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Book reviews on global economy and geopolitical readings

*ESADEgeo, under the supervision of Professor Javier Solana
and Professor Javier Santiso.*



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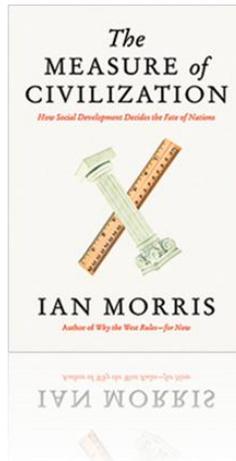


Obra Social "la Caixa"



The Measure of Civilization: How Social Development Decides the Fate of Nations

Morris, Ian, (2013), Princeton University Press, Oxfordshire.



“Social development is a measure of communities’ abilities to get things done in the world, not an explanation of communities’ abilities to get things done. Social development shows us the pattern that we need to explain.”

“Only when we have established the basic pattern of the history of social development can we start asking why it takes the form it does.”

“Social development is an important concept because the major reasons why the West has dominated the world in the past two hundred years are that a) its social development has reached higher levels than that of any other part of the planet and b) these levels have risen so high that the West has been able to project its power globally.”

“There will never be such a thing as one-size-fits-all numerical index that answers every question that any comparative social scientist might want to ask, but one of the best ways to turn comparative history into such a mature discipline may be through the design of multiple indices, each crafted to solve a particular problem.”

Summary

The last thirty years have seen many earnest debates on how civilisations developed and how the West gained so much power. *The Measure of Civilization* adopts a wholly new way of investigating these questions and furnishes new tools for measuring the long-term growth of societies. The author, Ian Morris, uses an innovative numerical index to compare societies across different places and times, establishing a wide-ranging analysis spanning Western and Eastern development over the fifteen thousand years since the end of the last Ice Age. He offers conclusions on how the West came to dominate the world and comes up with new perspectives on the 20th century.

Morris adapts a United Nations model – the so-called Human Development Index, or HDI, to develop a new model which measures human development in terms of four factors: (1) energy consumed per capita; (2) organisational capabilities; (3) information technology; (4) the ability to wage war. In order to quantify the patterns, he draws on archaeological, historical and governmental data. The author reveals that for ninety per cent of the time since the last Ice Age, the world’s most advanced area was the

most westerly part of Eurasia. He also notes that despite what many historians believe, Eastern Asia was the world's most developed region for a period spanning twelve centuries between 550 AD and 1750 AD. It was only in the 18th century, when North-Western Europe began developing fossil fuels, that the West took the lead.

The Measure of Civilization provides innovative tools to determine past, present and future economic and social trends.

The author

Ian Morris holds the Jean and Rebecca Willard Chair of Classics, is Professor of History at Stanford University and is Guest Professor at Stanford's Archaeology Centre. He is also Director of Stanford's archaeological excavation at Monte Polizzo, Sicily.

He graduated in Ancient History and Archaeology at the University of Birmingham in 1981 and took his PhD at Cambridge University in 1985. He has published over ten books and eighty papers on archaeology and history. His most recent volumes are *Why the West Rules—For Now: The Patterns of History and What They Reveal about the Future*. His latest book, *War! What is it Good For? Conflict and the Progress of Civilization from Primates to Robots*, will be published by Farrar, Straus & Giroux in the United States and Profile Books in the United Kingdom in April 2014. Ian Morris' many distinctions include prizes from The Guggenheim Foundation, Mellon Foundation, National Geographic Society and National Endowment for the Humanities. He has worked with various television channels, including A&E, Discovery Channel, History Channel, National Geographic Channel and PBS.

Key ideas and opinion

Through *The Measure of Civilization*, Ian Morris complements his earlier book – *Why the West Rules - For Now* – to offer a new, extended vision. In his latest book, Morris pursues two aims: (1) to respond to criticisms of *Why the West Rules—For Now* by furnishing a **better index of social development** and a **sounder explanation of the West's rise to power and riches**; (2) to **contribute an explicit comparative and quantitative historical analysis** based on said index.

Morris splits his book into three parts. He begins by giving an **overview of ideas of social development over the last fifty years** and distils from them the key challenges in building a social development index. In the second (and main) part of the book, Morris presents **evidence based upon four parameters**: (1) energy consumption per capita; (2i) organisational capabilities; (3) information technology; (4) the ability to wage war. In the third and final part of the book, the author considers some of the **conclusions that can be drawn from the social development index** and its potential contribution to the social sciences.

Towards a social development index

Intellectual basis

Morris' point of departure is the essay "Progress: Its Laws and Cause", published by the British thinker **Herbert Spencer** in *Westminster Review* in 1857. Spencer stated that his contemporaries were living through an unprecedented period of progress and he wanted to explain why. Combining geology, biology, psychology, sociology, politics and ethics, Spencer argued that **human societies had gone through four stages of development**. These were, in succeeding order: (1) simple societies (wandering, leaderless groups), (2) compound societies (stable peoples with political leaders); (3) doubly compound societies (groups with churches, states, complex division of work and education); (4) trebly compound societies (large civilisations such as the Roman Empire and Victorian Britain).

However, throughout the 20th century, Spencer's notion that evolution and differentiation should lie at the heart of historical research became unfashionable. **Functionalism — the theory that ideas, institutions and values strike a balance between these cultures** — became all the rage, with the German scholar Franz Boas and Poland's Bronislaw Malinowski being its most influential proponents. One of the sacrifices made in adopting a functional approach was that it made comparisons between cultures over time extremely difficult — **it was for this reason that many American social scientists in the 1950s returned to the evolutionist framework — then termed 'neo-evolutionism'**. Two ideas reigned in this 'new wave'. One was the return to differentiation as the most important consequence of evolution. The other was the desire to **quantify evolution to make comparisons more explicit**.

Raoul Naroll, a researcher at Yale University, **was the first to create a truly functional index**. He launched a highly ambitious programme to create a database for making global comparisons of human society and culture. To this end, Naroll used three parameters: (1) the size of a society's largest settlement, (2) its production specialisation, and (3) its number of sub-groups. The Yaghan Indians of Terra del Fuego occupied the lowest tier and the 15th century Aztecs, the top tier.

The latest trend in social evolutionism is theorising on **co-evolution between biology and social behaviour**. *Guns, Germs, and Steel: The Fates of Human Societies*, by Jared Diamond, has been by far the most influential contribution, combining biology, archaeology, anthropology and history in a convincing narration of co-evolution in plants, animals and human societies over the last fifteen thousand years.

Morris seeks to contribute to this theoretical framework, returning to Spencer and building on Naroll **to create sounder tools to explain why the West now rules the world**. Morris thus takes full account of the strongest criticisms of social evolutionism concerning the difficulties of measuring differentiation, the explanations of categories

and the units of selection — all of which were up to now imprecise and unclear. The fact is, discussions on evolution and differentiation can all too easily turn into an ideological discourse and self-justification of Western priorities. Furthermore, there are difficulties regarding the consistency of the states and societies on which the theories are based and the conversion of historical circumstances into data.

Methods and hypotheses

The main challenge facing the author in his analysis of social development is reflecting the criticisms of social evolutionism without losing sight of his **main aim, namely measuring and comparing social development through time and space**. Instead of falling into the trap of trying to explain everything — leading to inoperability — (which is, essentially, the charge levelled by critics of social evolutionism), the author uses his index solely to explain why the western-most societies of Eurasia dominated the world in the 19th century and why North America was top dog in the 20th century.

For this purpose and to avoid comparing only the most developed parts of Europe (such as Great Britain and the Netherlands) with China in the early modern period, **the author takes like with like. That is to say, he compares the most developed parts of each region whose nuclei were linked through the most intense political and socio-economic interactions**. Furthermore, Morris uses suitable time units that are short enough to illustrate general trends but not so short as to be meaningless. He uses units of: (1) 1000 years from 14,000 BC to 4000 BC; (2) 500 years from 4000 BC to 2500 BC; (3) 250 years from 2500 BC to 1500 BC; and (4) every century from 1500 BC to 2000 AD (the end of the index).

In addition, Morris starts from the UN Human Development Index to identify the least number of concrete indicators determining social development, based himself on the UN's criteria: life expectancy, knowledge, education, and living standards. The resulting criteria are **(a) per capita energy consumption; (b) social organisation; (c) the ability to wage war; (d) information technology**. Although he does not develop a global vision of social development beyond that covered by the UN approach, Morris' contribution lies in furnishing a view of social development that helps explain why **the West rules**.

Four key factors in social development

Energy consumption

According to Morris, **energy consumption is the inescapable basis of any measurement of human development**. Like animals and plants, if we do not consume energy, we die. Likewise, societies fall apart when they are incapable of drawing energy from the environment. In order to broaden their physical and intellectual control over their settings, peoples must increase their consumption of energy.

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By energy consumption, the author means **foodstuffs, fuel and raw materials** — three items that are added together to obtain data per person per day, expressed in kilocalories. The framework used to measure energy consumption is Earl Cook's famous diagram, originally published in the magazine *Scientific American* in 1971. The diagram gave rough estimates of energy consumption per head. Using this framework, Morris' data suggests that for almost two thousand years between the great classical empires and the Industrial Revolution, the ceiling of per capita energy consumption lay at a little over 30,000 kilo calories per day.

In the West:

- ✦ Total energy consumption rose between **9600 and 3500 BC** due to **farming and animal domestication** from around 3,500 kcal/person/day to 11,000.
- ✦ Then, between **3500 and 1300 BC**, during the **Late Bronze Age**, energy consumption doubled from a little over 11,000 to 21,500 kcal/person/day.
- ✦ Between **1200 and 1000 BC**, the collapse spread to the Western heartland, causing — according to Morris — the first irrefutable proof of **a clear drop in energy consumption**, to 21,000 kcal/person/day.
- ✦ From **800 to 500 BC**, **the beginning of classic civilisation in the Mediterranean and the spread of iron** led to a rise in energy consumption to 25,000 kcal/person/day and 30,000 kcal/person/day. These figures were **very high for the times, close to those found in the Western heartland around 1700 AD** — even though they are low by modern standards.

In the East:

- ✦ Energy consumption rose by 50 per cent from 4,000 to 6,000 kcal/person/day between **9050 and 6000 BC** as **agriculture took root**.
- ✦ In **2500 BC** it rose a further 50 per cent to 9,000 kcal/person/day as the revolution in **secondary products got underway**.
- ✦ In the following thousand years, between **2200 and 1200 BC**, energy consumption in the East rose by 52 per cent. The East **learnt bronze technology and wheat farming from the West and its travellers**.
- ✦ This, combined with the collapse of the West around 1200 AD, meant that by **500 BC the East had greatly reduced the gap that separated it from the West, with an energy consumption that was comparable with of the latter in 800 BC** (21,000 kcal/person/day).
- ✦ Between **1200 and 1700 AD**, contrary to what many authors state, Morris argues that **energy consumption in the East rose steadily and even quickly by pre-modern standards**, growing by 25 per cent.
- ✦ Although energy consumption in the West grew fast, data for the East **contradict statements by historians regarding 'the decline of the East'**. In fact, the East's

energy consumption reached 36,000 kcal/person/day in 1800, which is comparable with the 38,000 kcal/person/day in the West.

Rather than a decline in the East, Morris points to **a global redistribution of power in the 19th century in favour of the West, thanks to the Industrial Revolution.** In 1900, the West's energy consumption was 92,000 kcal/person/day compared with 49,000 in the East. **Thus the growing global importance of the East in the 20th Century was not due to a decline in the West but rather because the East learnt how to exploit the fossil fuel technologies the West had pioneered.**

Social organisation

In general terms, **the stages in the history of energy consumption and organisational capabilities related to city size went hand in hand.** According to Morris, both grew slowly after the Ice Age, speeding up in the **last two millennia** and undergoing exponential growth in the **19th and 20th centuries**, when the West built up its biggest lead over the East for a thousand years. Furthermore, Morris argues that **only when a certain quantity of energy was consumed — between 7,000 and 8,000 kcal/person/day —** was there a marked growth in the size of the biggest settlement. Consequently, both East and West experienced rapid urbanisation when energy consumption reached 11,000 and 12,000 kcal/person/day (between **3500 and 3000 BC** in the West and **2000 and 1500 BC** in the East).

Morris also notes the great crises in the first millennium AD, with the wars that toppled the Tang Dynasty in China in the East, and the fall of the Roman Empire in the West. The result was a 4% drop in the West's energy consumption between **100 and 300 AD** and 20% between **100 and 700 AD.** **However, the impact on the size of cities was even greater: in the East, cities shrank by 75% and in the West, by over 85%.** Likewise, the boom in energy consumption from **1500 AD** onwards drove city size up.

Ability to wage war

The ability to wage war has also been a function of energy consumption and has played a critical role in social development. **Small changes in energy consumption have produced big advances in the ability to wage war.** Given that military capability is always context-dependent, measuring war-fighting capacity is hard — especially when comparing societies in different periods, leading Morris to **equat**e this to **'destructive capacity'**.

In both the East and the West, after a long period in which the growth of war-fighting capacity was too sluggish to measure, there was a jump from 0.01 to 0.08 points within a thousand years (between **1800 and 500 BC** in the West and between **1200 BC and 100 AD** in the East). The West broke through the 0.12 barrier around **1400 AD**, precisely when warriors from Ottoman Turkey to Burundi, England and France began

experimenting with new weapons and tactics. Morris **notes that innovation was particularly intense in Western Europe** because: (a) the distance of Europe from the steppes made it hard to keep large numbers of cavalry horses; (b) Europe had many walled cities; (c) Europe's political fragmentation meant that there were many wars at any one time —fostering innovation.

Despite this, Morris highlights the vast difference between the war-fighting capabilities of industrial societies in the 20th and 21st centuries — in which science was applied to transport, logistics and firepower — and those of pre-industrial societies. In 2000, according to the author, the West's war-fighting capacity was **250, whereas the East scored a paltry 12.5**. For Morris, although China's military spending will equal that of The United States in 2020, at present there is still a huge military gap between East and West.

Information technology

Information technology has been incredibly sensitive to internal changes over the last few centuries in both the West and the East, forming a feedback cycle with energy consumption. To measure information, Morris looked at the skills needed to use technology in each period. Britain's Industrial Revolution in the 18th century would have been impossible **without high levels of literacy**. Its 'Second Industrial Revolution', in the late 19th century, (in which science was fully deployed in factories) depended even more on information technology.

Discussion

In the last section of his book, **Morris admits that his index may support various interpretations** and accepts that it may contain errors. Even so, Morris' index differs from previous ones adopting a neo-evolutionist approach in that **it was specifically developed to explain the rise of the West and its power and wealth**. He also stresses that even if his index were to have over a ten per cent margin of error — something he doubts — the general historical trends he explains would remain valid.

For the author, the index clearly demonstrates the West's leap in development between 1400 and 1800 AD. Second, **the West's domination of the modern world is not due to a prior decline in the East, given that oriental societies progressed a great deal during the same period. Rather, it was because of the extraordinary nature of the West's development**. The author notes that although this progress allowed early modern Europe to again reach the development levels it had enjoyed under Roman rule two millennia earlier, **the great leap forward did not occur until the Industrial Revolution**.

This remarkable parallel evolution over almost 15,000 years leads the author to conclude that **cultural idiosyncrasies made little difference to social development in**

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East and West. According to Morris and in line with Robert **Kaplan's** latest work, *The Revenge of Geography*, **a different environmental context would have yielded different results.** This is why Morris argues that 'the rise of the East' over the last fifty years has not been a temporary dip in Western domination but rather exhibits a medium to long-term shift in geographic changes (especially the 'shrinking' of the Pacific over the last century). Although the West may grapple with this shift in power and wealth, it will not be able to change the trend unless some as-yet unidentified developments radically turn geography to the West's advantage.

Morris concludes by stressing that **the index' key contribution is its proof of the critical role played by energy.** If the energy boom of the 19th and 20th centuries proves a flash in the pan, the 21st century could prove a very bleak one for mankind. On the other hand, if this century continues the growth in energy consumption begun by the Industrial Revolution, we can expect a vast and up to now unseen improvement in world living standards.