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Fight the Virus (COVID-19), Not the Economy!
How to Avoid the “Interventionist Storm”

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I Introduction

This paper is a call to arms. But it is a call to arms to wage war not on the economy that sustains us all, but on the new virus that threatens the lives of many. While COVID-19 can and will kill many individuals, it cannot seriously endanger the dynamic life-system that underlies our civilization. That can only occur through massive and misdirected government intervention—by what I have called the “interventionist storm”.

The central argument in this short paper is that only by understanding the dynamics of human society can we defeat COVID-19 without endangering our entire economic and social system. But to understand the **dynamic society** we need access to a realist general dynamic theory that does not exist in the natural sciences, the social sciences, or even orthodox economics. Such a theory, however, can be found in the work I have been undertaking over the past 50 years—work published in almost 30 books and many articles. It is called the “dynamic-strategy theory”, and has been successfully applied to human society over the past 2 million years, and used to make major predictions about the future of human civilization.

This general dynamic theory challenges the dangerous path we are now on—of progressively closing down the economy and damaging the underlying dynamic mechanism. Currently, nations throughout the world are taking an extremely **negative** approach to combating COVID-19 by massively deflating the economy—by placing it in “hibernation”. In effect, they are trying to starve the virus by trashing the economy. **It is a matter of who starves first.** This slash and burn policy, often employed in the face of invading medieval armies, is out of place in the modern technological age. Instead, I argue here, nations need to take a **positive** approach to fighting the virus by gearing up the economy to provide the infrastructure, equipment, vital supplies, and personnel needed for victory now and to meet the challenges that lie ahead. **No country ever won a major modern war by downsizing its economy.**

II A Few Ephemeral Facts in a Rapidly Changing War

The novel coronavirus popularly known as COVID-19 has taken the world by storm. In the four months of this invasion, it exploded from a small outbreak in the Wuhan province of China to infect some 400,000 people in at least 195 countries around the world. By the end of March 2020 about 17,000 people had died. And by the time you read this article, these numbers will have doubled, or quadrupled, or ... Clearly, the rate of expansion is exponential, and is expected to continue for six months or more into the future. It is now regarded as a pandemic. Unlike the Spanish Influenza Pandemic of 1918-20, which largely impacted young adults between 20 and 40 years of age, COVID-19 is mainly taking the lives of people over 70.

Initially the global government response was slow and ineffective. Chinese officials attempted to hide the outbreak by suppressing the facts and persecuting those medical practitioners who alerted the world to this deadly new threat. Since then China has taken extreme measures, as only a totalitarian regime can, to isolate the virus. In the West—particularly in Italy, Spain and the USA—elected governments have been slow to respond, with the result that numbers of infections and deaths have increased exponentially. This has led other democratic governments to impose increasingly severe restrictions on social interactions and to shut down all but essential organisations and activities. The underlying argument is that by going hard now in closing down the economy and society, governments will be able to “flatten the curve” of new infections sufficiently to enable hospital systems to cope with the numbers of sick patients. In other words, instead of taking the positive approach of gearing up the economy to enable the health system to cope with the number of infections, governments are attempting to reduce the number of infections at any point in time by deflating the economy. As we shall see, this negative response will inevitably generate an “**interventionist storm**” that could wreck the economy.

This negative approach to fighting the virus has meant that, increasingly, retail, manufacturing, and service establishments have closed their doors and workers have been thrown out of work. To ease the pain, governments are pursuing static Keynesian policies of injecting very large sums of money—involving billions and, in the case of the USA, trillions of dollars—into their economies through cash handouts, unemployment relief, business subsidies, rate relief, etc. And banks are being encouraged to defer mortgage repayments and make low interest loans, while landlords are being prevented from evicting those who default on their rents. This is a dangerous policy. On the one hand, governments are inflicting long-term damage on their economies, while providing short-term compensation. In contrast, Keynesian policies were originally designed in the 1930s to provide short-term relief in the context of declining economies caused, not by deliberate deflation, but by exogenous factors. Keynes certainly would not have supported policies designed to deliberately deflate the economy, while offering unproductive compensation. Anyway, Keynesian policies only work for as long as government expenditures are forthcoming, and that will not be very long when revenues dry up in artificially deflated economies.

In response to these government policies of deflation, people are panicking. They are hoarding not only essentials such as food, medicines, and cleaning products, but also surprising items such as toilet paper and baby wipes! Hordes of people are stampeding through the aisles of supermarkets, emptying the shelves of items that are not actually in short supply, and some are even fighting over individual items. Hospitals and medical practitioners are being inundated by people with both real and imagined viral illness. In some countries, such as Italy, these facilities are being overwhelmed, and doctors are being forced to decide who will and will not receive life-saving medical attention.

At this moment in history, the critical question is how far will governments around the world go in attempting to combat COVID-19? I suspect this will depend on how successful their initial programs are in containing the coronavirus outbreak. But will they go too far? Will they be prepared to badly damage their economies to achieve their life-saving objectives? Are the disease-transition models on which they have based their interventionist policies actually correct? Have they correctly measured—if measured at all—the costs and benefits of their intervention programs? While analogy is an unreliable method of enquiry, there is one comparison that may throw light on these issues.

III The Immune response in Individuals and Society

It has been estimated that during the Spanish Influenza Pandemic of 1918-20, somewhere between 20 and 50 million people around the world died from this virus—a death rate of between 1.0 and 2.5 percent of the total population.¹ Possibly one-third of global population was infected. As mentioned earlier, the highest death rate was experienced by young adults between 20 and 40 years old. A widely accepted scientific explanation of the surprisingly high death rate for young healthy adults (usually the very young and the old succumb more easily) is that this demographic experienced a massive overreaction of their immune systems—an overreaction known as a “**cytokine storm**”.

A cytokine storm is the result of an overproduction of immune cells and their “activating compounds” in the lungs of influenza patients. This results in inflammation and fluid accumulation in the lungs, which in turn leads to respiratory problems and, often, the onset of bacterial pneumonia (Qiang Liu et. al., 2016). Those age groups with weaker immune systems, including children and older people, experienced lower death rates precisely because they did not experience cytokine storms. In other words, it was the **overreaction** to viral attack that led to the destruction of young, healthy and strong bodies. Scientists have recently tested this hypothesis by recovering the Spanish Influenza virus from frozen bodies in the Arctic and injecting it into animals, which subsequently died from cytokine storm (Tumpey, 2005).

I wish to suggest that human society reacts in a similar way to the individual immune system when under a virus attack. This reaction, as we have noted, includes various programs of social isolation that require the shutting down of a variety of normal social, economic, and political activities. This policy has a debilitating impact on the underlying dynamic economic system. If this process of economic shutdown is taken to its logical extreme—in a frenzy of accumulating government prohibitions—the very viability of the economy and society concerned will be endangered. I will call this frenzy of government economic prohibitions the “**interventionist storm**”. Its impact on the body politic will be akin to the impact of the cytokine storm on the individual body—self-induced devastation. Like biological systems, economic systems can also be extinguished by an inappropriate **internal** response to **external** attack.

IV The Short-run, Static Economic Costs of a Virus Pandemic

In this context we need to explore the static and dynamic costs of the COVID-19 Pandemic. Shortrun static costs involve reduced material *outcomes* for a single generation owing to the impact of disease, whereas longrun dynamic costs involve material losses experienced by many generations owing to damage caused to a society’s dynamic *processes* or mechanism.

In discussing the shortrun costs, I will begin by outlining the recent research of Barro, Ursúa and Weng (Barro et al. 2020) at Harvard, which is based on the Spanish Influenza Pandemic. First, they estimate that the Spanish Flu between 1918 and 1920 resulted in the death of 39 million people globally—a death rate of 2% of the entire population. Second, by employing simple regression analysis on a data set for the period 1901 to 1929 (essentially a decade before and after World War I), these authors conclude that the pandemic was responsible for reducing real GDP per capita and real private consumption per capita in the “typical country” by 6% and 8% respectively. This is marginally less than their calculation of the reduction in real GDP per capita of 8.4% caused by World War I. In effect, the pandemic *doubled* the negative impact of World War I on global living standards.

Barro et al. attempt to draw implications from the Spanish Flu for the current COVID-19 crisis. They suggest that the 1918-20 pandemic could be regarded as a worst-case scenario. If this were the case, a death rate of 2% today would amount to 150 million deaths world-wide, and the decline in material living standards would be 6% to 8%. This would mean that the negative economic impact would be similar to that of the Global Financial Crisis (GFC) in 2008-09. But it should be remembered that Barro et al. have only calculated the shortrun static costs of pandemic. They ignore both the longrun dynamic costs and the costs of a greater degree of government intervention in today’s pandemic. Therefore, they have hugely underestimated the likely real costs of the COVID-19 crisis.

What implications do Barro et al. draw for today from their work on the Spanish Influenza Pandemic? They suggest that “the large potential losses in lives and economic activity justify substantial expenditure of resources to attempt to limit the damage”, and they reflect that “countries have been pursuing a policy of lowering real GDP ... as a way of curbing the spread of the disease” (Barro et al., 2020: 17). And they conclude that: “there is clearly a difficult trade-off here concerning lives versus material goods, with very little discussion about how this trade-off should be assessed and acted upon”. But they do not say where this balance should be achieved, nor do they discuss how government intervention could damage the longrun dynamic mechanism of society. We now turn to the totally neglected longrun dynamic costs of interventionism—to the “interventionist storm”.

V The Longrun Dynamic Costs of the “Interventionist Storm”

Clearly, governments cannot and should not stand idly by while their citizens continue to die from disease at an exponential rate. But we need to ask what should be the objectives of this intervention, and how far should it be taken? I argue that the central objective of governments throughout the world should be to “fight the virus, not the economy”. And further, that this war against the COVID-19 virus should not be taken so far that it permanently damages the underlying dynamic mechanism of the economy. The implication here is that, in addition to the usual shortrun static costs identified by orthodox economists like Barro et al., it is essential to explore the longrun dynamic costs of interventionism.

What are the longrun dynamic costs? They arise from the damage done to the dynamic life-system—which I call the “strategic *logos*” (explained in the Appendix)—by the outbreak of an “interventionist storm”. These costs are experienced for many generations. In the current global circumstances, an interventionist storm is highly probable, and its impact is potentially devastating. Every nation in the world seems to be competing in a race to see who can be the first to shut down their economies completely. Possibly the only dissident is the USA, where President Trump says (in

late March) he wants to get back to business by Easter. But the growing pressure to shut-down the economy will be hard to overcome. Already in the USA large manufacturing concerns are closing down. In the automobile industry, for example, most of the large carmakers have announced “temporary” shutdowns, partly under pressure from trade unions. German carmakers are also expected to close operations. Other countries are quickly following suit. And China’s manufacturing output declined by 15.7% in January-February 2020 as compared with the same period a year earlier (*The Japan Times*). And this is only the tip of the iceberg. The key question is: where will it end?

The vital point to realise is that economic systems cannot just be dismantled now and reconstructed at year’s end as if nothing has happened. They are not Lego construction kits, but rather complex organic systems that have taken centuries, if not thousands of years to emerge in their current forms (see Snooks, 1997). If heavy industry (iron and steel making together with associated engineering) is closed down around the world, it will be very costly (running into trillions of dollars) to restart again. Indeed many plants requiring continuity to survive will not even be able to contemplate reopening. Also, once heavy industry closes down, national energy network that require constant loads will be endangered from wild fluctuations. Therefore, if we are to intervene in these economic systems we must understand what they are and how they operate. The problem is that policy advisers, both from the natural sciences and the social sciences, have failed to develop a viable realist general dynamic theory to examine dynamic economic systems and the likely impact of interventionism. It has been my life’s work to develop such a theory called the “dynamic-strategy theory” to explore the dynamic life-system I call the “strategic *logos*” (Snooks 1996; 1997; 1998a; 2003; 2006; 2015), which is discussed in the Appendix.

VI What Underlies “Interventionist Storm”?

As suggested above, the massively growing intervention in the working of the strategic *logos* is the outcome of a revolution in the technological means of controlling society together with an increasing self-confidence to do so. But what is this new self-confidence based on? In the main it is a belief that science can save us from collapse. It is a new religion that has substituted science for the old gods. This new belief has been called “Scientism” (Snooks 2010a). **Increasingly, governments are relying on the theories and models of natural scientists, who have no expertise in the nature and operation of human society. Even when social scientists are consulted by policy makers they are orthodox economists and finance experts, who have little or no understanding of societal dynamics.**

Recent examples of radical intervention in the operation of the strategic *logos* are climate mitigation and disease control (COVID-19). While climate mitigation is the focus of some of my earlier publications (Snooks 2010b; 2015; 2019), a brief comment is required here. Natural scientists have quite correctly drawn our attention to probable changes in global climate and its possible future impacts, but, owing to their lack of expertise in the social sciences, they have nothing constructive to say about the matter of climate mitigation. Despite this, democratic governments are being forced, often against their better judgement, to respond to their demands for action by an increasingly frightened public. The lack of expertise by natural scientists in the way human society works has left the door open for neoclassical economists to enter the climate arena. Unfortunately, orthodox economists are also out of their depth, because their much flaunted theoretical tools are shortrun, static and marginal (small change) in nature, while climate mitigation requires an analysis that is

longrun, dynamic and non-marginal (vast change). Despite these flaws, orthodox economists are listened to by government policy makers. It is a case of the blind leading the blind.

Similarly, government intervention in the COVID-19 crisis is based on the modelling and demands of natural scientists, together with the policy conclusions of orthodox economists. The decision by leading democratic governments to shut down their economies is largely based on disease modelling by natural scientists and mathematicians. Most of the rest of the world—at the urging of the World Health Organisation (health bureaucrats)—merely follows these leaders without any modelling at all. In the UK for example, Prime Minister Boris Johnson’s policy changes reflect the revisions made to the disease models of mathematicians at Imperial College, London. Initially these models predicted that closing down the economy early would lead to an uncontrollable second wave of infections once controls were removed. It was claimed that it would be better to allow the virus to spread in order to generate “herd immunity”. This led Johnson, who was probably also rightly worried about the negative impact of controls on the economy, to request the public to adopt a program of voluntary social distancing. Within a matter of weeks, probably spooked by the rising number of infections and deaths in the UK, the disease modellers revised their models to show that if massive government intervention was not adopted there would be about 250,000 deaths in the UK, but that if aggressive “disease suppression” intervention was undertaken immediately, perhaps only 20,000 would die. Although this new report from Imperial College took no account of the social and economic consequences of going “hard and fast” with government intervention, the UK government accepted the advice of natural scientists and proceeded to close down the economy. Similarly, the French President Emmanuel Macron, after a slow start, now claims that France is “in a state of war”. Perhaps, but the war is on the economy as well as the pandemic, as this “state of war” involves a complete lock-down. **In times of real warfare the economy wasn’t shut down, it was dramatically geared up to meet war-time production.** Governments in the rest of the European Union have followed this accelerating trend to complete lock-down.

While leading democratic governments have largely rejected the herd immunity approach—the Netherlands and USA are amongst the exceptions—they have been, somewhat ironically, caught up in the “herd response” of imitation. Most nations have not bothered to explore models of the spread of disease or the economic impacts of intervention. Instead they merely follow the leading interventionists. In fact, intervention to close down the economy has become a highly competitive game. Each national and regional government is racing to be the first to go the furthest in this respect. This is the core dynamic of “interventionist storm”.

Even orthodox economists have not been able to effectively analyse the impact of the COVID-19 crisis. We have seen how orthodox economists at Harvard have attempted to estimate the static and shortrun costs of the COVID-19 Pandemic through analogy with the 1918-20 Spanish Influenza Pandemic. The limitations of this approach are enormous, and their implied advice is misleading. In the first place, the analogical approach is not scientific, but merely an illustrative, method. (For a discussion of this methodological issue in the context of Charles Darwin’s flawed barn-yard analogy for natural selection, see Snooks 2006.) There is no factual reason to expect that an influenza pandemic is a good model for the very different coronavirus pandemic. And second, the Harvard study misses the most important costs of both the Spanish Flu and COVID-19, which are dynamic and longrun, not static and shortrun.

VII What Policies Should Be Adopted?

As the title of this article suggests, **war must be waged against the virus, not the economy**. In this context, it is an interesting historical fact that even the most severe attacks on the strategic *logos* by disease have been unable to bring it down. For example, one of the world's deadliest diseases, the Black Death, or Bubonic Plague (caused by the bacterium *Yersinia pestis*), afflicted much of Eurasia during the 14th century, reaching a peak from 1347 to 1351. During this period it killed between one-third and one-half of the populations of affected countries. Despite this, the Hundred Years War (1337-1453) hardly missed a beat, as the kings of England and France pursued their dynamic strategies of conquest against each other. During the plague's peak, the English captured Calais in 1347 and routed the French at the Battle of Poitiers in 1356—presumably with smaller armies than before the Black Death. Their economies had been diminished, but their strategic *logoi* remained undiminished. The same is true of other periods in history when human society has been under attack from other diseases such as small pox, cholera, and malaria.

Closer to our own time, the Spanish Influenza Pandemic clearly had a significant negative impact on economies throughout the world in both the shortrun and longrun. This was despite the fact that it was not accompanied by an “intervention storm” (although the defensive measure of quarantine was widely employed). In the shortrun, this pandemic probably reduced real GDP per capita by about six percent. And in the longrun it is highly probable that the pandemic delayed the USA's transition in the early- to mid-1920s from an exhausting dynamic strategy to a new dynamic strategy following World War II and the Marshall Plan, thereby contributing to the Great Depression (Snooks 1997: 384-90). Even so, the pandemic did not derail the US strategic *logos*, just slowed its progress for a few decades.

The government response to COVID-19 promises to be very different to that during the Spanish Influenza Pandemic. Emboldened by new technological means of societal control, armed with the advice of narrowly focused natural scientists and orthodox economists, goaded by anti-establishment journalists, and pressured by panicking electorates unwilling to adopt the stoical stance of their great-grandparents at the beginning of the 20th century (in part due to their belief in the greater importance of the individual over the society), governments around the world are playing the dangerous game of Russian economic roulette. In quick succession they are declaring ever more extreme stages of economic shut-down. If this fevered process continues, it will be only a matter of time before “interventionist storm” occurs—a storm that is capable of turning a modest exogenous attack into an internally generated derailment of the strategic *logos*. The economic and social cost of such a derailment will be enormous both in its severity and duration. It is important here to realise that economic depressions also lead to an unacceptable loss of human life. We may be looking at a scenario similar to that in the USA between the mid-1920s and the mid-1940s—virtually an entire generation of high unemployment together with low and uncertain living standards, and even world war. It will make a 6 percent reduction in real GDP per capita during the Spanish Influenza Pandemic look like a birthday treat.

What then is to be done? The COVID-19 virus must be defeated, but it must not be at the expense of the economy or its underlying strategic *logos*. As in world war, the focus must be on protecting the economy and using it to produce the ordinance required to defeat the enemy. No society has ever won a war by adopting the strategy of trashing its economy. The same is true of the war against COVID-19. Instead of closing down manufacturing and construction—or, in the marketing jargon of the Australian Prime Minister Scott Morrison, “placing business in hibernation”—we need to reinvigorate them to:

- Provide the buildings, equipment, medical supplies, and personnel required by the health profession to take the fight to the coronavirus. Not wait until it comes to them.
- Generate the employment and incomes required to maintain and expand the living standards of the people.
- Develop new technology sectors that will play a central role in developing the new technological paradigm shift (the “Solar Revolution”—see Snooks 2010b; 2015) that will enable us to transcend the effects of climate change and, even more importantly, the exhaustion of the old industrial technological paradigm that has its origin in the British Industrial Revolution over 200 years ago. This could be done initially by diverting the billions and trillions of dollars being raised for welfare payments and further down the track, by raising loans from investors who are withdrawing from the money market owing to the negative policies being pursued to fight the coronavirus. Failure to do so will lead to massive dynamic costs that will last for many generations. Some countries may even collapse.
- To maintain and expand those sectors generating the energy we need to undertake this industrial expansion.

It is important to realise that, as history shows (Snooks, *The Dynamic Society*, 1996), **if you try to stand still, you die!**

In other words, instead of pursuing a negative policy of, in effect, deflating the economy to compensate for the current limited capacity of the health sector to cope with viral attack, we need to pursue a positive policy of expanding the economy and employment to take the fight to COVID-19 and beyond to the next technological paradigm shift. This means investing massively in the economy, not closing everything down and compensating the losers with social welfare handouts. The country that takes this more positive approach—perhaps the USA which under President Trump is already tiring of inaction—will probably be at the forefront of the new technological revolution, just as Britain was 200 years ago. There is much to gain for those who hold their nerve and take calculated risks as innovators have always done.

Of course, waging war against COVID-19 should be a matter of social as well as economic strategy. We need to ensure a sensible degree of self-isolation and social distancing. While difficult, it is not impossible, particularly as the most vulnerable demographic is the over 70s, who have already retired from the workforce. Older people, together with those already ill, must go into self-isolation. This will not have a significant impact on the economy. Younger people, practising sensible social distancing measures, should remain in the workforce, as they are less susceptible to COVID-19. This is of paramount importance, because if society continues to look after older people by throwing younger people out of work, it will be only a matter of time before our youth will rebel against current draconian measures and seek retribution; and they could well turn to crime in an attempt to maintain their living standards. If this happens, society will be ripped apart. Children, who are the future of the strategic *logos*, should remain in school to continue their education because they are not significantly impacted by the coronavirus. Appropriate adults who lose their jobs in vulnerable service industries where social distancing is impossible (and these areas must be minimised), could be redirected initially to assisting in health, education, and care sectors, and ultimately retrained to join the newly expanding technological sectors.

In other words, the emphasis of government expenditure should be less on Keynesian handouts and more on strategic investment. Using the experience of the USA for purposes of illustration: the emphasis should be less on the flawed New Deal (Roosevelt) of the 1930s, and more on the strategically successful Marshall Plan (Truman) of the late 1940s. To dodge the potentially disastrous

“interventionist storm” will require a difficult balancing act between saving lives and saving the economy. But if there is a major leader possessing the insight, courage, and determination to make this happen, the rewards for that nation will be beyond measure, just as they were for Britain after the Industrial Revolution.

VIII Appendix: The Strategic *Logos*

What is the strategic *logos*? It is an *open* biological system able to convert energy from a body, like the Sun, into work—a less than perfectly efficient process that loses energy to the environment in the form of heat. It is part of a larger *closed* system, the Universe, that is on a long but inevitable journey to heat death and chaos. While the ability of life-forms to gain access to energy from the Sun (or from the molten core of the Earth) is usually taken for granted, this is no easy task. It is necessary for life forms to develop either biological or technological methods to extract energy to undertake work and create order and complexity. This is a task beyond the capability of individual organisms. It can only be achieved by the emergence of a dynamic life-system—what I call the “strategic *logos*”. Biological and technological “ideas” do not just emerge spontaneously as do events in the physical world (such as the flow of heat from hot to cold bodies), but rather require the deliberate investment of time and resources in dynamic social structures. This is a process I call the “strategic pursuit”, whereby materially motivated organisms attempt to maximise the probability of survival and prosperity through the adoption of “dynamic strategies”.

Energy is needed, therefore, to develop dynamic life systems that in turn can protect and sustain the extremely difficult *process* of survival and prosperity in a hostile world that, as a result of entropy, is continually running down. The reasons these protective life systems—or strategic *logoi*—must be dynamic is because of the critical need to continually reinvent effective ways of gaining access to sources of energy and other resources in the face of “strategic exhaustion”. This is the exhaustion not of natural resources but of the current dynamic strategy. Only a viable dynamic *logos* can provide life and society with continuity and sustainability. Anything that damages the strategic *logos* damages society’s attempt to survive and prosper by reducing, perhaps even eliminating, its capacity to generate material surpluses (as measured by real GDP per capita) in the longrun. While the *logos* is an entropy-defying, exogenous shock-deflecting life system, it is vulnerable to sustained internal attack from antistrategic interventionists, such as home-grown terrorists, revolutionaries, extreme climate mitigationists, and, even, well-meaning but confused governments. In this paper I focus on misguided intervention from governments.

It may be useful to compare the nature of the strategic *logos* with hidden systems in the physical world with which readers will be more familiar. The relationship between invisible forces (strategic desire and strategic demand) and visible objects (agents, organisations, and physical structures) in the social world is similar to that in the physical world explored by physicists. For example, we can observe the pattern of planetary motion, but not the invisible force of gravity that shapes them; and we can detect the patterns of atoms and molecules in matter, but not the invisible but powerful controlling electromagnetic force. The laws governing these physical forces are derived not from the direct observation of objects, but from theories about the relationships between objects.

The nature of the discovery of the strategic *logos* is similar to these discoveries in science. The concept of the strategic *logos* emerged only towards the end of my research program spanning some five decades. This program passed through three main stages. First I established the quantitative

pattern of dynamics in both human society over the past 2 million years (myrs) and life over the past 4,000 myrs. Second, I developed a realist general dynamic theory that could best explain this real-life pattern. And third, I employed this theory to provide a dynamic picture of the hidden but powerful, underlying life-system. Here is a very brief outline of that theory.

The realist theory underlying the strategic *logos* is called the dynamic-strategy theory. It first appeared in fully developed form in my book *The Dynamic Society* (1996). Since then, the theory has been employed to explain biological transition (Snooks 2003) and the human mind and consciousness (Snooks 2006). This general dynamic theory was constructed inductively from a close and systematic observation of living systems in the human and non-human worlds. Very briefly, the dynamic-strategy theory consists of four endogenous, interrelated elements and one exogenous and random force (including disease). They include:

- The endogenous driving force, which arises from the need of all organisms to survive and prosper, provides the theory with its self-starting and self-sustaining nature. This force is called “strategic desire”, which is the drive to survive and prosper.
- The set of four universal “dynamic strategies”—genetic/technological change, family-multiplication (procreation and migration), commerce (or symbiosis), and conquest—that are employed opportunistically by individual organisms or “strategists” to achieve their material objectives.
- The “strategic struggle”, which is the main political method by which established individuals/societies/species/dynasties (“old strategists”) attempt to maintain control over sources of survival and prosperity, and by which emerging individuals/societies/species/dynasties (“new strategists”) attempt to usurp such control.
- The constraining force operating on the continuing dynamics of a society/species/dynasty is the eventual exhaustion not of natural resources but of the dominant dynamic strategy; or at a higher level in the dynamic process, of the genetic/technological paradigm. The operation of this constraint leads to the emergence of internal and external conflict, environmental crisis, collapse, and even extinction. Mass extinctions have internal rather than external causes in this model.
- Exogenous shocks, both physical (continental drift, volcanic action, asteroid attack, climate change) and biological (disease such as the plague and various viruses together with unforeseen invasion), impact randomly and marginally on this endogenously driven and shaped life-system, or strategic *logos*. In the past, only internally exhausted life systems (or *logoi*), that would have collapse anyway, are terminally affected; viable ones manage to shrug off these external shocks. But in the twenty-first century, a new and dangerous *internal* threat has arisen. The “metaphysical interventionists”—those activists driven by ideas unrelated to reality—have developed the self-confidence and technological means to generate “interventionist storm” in the modern global society as they respond to marginal exogenous shocks such as climate change and disease.

Figure 1 (page 12) shows the fundamental circular nature of interactions between humans (or any species of life) and society. This is the self-creating process—here called “strategic exchange”—which lies at the heart of the *logos*. This circular process of strategic exchange, in contrast to spontaneous order through particle interaction in physics, occurs at four levels of operation: (1) the dynamic strategy pursued by society; (2) the strategic demand that this material process generates for

a wide range of strategic inputs; (3) the individual and collective response to strategic demand; and (4) the resulting societal vehicle or culture (social institutions and organisations) that carries society forward in its struggle to survive and prosper.

The self-starting , self-sustaining dynamics of the strategic *logos* are driven by strategic desire—the ever-present determination to survive and prosper. Strategic desire, which is fed both directly and indirectly with energy from the Sun, operates primarily by driving both the prevailing dynamic strategy and its “strategic response”. In both cases, this activity is facilitated by the supervisory and planning role played by the mind or “strategic cerebrum”. All of this takes place beyond the conscious intelligence of the organic participants. In other words, **the emergence of complexity and order in life is not an automatic outcome of a predictable evolutionary pathway for matter and energy, as most scholars believe, but rather a special and vulnerable process arising from a strategic exchange between biological organisms and their physical environment.** The strategic *logos* is a time-travelling vehicle of life, battling the forces of a hostile cosmos and a hostile planet.

While the strategic *logos* is a dynamic system shaped by invisible forces, all human societies are, and have been, aware of its shadowy presence. Pre-industrial societies sought to understand it through myth and religion, while post-industrial societies attempted to penetrate its mysteries through rational thought (Snooks 2010a). Economists such as Adam Smith (1723-90) and Friedrich Hayek (1899-1992), although unable to analyse it successfully, were aware of the existence of hidden shaping forces—which they referred to as the “invisible hand” and “spontaneous order” respectively—that operated without conscious human control (Snooks 1993).

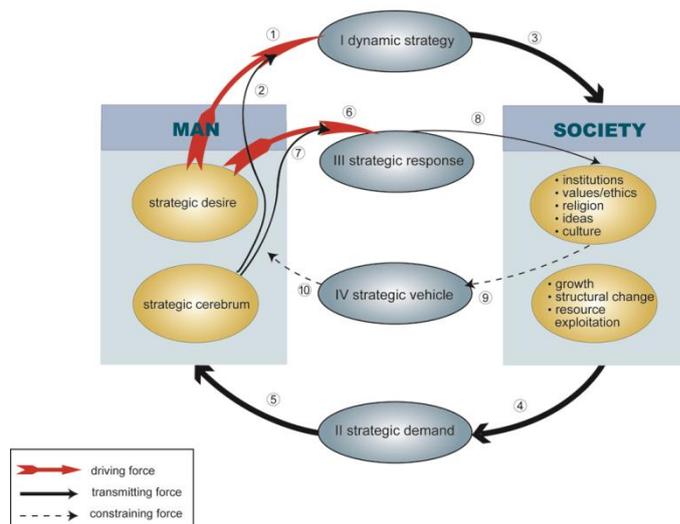


Figure 1: The Strategic Logos

Source: Snooks 2015: 108

Only with the completion of the dynamic-strategy project has it been possible to identify, expose, and explore the previously hidden dynamic life-system, and to show how it can be endangered from within by “interventionist storm”.

Endnote

1. My maternal grandfather Alfred Charles Williams (1896-1992) not only spent three years and three months continuously in the trenches on the Western Front during the First World War fighting in the British army (until he was finally badly wounded), but he also survived a serious bout of the Spanish Flu in London during November 1918. In a letter written to me in the 1980s, Pop Williams said: “I was chosen for guard duty at Wellington barracks, London; whilst there I went down with the so called Spanish Flu, which was more deadly than the war. People were dying like flies everywhere. I got permission to go home where I was unconscious for a week and lost a bit of weight. But I had got my luck back, it would seem.” He was a tough old bloke, both physically and mentally, who went on to live to be 96 years of age, despite (or perhaps because of) being an avid pipe smoker!

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