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Perspective

Entrepreneurship in International Context: Trends and Coping With Eco-Entropy

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Abstract

The rupture of the international system by the Ukranian war provides ecopreneurial opportunities for circular economies given gaps in national sovereignties laid bare by protectionism. The entropy of a full range of human needs from jobs to housing, etc. can be countered with sustainable, 'green-green' start-up designs stimulated by state policies yielding chances for 'individual sovereignty' and positive future perspectives.

Keywords: Ecopreneurship, Sovereignty, Entropy, Syntropy, Green-green Start-ups, Sustainability, Creative Destruction, Ukraine Crisis.

What The Ukrainian war has resulted in a rupture in the international system with consequences difficult to foresee. Threats of world war with the possible use of nuclear weapons have reinforced the perception that ultimately international affairs constitute analyses of existential life-chances divided into country risk and competing regional blocs of nations. This competition is mitigated by more or less globalization, particularly in terms of supply chains, energy and rare mineral resources, not to mention technological capacities and computer chips. As countries reassess their potential for self-sufficiency or what is called 'sovereignty', the capacity for suffering—that is, which nation is willing to suffer the most, has become an important psycho-social 'resource.' While entrepreneurial start-ups necessarily begin from the bottom up, whether they be frugal or high-tech ventures, in an era of potentially the greatest global crisis since World War II, one must necessarily start with an analysis of emerging trends from the top down. Only then can the objective of this paper become clear: policy framing ideas for creative ecopreneurship and circular economy to counter the inevitable entropy of the volatile international system.

That we live in a multipolar and not a bi-polar world is not a new development. What is new is the unexpected Ukrainian resilience and resulting initial unity of Western liberal democracies. The Chinese-Russian axis was agreed to before the invasion of the Ukraine. The resulting American mobilization of Western allies and global commitment to support liberal democracies against authoritarianism reinforced a 21st century struggle between Chinese and Russian efforts to expand and consolidate their spheres of regional influence, if not control, versus 'pax Americana outposts': despite American withdrawals from Afghanistan and Syria, the US has almost 800 military bases in more than 70 countries and territories abroad. But American power is constrained by domestic polarization at home and limited defense budget considerations. Europe plays an important but peripheral role in this competitive struggle given its own divisions concerning energy, defense and trade issues in terms of Russia and China and its over-reliance upon the US defense umbrella. There is an anti-globalization movement underway emphasizing the importance of each nation becoming as self-sufficient as possible in order to maintain sovereignty (sovereignty, after all, is the issue at stake in the Ukraine!). But the reality of global supply chains and interdependency is that no nation can be completely sovereign or self-sufficient and

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that the capacity to suffer these deprivations may be as important competitively as the capacity to fulfill them. Just take for example of the preparations for doing without Russian oil and gas in Europe. Step back a moment to consider what a nation-state must have in terms of its maintenance base in order to be fully sovereign or self-sufficient. It must have a complete *security structure* from effective police to conventional and nuclear weapons. Just as important is a *money and credit structure* as independent as that of the U.S. Clearly no other state, not even China, has pulled this off from a global perspective. Those with the weakest money and credit structures, like El Salvador, are tempted by radical solutions, like adopting Bitcoins as a national currency in place of everything else. This, of course, becomes extremely risky when one just considers that there are over 12,000 different cryptocurrencies now in the world. Next there is the *knowledge structure* or the depth and breadth of the educational system. In the recent debate for the presidency between Emmanuel Macron and Marie Le Pen in France, one of the interviewers asked whether policies could be put in place to create a Steve Jobs in the country. To this question, there was no satisfactory response but for Macron's mention of his economic program to stimulate and aid start-ups. Putin underestimates the important of the knowledge framework as future Sergy Brins (the Russian co-founder of Google) flee the country. Knowledge is closely related to the *production structure* from which productivity flows or the lack thereof which is a main problem in almost all countries today (eg. the 'chip wars'). The emergence of *lean manufacturing* and *just-in-time-inventory* after World War II in Japan, are positive examples of what can be done in terms of productivity. And, last but not least, the *value structure* plays an important role in the maintenance of sovereignty—from the insatiable consumer commercialism of the free-market liberal American democratic system to the Buddhist 'Gross National Happiness' mantra of contented poverty in Bhutan, to the conservative, decentralized democratic system of political economic neutrality of the Swiss. Here, the opposite of value effectiveness is China's *reducto ad absurdum* centralized policy of closing down

MANAGING WORLD ECONOMIC CHANGE

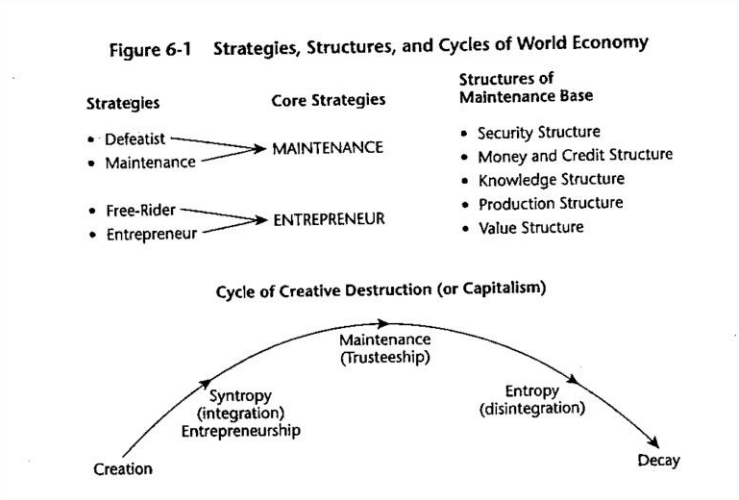

Figure 1. Source: Robert Isaak, MANAGING WORLD ECONOMIC CHANGE 3rd Edition, 2000 (Prentice-Hal)l, page 160

major cities to head off a single case of the Covid-19 virus, with devastating supply chain and global economic consequences.

A book that has become all too timely, although published in 2013, is *Mass Flourishing* by Nobel Prize laureate economist Edmund Phelps. By 'flourishing' is meant not merely the unprecedented material wealth that exploded between 1820s and the 1960s, but meaningful work, self-expression and personal growth for more people than ever before. The source according to Phelps were the values of the desire to create, explore and meet new challenges fueling grass-roots dynamism and widespread, indigenous innovation in the West. Here he does not refer to isolated individuals, such as Henry Ford, but millions

of people empowered to think of, develop and market innumerable new products, processes and improvements. The aim should be to enable 'the good life', by which he means 'a life lived to the fullest.' He argues that post World War II Europe never recaptured its former dynamism due to a resurgence of traditional, corporatist values that put the community and state over the individuals. The key question for the West, says Phelps, is whether Western nations recommit themselves to modernity, grassroots dynamism, indigenous innovation and widespread personal fulfillment or go on with a narrowed innovation that limits flourishing to a few. This is a profound values question for entrepreneurial development.

The advantage, of course, of a tight, well organized value system at the nation-state level is as the Japanese demonstrated the ability to use the efficient, cost-reducing maintenance base of the country to launch entrepreneurial ventures such as zero-repair small cars, which made the large autos of Detroit appear obsolete. Efficient maintenance base strategies can become the basis for effective entrepreneurial strategies and circular economies.

Another related rupture issue emerging globally is the mismanagement of the US economy upon which much of the world depends for currency stability and long-term economic growth and trade. The Biden administration overstimulated the economy with too much spending due to Covid-19, infrastructure and burgeoning military issues complemented by a Federal Reserve Bank that started to raise interest rates and to withdraw the quantitative easing of bond purchases to counter inflation far too late. Of course the European Central Bank was even later to start to counter inflation. So there is a significant probability not only of recession but of possibly a long episode of 'moderate' recession or near -recession growth since central banks will not be able to lower the interest rates easily which they too belatedly raised in order to stimulate the economy out of a trough. In 2023 inflation was hence charted to continue to burden both the European and US economies as the costs of a business transactions (eg. salaries in tight labor markets) and many natural resources rise accordingly and many developing countries find they cannot afford to pay back heavy debt loads.

In terms of entrepreneurship, the rupture in the world system opens up *vacuums,* which translate as fields of opportunity. For example, as Western companies left Russia, Chinese companies considered moving in. Xiaomi, the Chinese mobile hand-set company, already with about 40% of the Russian smartphone market, stands to benefit from Apple's suspension of operations in Russia. As thousands of Ukrainian refugees pour into EU states, the opportunities for helping to train, relocate, and integrate them are immense—even if many eventually return to their bombed out homeland. Initially state funding will be at least partially provided for such activities, which can be considered 'start-up venture capital.' The housing market, which was in crisis in Germany and elsewhere before the war, is now in a hyper-crisis, particularly given that it typically takes at least 2-3 years in Germany to get something built after it has been agreed upon and mortgage interest rates become unaffordable for many. Still tiny house entrepreneurs could have great opportunities without the over-regulation. To have a 'home-office', after all, one must first have a home…This is a sector ripe for sustainable circular economy development.

The global rupture we are experiencing can also be broken down into logics of entropic versus syntropic processes in terms of leadership and entrepreneurial initiative.

The creation of ventures or nation-states for that matter involves a process of syntropy or concentration of energy aiming for growth, if not self-sufficiency or sustainability. Once established organizations become institutionalized and routinized into habits of maintenance just to keep systems going, which, ideally of course, could become habits of an eco-friendly circular economy. But all human organizations then are confronted with change that leads ultimately to entropy, or the disintegration of energy (See figure above).

To head this entropy off, organizations have to engage in new entrepreneurial risk-taking, coopting the latest technologies and competitive practices. But if they become too preoccupied with innovative, technological risk-taking, they often take their resource and manufacturing bases for granted becoming de facto dependent upon other organizations or nations for basic resources, such as oil, gas, grain, or manufacturing processes, such as computer chip production. This leads to vacuums of opportunity to meet the demands and long-term self-sufficiency for so-called sovereignty goals. The shift towards domestic protectionism also opens possibilities for domestic environmentally oriented circular economies: regulated national resource sourcing, local manufacturing- even the push for consumers to

buy products produced domestically can be accompanied by vertical as well as horizontal corporate integration of processes and product development. Sustainable 'jobs at home', however, will require major educational and corporate 'retooling' technologically for competitiveness and the ultimate goal: the 'sovereignty' of the individual to satisfy the full range of human needs in such an emerging circular economy.

All systems tend towards entropy: love relationships, industrial designs, nation-states. And, in theory, they can be resurrected with creative sparks of entrepreneurship and targeted efficiencies (See, for example, Yinglan Tan, Chinnovation: John Wiley, 2011). Or they can be stimulated by crises, such as the energy crises caused, for example, by dependence upon Russian gas in Europe, provoking a boost for speeding up the conversion to sustainable energy production and scaled up circular economies.

From the macro level, the acceleration of sustainable strategies can be illustrated by the growing competition between China's refocusing upon green projects in its global Belt and Road infrastructure initiative versus the US-G-7 Partnership for Global Infrastructure and Investment striving to bring together $600 billion of investment in eco-oriented infrastructure in poor nations by 2027 (cf: "The Road to Co-operation;" *The Economist* November 26,2002, pp.49-50). World leaders have finally belatedly recognized the critical long-term importance of the ultimate entropy, climate change, stimulated by catastrophic events such as the tragic flooding in Pakistan in 2022. It was thus no accident that Pakistan led the initiative to create an insurance fund for the poorest countries hit by environmental destruction at the COP27 talks in Egypt later in 2022. But here, as is all too often the case with global environmental commitments, the promising talk outstrips the necessary funding from wealthier nations to make such blueprints effective.

Perhaps more hopeful is the ecopreneurship movement, the 'greenprint' of which can be found in my book Green Logic: Ecopreneurship, Theory and Ethics (Greenleaf publishing, 1998) or "The Making of the Ecopreneur" (in Greener Management International, Sheffield, U.K., Spring 2003). Here the assumption is that wherever we stand on the globe, we have responsibility for that environment and need to order it as if to expect guests at any moment. As opposed to merely 'greening' existing businesses, for example, ventures should be green in all processes and elements from scratch (eg. green- green businesses as ideal types vs. mere 'green businesses'). One recent example would be concrete created from cyanobacteria in which the energy in cement-making (which generates some 8% of anthropogenic carbon-dioxide emissions globally) comes not from heat but from light: a process developed in Fort Collins, Colorado, USA by Prometheus Materials. The resulting process of photosynthesis actually subtracts CO2 from the atmosphere. Another example is 'the liter of light': a sanitized plastic water bottle with filtered water and some bleach attached to a hole in tin roofs in Brazil and widespread in developing countries to provide light without electricity. Similarly the Norwegians have developed heaters from recycled cans or bottles (eg. OSO Hotwater) and hyper-efficient deposit return economies (eg. TOMRA). Such ecopreneurial innovations are literally concrete examples of scalable sustainable entrepreneurship and economic growth (Cf: Michael Schaper, ed., *Making Ecopreneurs: Developing. Sustainable Entrepreneurship*, 2nd edition; Surrey, England: Gower, 2010).

In conclusion, a collection of low entropy that is sustainable can result from syntropy targeted towards sustainable economic development in times of economic crisis led by ecopreneurs supported by public policy regulatory framing and private donations (eg. crowd-funding). The International Energy Agency (IEA) could only forecast that solar power will surpass coal power by 2027 because of the acceleration of sustainable public policies in terms of energy sourcing stimulated by global economic crises disrupting status quo complacency. Ecopreneurship used to be a somewhat exotic innovative management phenomenon. It has now become a *sine qua non* for the long-term healthy survival of the human species on the planet regardless of the biases of national political ideologies. Circular economies have an important role to play in providing blueprints for local sourcing of resources and labor, systematic recycling and eco-innovations, and the training of young and old in sustainable processes, need satisfaction and the means to realize 'individual sovereignty' in terms of discriminative human development and the motivation for positive future perspectives too often absent in a ruptured macro economy.

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DECLARATIONS

Competing interests The author declares no competing interests.

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