



# Behind Civilization

Second Edition (English edition)

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**To the people who provided me with an  
education**

## CONTENTS

Chapter 1: What is human civilization?	6
Chapter 2: What is the driving force behind human civilization?	9
Chapter 3: What is the direction of human civilization?	11
Chapter 4: How does civilization disseminate and proceed?	13
Chapter 5: How can civilization advance at the fastest possible pace?	16
Chapter 6: The importance of the orderly functioning of society in regards to social output	17
Chapter 7: What are the forces controlling individuals' behaviour to ensure an orderly society?	19
Chapter 8: How does society manipulate the social output?	21
Chapter 9: How do various "internal and external controlling forces" maintain social order?	28
Chapter 10: Logical thinking	33
Chapter 11: Concepts and the objective existences	39
Chapter 12: The fundamental interrelationships of nature	43
Chapter 13: Body system and social system – two parallel expressions of energy in the universe	58
Chapter 14: The nature and rules of technological development	90
Chapter 15: The mechanism of social evolution and the social impacts of the information revolution and the biological revolution	94
Chapter 16: Beauty and Interrelationships	114
Chapter 17: The mechanism behind the rise of Western Civilization	120
Chapter 18: The development of Chinese Civilization	161

## Introduction

Today while we are taking the luxurious lifestyle provided by the modern civilisation for granted, have you ever wondered what human civilisation is? Do you really understand its nature? These puzzling questions still remain unsolved although many attempts have been made to unlock their mysteries.

To understand the nature of human civilisation, we need to look into its mechanism that governs its whole process from its beginning, its journey and its destination.

Stemming from this way of thinking, we can undoubtedly conclude that civilisation is created by humans' behaviour and human behaviour is the product of decision making. Decision making is a process in the neural network which is influenced by the human nature and the knowledge imputed from the environment. This means that our nature and knowledge drive our behaviours to create civilisation. In other words, human nature and knowledge acquired are the driving forces of civilisation.

When the concept of force is applied to the study of civilisation, it means that the Newtonian mechanics is applied to the study of civilisation. Following Newtonian mechanics, the inquiry into the nature of civilisation can develop into the following thinking: force is a vector which not only has size, but direction as well. Then, what is the direction of civilisation? Furthermore, any moving object has its speed, so this concept can be translated into the concept of "the pace of civilisation". As the speed of a moving object is influenced by the driving force and the resistance, then the pace of civilisation is influenced by the driving force of civilisation and the resistance of civilisation.

By now, a new approach to the study of civilisation has begun. This approach is to examine the causes of human behaviours from the electrical activities in the brain to human social behaviour. These processes are further interpreted from the perspective of Newtonian mechanics. This study can be considered as "social mechanics", a part of the study of "physical sociology". The following issues are discussed in the book: the driving force of civilisation; the resistance of civilisation; the controlling forces of human behaviour and the relationship between human behaviour and social output which ultimately influences social development. This is an attempt to interpret civilisation from the perspective of physics. All these discussions arrive to the point that logical thinking is vital to decision making, which will have critical impacts on civilisation. Therefore, the subsequent inquiry is to look into the way of logical thinking.

From the above discussion, you may think that civilisation is the product of our intelligence and controlled in our own hand. However, upon further observation, you might notice that civilisation bears amazing similarities to the development of the human body and even cosmic phenomena: the body's controlling system and the social administration system; the immune system and the defence system; the birth of a celestial body and the rise of an empire; the collision of galaxies and conflict of civilisations, etc. These amazing similarities lead one to wonder: are processes controlled by intelligence ultimately governed by something else? Is there a common mechanism governing all existences in the universe?

We can understand this issue from the following perspective: since civilisation is the product of the interaction between human behaviour and the physical environment and the interaction is governed by the laws of physics, therefore, civilisation is fundamentally governed by the laws of physics.

Furthermore, we can also understand this issue from another perspective: as you can see the relationship on the book cover: protons, neutrons and electrons form atoms. Atoms build molecules, as symbolised by DNA. Specific molecules create life. A specific form of life on earth, human beings, gives birth to civilisation, symbolised by the female image. Beyond the earth, there are other celestial bodies in the space. From this relationship, we can understand that the human body and human civilisation are part of the process of physical transformation of energy/materials. Therefore civilisation must follow the laws of physics. As displayed on the book cover, the human body, society, atoms, molecules, planet, galaxy and space are all part of the universe. And given the fact that they display amazing similarities, there must be a set of laws of physics as the common mechanism fundamentally governing all existence in the universe. Then what are these laws of the common mechanism?

Through logical reasoning, a simple diagram/mathematical model has been proposed in this book to represent the fundamental relationships, the common mechanism governing the universe. Much of the work has been put into demonstrating that all existence, such as ice melting, social developments, technological developments, the human body, marriage and even beauty, follow the interrelationships represented by the model. In particular, the human body's internal structures and activities have been extensively used to explain social structures and activities as well as predict the future development of society (this is why a natural human body image is used on the book cover and it has nothing to do with nudism but the very nature of the body system and social system). This approach of using medical sciences (including anatomy, embryology, physiology, pathophysiology and biochemistry) and other biology studies such as evolutionary biology is an effective way to study sociology and can be termed "Biological Sociology". Apart from using the human body to analyse social development, the phenomenon of ice melting and the mathematical model are used to analyse social development (It sounds very weird indeed! However, the ice melting contains all the fundamental laws that govern social development.) The mathematical model is further used to analyse the rise of Western civilisation and the Chinese civilisation. This approach allows us to understand these two civilisations on a much deeper level. These studies are the examples of physical sociology. The mathematic model and its applications in this book belong to Scientific Philosophy.

Through all the discussion, finally a conclusion is reached: human civilisation is part of the evolution of the universe. The laws governing the whole universe also govern human civilisation.

Gavin Huang

## **Chapter One: What is human civilization?**

Surrounded by the enchantment of nature, its magnificent powers never cease to amaze us. We gaze, confused, at its forever dynamics, puzzled by the paradox of its display, astonished by its split second transformations. Out of the yearning to understand the environment upon which our survival depends, and dreaming of arriving at the utopia, mankind searches for the ultimate answers: what is human civilisation? How does it journey along the path of time? Where is it headed? All these puzzling issues lead to the ultimate question: What are the fundamental rules governing human civilisation? Urged by nature's quest, we begin our journey to explore this philosophical kingdom.

To begin our journey, let's compare various aspects of living between human beings and other animals. As civilization is generally considered something that is "exclusively" associated with the human race, we can compare "civilized" human beings with any "uncivilized" group of animals, for instance, other primates, who also happen to be our closest relatives from an evolutionary perspective. This approach employs the same principles as comparative anatomy, where inferences are proposed based on the outcomes of direct comparisons. Humans can be compared to other primates, such as chimpanzees, in terms of how we dress, what we eat, where we live and how we travel.

The most obvious difference between human beings and other primates is that we wear clothes and they don't. The only thing a chimpanzee wears is its furry coat, no pun intended! To most humans, the purpose of wearing clothes is no longer just to obtain warmth. Through the active pursuit of fashion, the clothing we wear also becomes an expression of social status. Just think about all the different styles of apparel that are available to us: formal dresses, casual outfits, swimwear, school uniforms, and even gorilla suits! Ever noticed the sheer abundance and diversity of clothing stores there are in the local shopping mall? In some cases, clothing has now become more or less an ornamental luxury and an embellishment of beauty. Fashion shows are one such example. Every year, these shows are held in places such as Paris, Milan and Tokyo where gorgeous models strut and pose on the catwalk flaunting the latest designer outfits with their beauty. In contrast, the only sense of "fashion" evident in chimpanzees is their nudity, something which is considered unacceptable and offensive in many human societies and cultures. A similar display of nudity by a human being is likely to result in an arrest where the person is charged with indecent exposure or taken to a psychiatric institution for assessment.

The broad range of food and styles of cooking available to humans seem endless, ranging from exotic delicacies such as oysters, caviar, snails and truffles, to international cuisines such as Chinese, French, Japanese, Thai, Italian, Mexican, and more. We also have a vast array of fast food, snacks, microwave dinners, health food, vegetarian meals and low fat diets to meet our individual demand for convenience or nutritional requirements. Even a simple family dinner may consist of an entrée, the main course and dessert. In contrast, no other animals have such an

assortment of food to choose from, nor can they afford to have such elaborate eating habits. In the wild, chimpanzees rely mainly on fruit and nuts as staple food, while many animals must simply be content with whatever food is available.

Humans have many choices regarding where they live, including houses, apartments or even luxurious mansions, with access to electricity and drinking water. Most forms of housing are also adequately equipped with lighting, bathroom facilities, air-conditioning, and burglar alarms, all of which offer additional comfort and greater security. Wealthy individuals are able to purchase their own homes, and even most people with financial difficulties are still able to find affordable housing subsidised by government Housing Commission. In comparison, chimpanzees, along with all other wild animals, can only seek shelter amongst trees, caves or burrows for limited protection from the harsh elements and stalking predators. Even a desolate shack in the middle of a ruinous urban slum would be considered a five-star hotel to chimpanzees.

To travel from one place to another, humans have at their disposal various forms of transportation such as bicycles, automobiles, trains, ferries, aircrafts and even space shuttles. These forms of transportation offer greater efficiency, swiftness, comfort and reliability than travelling on foot. Our primate relatives do not have so many modes of transportation to choose from, having only their legs to rely on for travel, although swinging from branch to branch may be considered their equivalent to air travel.

We can clearly see that there are enormous lifestyle differences between human beings and other primates. This leads to the very question of why such differences do exist, particularly considering that humans and other primates are so closely related from an evolutionary perspective. The answer lies in the simple fact that human beings are able to invent and utilise various tools to compensate for the insufficiencies of the human body. These tools allow humans to enhance their capacity to satisfy more desires. Just think about the number of kitchen utensils we routinely use to prepare a meal; the variety of instruments used to tailor an outfit; and the diverse range of equipment associated with agricultural practices. In fact, the extent to which humans use vast quantities of tools to satisfy their every desire is unmatched by any other known life form on earth. From this we can propose the notion that civilisation is essentially the invention and utilisation of tools as an external aid to supplement the human body's insufficiency to satisfy desires. Looking back at the history, human civilisation has progressed from using bare hands to stone tools, from stone tools to metal tools, from metal tools to the invention of the steam engine, and then from steam engines to the emergence of computers. Therefore it is clear that the tools created by humans have become more and more sophisticated over time. More importantly, the availability of these tools continues to improve the productivity and efficiency of all human activities, which consequently improves our capacity to satisfy our desires. Such improvements are attributed to breakthroughs in technology that provide the impetus for the advancement of civilisation. When our ancestors first learned to make and use stone tools, human civilisation entered the period that is commonly known as the Stone Age. When people learned to manufacture and use metal objects, human civilisation progressed to the Bronze Age, and subsequently the Iron Age. The invention of the steam engine triggered the industrial revolution. Finally, the invention and proliferation of computers moved our civilisation into the age of information technology. Now, revolutionary breakthroughs in genetic engineering are set to thrust human civilisation into an age of biotechnological manipulation.



At this point, it is worth contemplating the reasons why civilisation is so exclusively associated with human beings and not any other life forms on earth. Why is it that only the human race is capable of making and using sophisticated tools to such a large extent that is unrivalled by any other animals?

This is because only human beings possess the higher level of intelligence required to invent and use tools. No other animals are known to possess comparable levels of intelligence. Such disparity in intelligence can be attributed to the histological, physiological and biochemical differences between human beings and all other animals. These differences are due to variations in the DNA sequences between all animals. Therefore, it is DNA that ultimately determines the levels of intelligence which subsequently determines the dominance of various organisms within the biological world.

The above writing is only a part of the book, **BEHIND CIVILISATION**.