world, viewing them as far superior to immediate, direct interests—a value that could not be traded away. For its antithesis—immediate direct self-interest (the Rule of Violence)—there exists an upper limit to its efficacy: life itself. As Laozi said, “If the people do not fear death, how can they be frightened by the threat of death?” When death is no longer feared, the threat of violence loses its potency. Some may ask: if life is lost, how can civilized principles be maintained? In reality, even when life is extinguished, the principles endure—and shine even more brightly. The act of martyrdom is an extreme one; by paying the price of life, it underscores the nobility and preciousness of civilized principles, inspiring more people to understand, emulate, and propagate them. This is the value of “achieving virtue and choosing righteousness”, and it is one of the ultimate reasons why civilized rules will eventually triumph over barbaric ones.

Civilized principles are not merely a set of abstract rules; they are manifested and realized through specific individuals. The elevation of a society’s degree of civilization depends on the increasing number of people who adhere to and uphold these principles. As this population grows, so does the level of civilization. The increase of “civilized persons” is, in turn, contingent upon certain conditions: the enhancement of human cognitive abilities and the lengthening of foresight and vision; the enrichment and increasing efficacy of institutions that guarantee future certainty; and the expanding scale of human society. For instance, the reduction of institutional barriers between nations and the lowering of obstacles to the movement of people, goods, capital, and information—in short, the movement toward an ideal state of freedom of flow. Furthermore, it depends on human understanding of social order drawing closer to “The Way of Heaven” or “Natural Law”, where rules rely more on voluntary compliance than on coercive enforcement, and where human culture and art become more beautiful and abundant.

Consequently, the chronic maladies of barbarism we currently face—such as domestic autocracy and international warfare—will one day vanish. This is not the grandiloquence of an idealist, but a conclusion grounded in a solid and verifiable path. Since our discussion reveals that the degree of civilization in human society depends on the increasing number of people who follow civilized rules—a trend driven by the lengthening of human cognitive horizons and the expansion of social scale—our current task is clear. By continuing to create institutions and technologies that enhance future certainty, by lowering the thresholds for the flow of labor, resources, and information between nations, by pursuing social rules that align more closely with the Way of Heaven or Natural Law, and by creating more brilliant culture and art, the collapse of autocracy and the arrival of permanent world peace will occur naturally, like “water flowing to form a channel” or “fruit falling when ripe”.

All these factors that promote civilization do not appear as a monolithic whole;

they increase incrementally. Yet, for every small increment, the degree of civilization advances accordingly. For instance, when the time horizon of human cognition expands even slightly, the certainty of property rights and exchange grows; the space they cover—the social scale—expands in turn. As civilized classics draw closer to the Way of Heaven or Natural Law, their authority grows, as does the number of people who believe in them. As the art expressing these truths becomes richer and more beautiful, people's conviction in civilized classics strengthens, thereby increasing the informational negentropy (S) of cooperative gains. This growth need not be massive in each generation—a mere 1% or even 0.1‰ increase, accumulated over multiple generations, will eventually produce a civilization fundamentally different from non-human societies. For example, with just 200 generations of iteration, informational negentropy (S) would increase by 22%. If a generation is 20 years, this spans only 4000 years. Considering that humans diverged from chimpanzees 8 million years ago, and Cro-Magnons from Neanderthals 800,000 years ago, this is a relatively brief span in evolutionary time.

12. Conclusion: Distinguishing Natural Orders

The central thesis of this paper is that while the Natural Order in non-human societies manifests as barbaric behavior, the Natural Order in human society is inherently civilized. Although these two natural orders differ, they are both subordinate to a higher Natural Order: Self-interest. The difference lies in the fact that one is immediate direct self-interest, while the other is future indirect self-interest. The reason the natural order of human society can diverge from that of non-human societies is that humans have developed long-term horizons, vast social scales, and civilized classics with beautiful forms. These conditions incline humanity toward choosing future indirect egoistic rules, thereby achieving positive utility. In the past, people failed to distinguish between these two natural orders, leading to cognitive confusion. On one hand, some used the disasters caused by barbaric self-interest to negate civilized self-interest; on the other, some used the natural order of the animal kingdom to justify barbaric behavior in human society. As Jared Diamond noted, “we never lack excuses for mistreating or murdering others, but since Darwin published the theory of evolution, ‘evolutionary logic’ has become a ready-made excuse.” (Diamond, 2016: p. 118) By clearly distinguishing between these two natural orders, we can clarify the cognitive confusion caused by the blurring of this boundary.

Some argue that Qin Shi Huang promoted the development of civilization by annexing the six states through war and unifying the script, axle lengths, and weights and measures. Similarly, did the Mongol conquests of numerous Eurasian nations not facilitate the expansion of trade and cultural exchange? Such views conflate two distinct sets of behavioral rules. War and conquest are actions that follow the rule of barbarism, whereas the unification of rules and the promotion of trade and culture follow the rule of civilization. There is no inherent causal link between the two. Peaceful union and unification can likewise achieve standardized

rules and the circulation of goods and culture, while sparing the immense cost of human life and proving far more sustainable. For example, the Book of Documents (Shangshu) records that as early as the reign of Emperor Yao, “standards for pitch pipes, weights and measures had already been unified” (Trans. Wang, 1998: p. 12). It is also undeniable that precisely because the Qin Dynasty conquered nations by force, its rule was extremely brutal, characterized by heavy taxation and corvée labor, leading to its rapid overthrow. Although the nominal tax rates under the Mongols were not high, their tax farmers increased levies at will, placing a heavy burden on the populace. Coupled with the requirement for unpaid labor, the Mongol Empire soon disintegrated, with some of its khanates, such as the Yuan Dynasty, being overthrown in less than a century.

It is said that during the American Civil War, a debate raged over whether slavery conformed to the Natural Order. The South argued that human hierarchy was natural because hierarchies exist throughout the animal kingdom. The North countered that it was natural for all men to be born equal. Viewed through the lens of the natural order in non-human societies, the Southern argument appeared plausible: animal societies indeed feature hierarchies with leaders, high-ranking members, and subordinates. The fact that these societies survived through eons of evolution suggests this was a result of natural selection—a natural order. Today, however, it is clear the North was correct. Human equality eliminates disparities in violence resources between individuals. Since human society as a whole relies on future indirect self-interest—cooperation—for its development and prosperity, it does not depend on violence. Every individual is a unique being with distinct talents; as long as they are not ranked by some immediately effective physical endowment, their respective strengths can flourish. Through the division of labor and cooperation, they create more wealth for both society and themselves. This has enabled humanity not only to survive and reproduce but to far surpass all other animals. This, too, is a result of natural selection. Therefore, judging by the success of human society, equality is the Natural Order.

In the modern era, some have used Darwinism to justify European colonialism, claiming that humans must undergo “survival of the fittest” competition to survive and develop into a modern society. By using Darwin’s theory of natural selection to justify wars between Europeans and the barbaric plundering and colonization of the non-Western world, they mistook the natural order of the animal kingdom for the natural order of human society. The theory presented in this paper demonstrates that since humanity has triumphed in the natural world, it proves that future indirect self-interest is what truly conforms to the Natural Order. Since humans tend to pursue their interests through future indirect self-interest, this choice abandons violent competition between groups, allowing humanity to benefit from mutual cooperation. Conversely, war and national oppression only lead to suffering and regression, incentivizing the development of weapons that plunge the entire world into catastrophe. If humanity were to fully comply with the animalistic natural order they advocate, we would regress into the

animal kingdom ourselves.

This Social Darwinist theory was also once embraced by intellectuals in the non-Western world. In the late 19th and early 20th centuries, most of China's leading intellectual elites believed in the "law of the jungle". Yan Fu's *Tianyan Lun* (On Evolution) was a reinterpretation based on his translation of Thomas Huxley's *Evolution and Ethics*, applying Darwinian evolutionary theory to human society. While this served to galvanize the Chinese elite and public amidst Western military aggression, from the perspective of this paper, applying the animalistic natural order to human society remained a fundamental error. This book influenced a vast generation of intellectuals. For instance, Hu Shi (originally named Hu Simen) changed his name to "Shi" to represent "Survival of the Fittest" (*Shizhe Shengcun*). Lu Xun recalled his first encounter with *Tianyan Lun* while studying at the Nanjing School of Mines and Railways, later advocating Darwinian theory in his essay "The History of Man". Many other intellectuals justified the aggressive and colonial acts of the West—which followed barbaric rules—by pointing to the results the West achieved through following civilized rules in technology and institutions. A prime example is the claim that the Opium War was fought for the "noble purpose of free trade", which clearly confuses two distinct types of egoistic behavior and their respective rules.

Another less obvious form of confusing the two natural orders is the disdain for human moral ideals, viewing them as useless or even harmful tendencies. A prime example is the attitude toward aiding the weak. While this may appear to be an exaggerated moral pursuit rooted in pity or indulgence, it is, in fact, the very behavior that allowed humanity to transcend the animal kingdom. The equality of rights for all—regardless of strength—is the rule that enables every individual to fully realize their potential. Because human creativity and diversity are so profound, they cannot be measured by a few simplistic standards, especially not by the standard of violence. Talent often emerges in unexpected ways; without equal rights, it would be suppressed and left dormant. Furthermore, some critics argue that societal support for the weak, the sick, and the disabled leads to a decline in the overall competitive capacity of the human race, citing a misinterpretation of Darwinism. However, since human success is driven by future indirect self-interest and civilized rules rather than physical prowess, the "weak" or "disabled" may possess unique talents that contribute immensely to society as a whole.

Furthermore, the confusion between these two natural orders manifests abstractly in the choice between two paths: engaging in circuitous negotiations and contracting to achieve cooperation—appealing to the moral baselines of all parties—or bypassing these "tedious" or "illusory" steps to resort directly to threats of force or violence. For instance, President Trump viewed NATO as a burden on the United States, believing that the direct application of military power would be more efficient. The correct answer, however, is that while resorting to force may yield superior results from the perspective of immediate costs and benefits, the net gain of an alliance like NATO is far greater in the long run. It not only multiplies

American influence but also ensures lasting stability. Conversely, acting alone invites resistance and retaliation; by disregarding allies and bypassing consultation, a power loses their support, as seen in the complexities of the Iran War. Setting aside specific facts, the trajectory of human history is fundamentally the story of future indirect self-interest triumphing over immediate direct self-interest. Were this not the case, humanity would never have reached its current stage of development. Therefore, future indirect self-interest—the Civilized Rules—is the Natural Order of human society.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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