

## **The Blocks of History: A Step-by-Step Model for the Evolution of Civilizations**

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### **Abstract**

The Pattern Recognition algorithm in Artificial Intelligence has been applied to many fields and proven to be very effective when seeking out patterns that arise from huge amount of raw data. As world history has evolved, it has revealed the shift of hegemony from one civilization to another, for example, from the Spanish Empire to the Kingdom of France, from the Kingdom of France to the British Empire, and from the British Empire to the United States. As historians have shown, the relevant eras are the Spanish Golden Age, the Age of Enlightenment, Pax Britannica, and Pax Americana. Since the data about these eras are too huge to collect, I believe one can manually find out useful patterns by critically thinking about similarities in history. I propose a solution of finding each era's beginning and ending year, then quartering years, along with similar but critical events which happen in these years. By applying this method, one can observe the evolution of history step-by-step and can extract the pure logic behind it.

### **1. Introduction**

Pattern Recognition can be applied to extract pattern(s) from huge amount of data. For example, Walmart has applied this technology to analyze receipts, and it has found that on Monday night customers who buy diapers usually also buy beer. They soon realized it's because for newly married couples, men often do shopping on Monday nights for the babies. The company put diapers and beer close to each other and found that the beer sales increased. A pattern can be thought of as something happening repeatedly over with a fixed period.

The view of civilization as an "organism," offered by Oswald Spengler, is the foundation of this paper. In order to make things easier, the abbreviations ESP, FRA, GBR and USA will be designated for the Spanish, French, British, and American civilizations. We will use DEU for the Germanic civilization, including Prussia, the Second German Empire and Germany today. Similarly, we will use RUS for the Russian civilization and CHN for Chinese civilization.

A "step" could be considered to represent an era like the one generally designated as Pax Americana, or a period within it, such as the Gilded Age of the United States (from 1870s to about 1900), or something even longer.

Some features of each era are indicated in the following chart.

Age/Era	Core	Ideology	Means of production	Production upgrade
Spanish Golden Age	ESP	Colonialism	Outsource to other countries	Purchase from workshops in other countries
Age of Enlightenment	FRA	Mercantilism	Workshop	Royally-chartered Workshop
Pax Britannica	GBR	Capitalism	Factory	Industrial Revolution
Pax Americana	USA	Consumerism	Factory with mass production	Electrification Revolution

## 2. Initial Breaking Points: Comparing the United States and China

After reading *The Jungle* by Upton Sinclair, I did some research about the background of the period. I realized it is the dawn of the Progressive Era in the United States (from the 1890s to the 1920s). Before this period lies the Gilded Age (from 1870s to about 1900).

As a Chinese born in the 1980s, I soon found significant similarities between the Gilded Age of the United States and what happened in China during the 1990s to 2000s, known in China as the Era of Reform and Opening-up. This involved, but is not limited to industrialization, cheap labor, poor product quality, urbanization, pollution, and corruption of the bureaucratic system.

The next question I considered was, how did the United States manage to evolve from the Gilded Age to the Progressive Era? As my research went on, I found that the US restored the gold standard in 1879; in 1883 the building of the ABCD fleet occurred and during the same year the *1883 Pendleton Civil Service Reform Act* was passed. These three key events in the Gilded Age paved the way for the next era. And they represent upgrades in the economy, the military, and the bureaucratic system.

China in 2002 joined the World Trade Organization. In 2006 it started its aircraft-carrier program (along with WS-15 aviation engine project, to be used in the J-20 stealth jet fighter). The same year saw the declaration of the *Civil Servant Law of the People's Republic of China*.

Thus,  $2002 - 1879 = 123$ , and  $2006 - 1883 = 123$ .

These, then, constitute my first three initial “breaking points,” and they share this period of 123 years. Thus, what happened in the United States 123 years ago, now happened in China, albeit in a different form.

A summary of this section:

USA		CHN	
USA restores the gold standard and joins the world trading system led by GBR	1879	2002	China enters the WTO, which is led by the USA
1883 Pendleton Civil Service Reform Act abolishes the Spoils System	1883	2006	Civil Servant Law of the People's Republic of China
Starts to build the ABCD fleet (modernization of the American naval force)	1883	2006	China starts to update the aircraft carrier the Varyag, purchased from Ukraine and the WS-15 aviation engine

### 3. Second Breaking Points: between AUT-DEU Alliance and the EU

When thinking about the end of Pax Britannica and the start of Pax Americana, I'd like to point out here that two major new powers arose near the end of Pax Britannica. These two are the United States and the German-led Austro-German Alliance. For the period of Pax Americana, there are two new major powers: the German-led European Union and China.

The question arises whether the German-led Austro-German Alliance parallels the European Union. Since Germany is the core for both, we find that in 1879 the Austro-German Alliance started and in 2002 the Euro became the single currency in Euro-zone Europe (vs Petrodollars). And we see that  $2002 - 1879 = 123$ .

During Pax Britannica, Germany (Prussia) united, rose in power, and finally challenged Great Britain. During Pax Americana, modern Germany reunited, rose in power, and tried to restore its political position (following its defeat in World War II). The similarity here is obvious to me. One cannot state that the European Union will challenge the United States later, or that by  $1914 + 123 = 2037$  World War III will happen.

Statements like these require more proof concerning the magic number "123". Therefore, in the following paragraphs, I will just assume this 123-year-period works and consider it like a constant in physics.

Here, I would like to divide major civilizations into several types, Type I civilization includes ESP, FRA, GBR and USA. Type II civilization is DEU. Type III civilization is RUS and Mongolia before it.

Type I focuses on expansion and always builds a system (with YANG features), but Type II focuses on perfecting (with YIN features).

#### 4. The rise of the United States and its 123 year period

After trying out different starting years, I believe the year 1883 is perfect for the rise of the United States, and 2005 is the moment of the start of the fall of the US (since  $1883 + 123 = 2006$ ).

The reason is that China's military power rises in 2006, but this doesn't mean that the United States instantly declines in 2006. Think about a baby. The baby when born, it's age one. But it'll take at least 17 years before that child can formally join and function in society. This "age 18" is like the 1883 for US and 2006 for CHN, which means that the United States is ready and officially enters upon the international scene. The military upgrade (from defensive to offensive) is a key aspect of the pattern.

Thus,  $123 = 30 + 1 + 30 + 1 + 30 + 1 + 30$ , so if we use 1883 as start, we can divide the period into:

1883	1912	1913	1914	1943	1944	1945	1974	1975	1976	2005
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The years 1913, 1944 and 1975 each reveal very important events for the United States. The Federal Reserve starts in 1913, the Bretton Woods System (Gold-dollars) starts in 1944, and the US Dollar is tied with oil (Petrodollars) in 1975. So, this quartering split clearly shows the evolution of American's dominating financial system, which is obviously an important cornerstone of Pax Americana.

This is my definition of the Pax Americana, from 1883 to 2005, its critical years are 1883, 1913, 1944 and 1975.

#### 5. The rise of Great Britain and its 123 year period

For Pax Britannica, by applying 123 years' period, it should be from 1760 to 1882, like this:

1760	1789	1790	1791	1820	1821	1822	1851	1852	1853	1882
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The most obvious pattern about Great Britain is that in 1821 the Gold Standard starts;  $1821 + 123 = 1944$  (the Bretton Woods System starts). But I can't find how GBR built its Gold Standard nor how the Gold Standard evolved. For GBR's military and political upgrade, in 1760 the new king, George III, started to expel the Whig Party and use the Tory Party (thus revealing a British bureaucratic system upgrade). And the Annus Mirabilis of 1759 is perfect for the end of FRA's military might.

The 1789 French Revolution gives GBR an excellent edge to maneuver across the European continent. I believe arrangements must have been made in 1789 to ensure the stability of Great Britain's financial system due to the disturbances in France, but as of yet, I cannot find any evidence.

So, I am led to assume that Pax Britannica runs from 1760 to 1882, and its critical years are 1760 and 1821. In addition, 1790 and 1852 require more study about the evolution of the British Gold Standard.

## 6. The rise of France and its 123 year period

For the Age of Enlightenment (or, if you will, the period of French hegemony)

1637	1666	1667	1668	1697	1698	1699	1728	1729	1730	1759
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In 1636 an offensive by Spain and the Holy Roman Empire was launched against France, but in 1637 the French offensive began, and finally France won the Thirty Years' War (1618-1648). Now it dominated the European continent, which is perfect for the start of the rise of France.

I can't find enough material about the French financial system. It seems that Sir Isaac Newton made an agreement with French king Louis XIV in 1698 concerning silver coin casting; I just cannot find more details about it.

So, I assume that the Age of Enlightenment is from 1637 to 1759 (as mentioned above, the Annus Mirabilis of 1759), its critical years are 1637 and probably 1698, and 1759. Years 1667 and 1729 require more study about the evolution of French Mercantilism.

## 7. The Spanish Golden Age

For the Spanish Gold Age, our calculations are purely theoretical.

1514	1543	1544	1545	1574	1575	1576	1605	1606	1607	1636
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I haven't done my study about Spain yet, so I'll just put the timeline here for now. The Spanish Empire is apparently the final step of the hegemony of the House of Habsburg, which was started by Rudolf I of Germany in roughly 1268 (LUX for Luxemburg), then develops into the Austrian Empire (AUT) in around 1391, and then, into the Spanish Empire (ESP).

This pattern of 123 years could be applied repeatedly backwards through history to show each era, running through the Middle Age of Europe. As you can see, LUX, AUT and ESP formed ever bigger steps of the hegemony of the House of Habsburg.

Similarly, FRA, GBR and USA formed yet greater steps in modern history. By doing this we can approach and study the evolution of history metaphysically.

Thus, a “big step” of civilization’s evolution comes via three smaller steps and lasts for a period of 123 times 3 = 369 years, like this:

Frankish Civilization			Holy Roman Empire Civilization			Habsburg Civilization			Modern Western Civilization		
Neustria	Austrasia	Charlemagne	Saxon	Salian	Hohenstaufen	Luxemburg	Austria	Spain	France	Britain	America
NTS	ATS	KAL	SXN	SLN	HSF	LUX	AUT	ESP	FRA	GBR	USA
530	653	776	899	1022	1145	1268	1391	1514	1637	1760	1883
559	682	805	928	1051	1174	1297	1420	1543	1666	1789	1912
560	683	806	929	1052	1175	1298	1421	1544	1667	1790	1913
561	684	807	930	1053	1176	1299	1422	1545	1668	1791	1914
590	713	836	959	1082	1205	1328	1451	1574	1697	1820	1943
591	714	837	960	1083	1206	1329	1452	1575	1698	1821	1944
592	715	838	961	1084	1207	1330	1453	1576	1699	1822	1945
621	744	867	990	1113	1236	1359	1482	1605	1728	1851	1974
622	745	868	991	1114	1237	1360	1483	1606	1729	1852	1975
623	746	869	992	1115	1238	1361	1484	1607	1730	1853	1976
652	775	898	1021	1144	1267	1390	1513	1636	1759	1882	2005

### 8. Summary of year-based data

The table of four hegemonic civilizations in modern history is as follows:

ESP	FRA	GBR	USA	Description	Time
1514	1637	1760	1883	Step 1: military and bureaucratic system upgrade	30 years
1543	1666	1789	1912		
1544	1667	1790	1913	Step 2: seizure of power to build hegemony	1 year
1545	1668	1791	1914		30 years
1574	1697	1820	1943		
1575	1698	1821	1944	Step 3: a powerful hegemony rules its time	1 year
1576	1699	1822	1945		30 years
1605	1728	1851	1974		
1606	1729	1852	1975		
1607	1730	1853	1976	Step 4: the end of the several periods of hegemony	30 years
1636	1759	1882	2005		

### 9. Conclusion

In this attempt I have proposed an experimental model of the evolution of modern history, and I have offered a method to split or combine eras, each one of which is assumed to last for 123 years. I started with the analysis of the four major eras of modern history, and I then observed the similarities between the United States and China.

These reveal that there is a recurring 123 year-long pattern. Then, we can apply this pattern to modern history and split every 123 years into four parts, each demarcated by significant events.

The model (for Type I civilization) is not perfect due to the insufficient historical evidence, but for each start year, the military upgrade provides an epoch-making pattern.

As a result, I have revealed two key patterns to investigate when studying any civilization: one rests upon its military system and the other upon its economic system. The evolution of these systems in Type I civilizations has shown certain similarities.

## **10. Aim and Summation**

Each era can be split into smaller steps or combined to form bigger steps. Utilizing this method, like the zoom in/out function of a camera, once accomplished can display the evolution of history at different levels. It will show a clear shift of hegemony, or the main path of development of human history.

The next stage of study includes three major efforts.

1. To divide each era into eight parts, which is  $123 = 15+15+1 +15+15+1 +15+15+1 +15+15$ .
2. A deeper study and understanding of Spanish, French, and British financial and military history.
3. The expansion of these 123 year eras backwards. The goal is to try to narrow down the starting location of human history. (It's highly probable that this will be the Sumerian civilization)

## **11. Partial glance at patterns and prognostications**

In 1883 the Americans started to build warships. Fifteen years later the United States started to use this military might to expand. This is one reason I intend to divide each era into eight parts with 15 years suggested as a minimal length for each segment. And in my opinion, 15 years is perfect for one generation.

### Patterns

The Austro-German Alliance (DEU-AUT) starts	1879	2002	The Euro becomes the single currency in Euro-zone (DEU-FRA), as against Petrodollars
The United States restores the gold standard and joins the world trading system led by Great Britain	1879	2002	China enters WTO which is led by the USA
1883 Pendleton Civil Service Reform Act abolishes the Spoils System	1883	2006	The Civil Servant Law of the People's Republic of China
Start of the building of the ABCD fleet (modernization of US naval force)	1883	2006	China starts the updating of the aircraft-carrier The Varyag purchased from Ukraine and the WS-15 aviation engine
Venezuela Crisis between GBR and USA (USA expands)	1895	2018	Trade War between USA and CHN (CHN expands)

### Prognostications

The following prognostications are made without using a crystal ball or burning turtle bones or throwing sticks. They result from pure logic, informed by an educated guess.

Spanish-American War, US seizes control of the Caribbean Sea	1898	2021	If China must have a similar fight, it will be to reunite with Taiwan or to utilize another method to control the South China Sea
Boer War, GBR fought very hard to control the diamond and gold mines found in South Africa	1899	2022	If US must have a similar fight, it'll be against Iran to take full control of oil supplies

## 12. Postscript

Ecclesiastes 1:9 -- "There is nothing new under the sun."

Harry S. Truman -- " There is nothing new in the world except the history you do not know."

Even though sayings like this exist, history still has been used to undergird patriotism in many countries. Heroes, heroic stories and the glories of the fatherland have been repeatedly taught to the public in order to motivate a nation to achieve something (could be hard-work or war).

But they all have neglected one simple thing: no empire lasts forever. Every hegemony has a life-span, every hegemony falls at some point, that fate is inevitable because it's man-made.

In this paper I have focused on hegemony, which is the most obvious period of any major civilization. Yet, if we think about a civilization's life-span, then there must be a beginning and an end.

Think about 1764 and its impact for the settlers living in North American colonies. The British had won the Seven Years' War, but they mistreated the people of the colonies, thus causing the colonials to form their own self-identity (they're Americans instead of British). Think about the year 1641 (1641 = 1764 - 123) for the British; the Grand Remonstrance was passed, and it helped bring on the British Civil War in the next year. Then, equivalently, 1518 for the French, and 1395 for the Spanish.

I'm not saying these are perfect years to indicate the ushering in of a new era, just a way to be considered.

## References

[1] Upton Sinclair, *The Jungle*, 1906.

[2] Oswald Spengler, *The Decline of the West*, 1918.

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