The double discipline of neoclassical economics: when the map both hides and reveals the territory

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Since the Industrial Revolution, capitalism has created unprecedented riches and allowed for massive social betterment, the emergence of a large global middle-class, and the consolidation of pluralistic democracy (McCloskey, 2015a). These achievements were, and still are, marred by slavery (yesterday: American Confederacy, colonized regions, today: underground migrant economy, segments of the official economy), cultural and social struggles, resource-driven imperialism, and widespread ecosystem degradation. Capitalism also feeds and feeds off of organized crime, white-collar crime, and criminal regimes; yet so-called democratic governments have been unable and unwilling to break this collusion between capitalism and crime, and the drift toward corporatocracy and plutocracy. Neoclassical economics serves as the official worldview of this hegemonic system: it fuels mainstream business practices, academe, think tanks and media (*Economist, Financial Times*) and Western-dominated international organizations (World Bank, WTO, IMF). It is a very big tent but its core assumptions, debated as they are within the profession, constitute a Foucaultian *truth regime*, a chosen discourse that generates reality. As a modernist discourse, it cloaks itself into modernist speak, that is to say science (Weir, 2008).

Therefore, this paper analyzes the dual power play at work here: within the profession, as hegemonic economists guard the orthodoxy against its critics, and within society, as neoclassical thought constructs intellectual and cultural "reality" to serve the hegemonic classes, groups, and practices. First we briefly discuss how the genealogy of power for dominant economics operates, a social dynamic that Foucault scholar Clare O'Farrell defines as "the grounds of the true and the false […] distinguished via mechanisms of power" (O'Farrell, 2015). Then we examine five key neoclassical tenets – doctrinal orthodoxy, infinite growth, methodological individualism, utility maximization and actors' rationality – in light of power formation, which unmasks their mobilization for neoliberal purposes.

Neoclassical economics: genealogy of power and the ideas of domination

Disciplinary self-critique illuminates the normative orientation of social sciences. For instance, University of Florida political scientist Ido Oren shows the mobilization of American political science and its intellectual transformation on behalf of American foreign policy and states: "[T]he self-image of American political science is paradoxically that of a detached science attached to particular ideas" (Oren, 2003, 1). In his detailed consideration of the relationship between expertise, politics, and democracy, the political scientist David M. Ricci further sheds light on this social production of knowledge:

> "[P]ractitioners tend to expound notions they believe theory colleagues will accept, and they are reluctant to suggest ideas they assume will be less attractive, for one reason or another, to the discipline as a whole. As a result, the end-product of knowledge generated by political science and passed

> down over the years, is shaped by institutional pressures that strongly affect both the kind of assertions that are advanced within the profession and the sort of ideas that are accorded the status of certified truth there" (Ricci, 1984, 3-4).

Likewise, seemingly detached economics is also "attached to particular ideas" because it results from professional, organizational, and societal expectations and power distribution. Critics point out that its claims to neutrality and objectivity are part of its cloaking strategy of domination; and describe it "as social technology, a technology of power" where "the perceived order in the world is an epiphenomenon of power" (Finlayson, Lyson, Pleasant *et alii*, 2005, 519). They skewer its central theory of the invisible hand, which supposedly "aggregates individual decisions into socially optimal outcomes":

> "[C]ontrary to claims of value neutrality, neoclassical economics functions as a master social narrative, or a technology of power, that concentrates power by transferring socio-economic decision-making from multiple sites to the centralized nodes of global economic and political institutions. This transfer occurs through the domination of the discursive space. The 'invisible hand' is power" (Ib., 515-16).

For instance, the noted Harvard economist N. Gregory Mankiw (the author of a widely used introductory economics textbook) casts society's choice as a non-negotiable dichotomy, a drastic trade-off between equality and efficiency (Mankiw, 2001, 26) and reduces it to "the interpersonal comparability of social utility" (Ib., 28). Accordingly, he lauds the large compensations given to actors, athletes, and executives as earned rewards for their social contribution, and asserts that their self-concern "advance[s] the public good" (Mankiw, 2014a). But the dissenting economist Paul Krugman injects the larger context to critique such fragmented reasoning. He points out that such allocation of wealth depends on much larger policy and political choices, and not just on individual merits and social utility. Mankiw ignores the growing "inequality of opportunity" and the steady degradation of public goods (such as public education and cultural capital) and policies (tax regime) in the United States since the 1980s Reagan revolution, which facilitates such growing discrepancy in earning power. Krugman also takes on Mankiw for misrepresenting what economic fairness really is, reminding him that it does not mean authoritarianism or sameness of conditions (Krugman, 2013a). Krugman reminds Mankiw of the need to think historically in terms of the evolution of class, power, and privilege: "We were middle-class once, and young […] We are a much more unequal society now, and as a consequence arguably one with a lot less intergenerational mobility too […] We are not the society we once were" (Krugman, 2013b).

Mankiw's a-historical, decontextualized defense of the merits and privileges of the One Percent reveals a key mechanism of intellectual power: the framing of issues. The Australian economist Herb Thompson explains: "[N]eoclassical economists, as traditional intellectuals, cultivate the social production of ignorance, and propagate it to their students, in the struggle for ideas. This is done through narrow pedagogy, delineation of research parameters, and by constraining the production and presentation of non-neoclassical knowledge" (Thompson, 1997, 304-05). Given such connection between neoclassical views on economic power and elite interests, it comes as no surprise that Mankiw wants to "repeal the corporate income tax entirely," lower personal taxes, and replace them with consumption taxes (Mankiw, 2014b), which most economist and tax experts recognize as socially regressive. Following the same logic, he rejects Thomas Piketty's thesis regarding the growing role of inherited wealth in the social construction of inequality and contends that vast inherited wealth "is not a problem" (2014c).

Mankiw illustrates the fact that neoclassical economics is a *double discipline* – intellectual construct *and* system of control, reward, and punishment – that underlies our economic practices. The genealogy of power here is the combination of an elite intellectual discipline and the social disciplining of the dominated. For instance, as he praises the One Percent's immense wealth, Mankiw rejects the notion of a living wage for workers at the bottom of the social hierarchy. In 2001, some Harvard students sided with janitors in their struggle for a raise of their minimum wage. Predictably, Mankiw came down against the hapless janitors (social discipline) in the name of scientific, objective, impersonal mechanisms (intellectual discipline): **"**We can't ignore law of supply and demand," and called their fight for survival and dignity a "utopian social reform" (Mankiw, 2001). This example of Social Darwinism justified by science – one among many – suggests that power (social discipline), as much as or more than science (intellectual discipline), accounts for many of the dominant traits of elite economics: its specific ontology (what is human nature?), psychology (what motivates economic agents?), sociology (what are the right relations among citizens and between citizens and authority?), ethics (what is good and bad?) and cosmology (what is the relationship between human society and the earth?). Or to be more exact, neoclassical economics dexterously weaves sound science, politicized science, and service to power, while claiming to be detached, objective, benevolent, and universal.

As Mankiw's scientific and social positioning demonstrates, elite economics is carefully engineered to 1) promote growth under assumptions of ecosystem infinity, 2) maximize return on capital and the social reproduction of capital, 3) curb intellectual and social dissent, 4) hide the roots of unfair economic power and, 5) facilitate propaganda. In *German Ideology* (1845-1849), Karl Marx and Friedrich Engels observe that

> "The ideas of the ruling class are in every epoch the ruling ideas, i.e. the class which is the ruling material force of society, is at the same time its ruling intellectual force. The class which has the means of material production at its disposal, has control at the same time over the means of mental production, so that thereby, generally speaking, the ideas of those who lack the means of mental production are subject to it. The ruling ideas are nothing more than the ideal expression of the dominant material relationships, the dominant material relationships grasped as ideas; hence of the relationships which make the one class the ruling one, therefore, the ideas of its dominance. The individuals composing the ruling class possess among other things consciousness, and therefore think. Insofar, therefore, as they rule as a class and determine the extent and compass of an epoch, it is self-evident that they do this in its whole range, hence among other things rule also as thinkers, as producers of ideas, and regulate the production and distribution of the ideas of their age: thus their ideas are the ruling ideas of the epoch" (Marx and Engels, 1845-1849).

Therefore, neoclassical economics may also be called "elite economics." This political sociology of knowledge indicates that, like all social sciences, elite economics is both science and politics. It is a *positive* science based on observations and experiments, one that effectively draws principles and regularities – "economic laws" – and possesses some predictive value. It is also a *normative* science based on scientists' individual, methodological, and professional bias, since it is embedded within power relations both inside academe –

economics in relation to itself and other social sciences – and society – economics with respect to socio-economic practices and the political practices that uphold them. Thus the economist Deirdre McCloskey invites economists to not confuse their map and the territory:

> "All the human sciences share the problem. An economist examining the business world is not like a physicist examining the physical world, he is more like a critic examining the art world […] The prediction of the future and the explanation of the past are symmetrical in a simple physical system. They are not in a human system, because the observer is part of the system. That he looks backward does not change the past; but that he looks forward does change the future […] Like other scientists, economists make their world to human specifications. […] Economics is not about the economy but about what human beings can say about the economy" (McCloskey, 1988, 645, 654).

As the following examination of five of its key tenets show, elite economics contributes simultaneously to science, to false consciousness, and to shaping the future according to its preferences.

Maligning disciplinary pluralism: willful misunderstanding and straw man arguments as exclusionary strategy

Doctrinal rigidity among – many – economists and maligning of more ethical, viable business models – notably Corporate Social Responsibility (CSR) – serve a dual purpose: to protect hierarchy within economics as a profession, and to discredit alternative economic practices that demonstrate that "another world is possible," to use the slogan of the World Social Forum.

Dominant economists present their "basic principles of economics" (Lieberman and Hall, 2005, 13-14) as established and infallible. Take for instance E. Roy Weintraub, Duke University economics professor and noted expert of mathematical economics and the history of the discipline. In *The Concise Encyclopedia of Economics*, he offers a stern defense of the scientific character of neo-classicism and pre-emptively impugns all dissenting views. He deems neoclassical tenets non-negotiable as his discipline constitutes an objective and exhaustive rendition of reality:

> "[W]hat is taught to students, what is mainstream economics today, is neoclassical economics. […] Its fundamental assumptions are not open to discussion in that they define the shared understandings of those who call themselves neoclassical economists, or economists without an adjective. Those fundamental assumptions include the following: 1. People have rational preferences among outcomes. 2. Individuals maximize utility and firms maximize profits. 3. People act independently on the basis of full and relevant information" (2007).

UCLA economist Jack Hirshleifer also proposes a sinuous defense of *economic imperialism*, i.e., the growing penetration and influence of economics in other social sciences:

> "In dealing with economics as an expansive imperialist discipline […] a geographical metaphor may be illuminating. Our heartland is an intellectual territory carved off by two narrowing conceptions: (1) of *man* as rational, self-interested decisionmaker, and (2) of *social interaction* as typified by market exchange. *There is only one social science*. [Emphasis in original] Thus economics really does constitute the universal grammar of social science […] Economists could then modestly claim that the hypothesis of rational self-interested man, though admittedly inaccurate, has proved to have great explanatory power *in the areas where we apply it*. [Emphasis in original] The history of imperialistic economics illustrate that the model of economic man has indeed been productive, but only to a point" (Hirshleifer, 1985, 53-54).

But his modesty quickly gives way to hegemonic reassertion of "narrowing conceptions" to annex all intellectual territories:

> "While rich in data, on the theoretical level psychology remains a confusing clamor of competing categories; there is no integrating theoretical structure. I will be so bold as to predict that such a structure, when achieved, will be fundamentally economic […] in nature. That is, it will show how mental patterns have evolved as optimizing solutions subject to the constraints of scarcity and competition" (Ib., 61-62).

Indeed, when one is equipped only with hammers, all issues look like nails. In his famous 1970 article that denigrates corporate social responsibility, Milton Friedman offers a Pollyannesque view of freedom: "In an ideal free market […] all cooperation is voluntary, all parties to such cooperation benefit or they need not participate." Next he misrepresents "social responsibility of business in a free-enterprise system" as "preaching pure and unadulterated socialism," as "the most explicitly collectivist doctrine" that reveals "a suicidal impulse" on the part of its advocates. To undermine "social responsibility," he attacks the very notion of "business responsibility" – but in the same breadth champions the idea that business "responsibility is to increase its profits." He then establishes the responsibility of corporate managers to maximize return on investment for the real proprietors of the company, the stock holders. In effect, any "executive is an agent serving the interests of his principal" but Friedman overlooks the countless examples and abundant literature on the "principal-agent dilemma," whereby appointed agents emancipate themselves from principals' control and pursue their own objectives. Exaggerations and intellectual dishonesty pervade Milton's analyses, which to this day remain a key reference for neoliberal economists. Corporate misgovernance, executive overcompensation disconnected from financial results, countless forms of abuse, "casino capitalism," "mad money" (Strange, 1997, 1998), insulation from liability under neoliberal economics, and "suicide economy" make a mockery of such idealized views (Korten, 2015, 19-40).

Milton Friedman asserts that CSR implies the "view that the pursuit of profits is wicked and immoral," when in fact CSR defends *legitimate* profits while castigating profit-gauging and antisocial practices in the name of profits. In 2005, the (libertarian) magazine *Reason* organized a spirited debate between Friedman, T.J. Rodgers (CEO, Cypress Semiconductor) and John Mackey (CEO and founder, Whole Foods). In yet another display of confident ignorance, Friedman stated that his brand of neoliberalism is essentially similar to Mackey's social responsibility approach, while Rodgers incoherently denounced Mackey's social responsibility as worthy of both Ralph Nader *and* Karl Marx. Rodgers conflated CSR and totalitarianism by lumping together "the philosophies of collectivism and altruism that have caused so much human misery" (*Reason*, 2005). Even CSR practitioners can get confused: as John Mackey describes his Whole Foods business practices in his book *Conscious Capitalism*, it is easy to recognize them as variations of CSR, yet he adamantly rejects this label and makes grandiose claims of total originality and superiority (Mackey and Sisodia, 2013). Conversely, Yvon Chouinard (founder and CEO, Patagonia) proposes a coherent green economy, because he is able to critique consumerism (Chouinard, 2012, 26-27) and the very logic of capitalism (Ib., 33-36).

Some critiques of CSR are justified. For instance, tensions and contradictions do exist among the 3 Ps (the triple bottom line of profit, people, and planet), between 1st, 2nd and 3rd generation rights that inspire CSR (liberty, equality, and fraternity are hard to reconcile in practice) and among stakeholders. And CSR is often used for greenwashing and corporate PR. But economic conservatives construct an alternative mental universe to better slander it. For mainstream capitalists, if any activity is legal, it is moral, even if social costs are huge, as in the case with tobacco, alcohol, weapons, economic exploitation but they blame CSR for imposing murderous costs to business (say, labeling for GMOs and real food ingredients). So-called free marketers (Milton Friedman, Ayn Rand, Center for the Defense of Free Enterprise, CATO Institute, Hudson Institute, Hoover Institution, Foundation for Research on Economics and the Environment etc.) allege against facts and reason that CSR is hostile to freedom, private property, and owners' rights, that it is a Trojan horse for socialism and statism, and that it is anti-democratic (it assigns social-political responsibilities to private companies, thereby robbing elected government of its rightful duties). Technoptimists trust entirely in science rather than in voluntary self-restraint (a core trait of CSR), for instance with bioengineering (GMOs) or geoengineering. Science renegades and deniers, whom Naomi Oreskes and Erik Conway aptly call *Merchants of Doubt* (2010), pervert science to serve corporate ends (e.g. the Heartland Institute), and claim that CSR and environmentalists politicize false risks for a power grab. And developing world advocates grandly claim that environmentalism and CSR are forms of northern imperialism meant to hamstring southern development (Berstein, 2010; Driessen, 2003), or to criminally deny southern countries access to vital technologies (Driessen, 2003).

Such narrow, aggressive views of private property, business authority and accountability serve the power structure in multiple ways. If companies are accountable only to their shareholders and only strive to maximize profit, as Friedman claims, the power game remains circumscribed within elite circles and power remains organized hierarchically: CEOs deal with board members, board members with rich investors, investment banks, pension funds, magnates, etc. In effect, it promotes an antidemocratic, anticommunity conception of individual freedom and private property. It also offers an aggressive justification of first-generation rights theory (private property *against* state and public encroachment) and summarily dismisses second-generation rights theory (right *to* work, *to* unionize, *to* receive fair treatment at work) and third-generation rights theory (e.g., environmental interest). In addition, a narrow shareholders theory provides the intellectual and moral justification for greed (relabeled "profit maximization") and excuses dumping negative externalities on society. This "private power and private benefits with public liabilities" is abundantly illustrated by environmental degradation and social breakdowns (e.g., the 2008 financial and real estate crisis) that must be mopped up by public authority and public money. Therefore, if another version of win-win business is conceptually possible and pragmatically robust, it undermines the power infrastructure of mainstream capitalism and its intellectual edifice.

The economics profession has structured incentives to reward conformity with this dominant credo and punish dissenters. As E. Roy Weintraub candidly explains, academic departments and tenure committees enforce intellectual conformity: “The status of non-classical economists in the economics departments in English-speaking universities is similar to that of flat-earthers in geography departments: it is safer to voice such opinions after one has tenure, if at all” (“Neoclassical Economics,” 2007). Theoretical pluralism, a key requirement across social sciences, is synonymous with professional suicide in economics departments. For instance, starting in 2006-2007, heterodox economists in the department of economics at the University of Manitoba felt ostracized and victimized by their orthodox colleagues. In September 2015, the situation was so degraded that they took steps toward creating two separate and distinct departments, and the Canadian Association of University Teachers (CAUT) threatened to censure the University of Manitoba for failing to resolve this bitter crisis (Cabel, 2015). In January 2015, a special CAUT report on this conflict noted the difficult position of heterodox economists in the profession in general, and quoted:

> “Jeff Schmidt, a physicist and editor of *Physics Today* [who] published the book *Disciplined Minds*. In it, he argues that the word “discipline,” in reference to knowledge workers has two meanings: first, a particular way of viewing the world and of practicing the profession that distinguishes it from other professions; and second, a distinct way of compelling adherence to an orthodoxy within the profession by way of inducements and sanctions” (CAUT, 2015, 13).

In its findings, the CAUT report observed repeated instances of injustice, intimidation, manipulation, violation of academic freedom, disrespect against heterodox economists and labor specialists by the department of economics at the University of Manitoba as well as a power grab by their mainstream colleagues (CAUT, 2015, 32-34). A similar conflict erupted in the economics department at the University of Notre-Dame (Indiana) from the late 1990s until 2010, which also led to the marginalization of heterodox economists.

The “free market of ideas” richly rewards those who support hegemonic structures: economic prizes, public appearances, media visibility, lucrative consultancy jobs, etc. In addition, American political economist Robert Wade connects neoclassicism’s intellectual “biases in favor of self-adjusting system and American hegemony,” “against attention to inequalities of income and power,” and against alternative economic models, with the current *patronage system* that benefits neoclassical economists over competing schools of thought (Wade, 2009, 106). Addressing this monoculture of/in orthodox economics, Wade explains that “[t]he neoclassical world view protects not only the underlying assumption about human nature and the virtues of self-adjusting market but also the rightness of U.S. leadership of the ‘free world’.” He also describes economics as a “colonized discipline” that now faces decolonization through “invasion by contiguous fields,” such as psychology, sociology, history and political science. Chief among them is behavioral economics that demonstrate “how people often choose in conditions of confusion, myopia and herd-following” (Ib., 116), a point we will discuss further down.

Critics of neoclassical economics use the concept of consilience to argue that in some of its fundamental assumptions, this discipline is an outlier among social sciences. Consilience is the convergence of evidence across a variety of approaches and addresses the need for intellectual consistency, for broad concordance of findings across connected sciences and disciplines. When different yet connected disciplines reach compatible conclusions by following their own scientific methods of inquiry and criteria for evidence, this is a strong indication that their independent-yet-compatible findings are correct, and also that their own disciplinary methods of inquiry are correct. For instance, Darwin's theory of evolution is independently confirmed by many scientific disciplines such as geology, genetics, biology, comparative anatomy, paleontology, etc. As such, consilience is a safeguard against the fragmentation of knowledge and disciplinary autism. Historians and legal experts have long recognized the need for multiple independent sources in their field: "Testis unus, testis nullus," or "One witness, no witness." Thus social sciences must withstand the test of consilience, and identify and address where a particular discipline structurally departs from what biologist Edward O. Wilson calls *the unity of knowledge* (Wilson, 1999). However, for a group of European economists, the axiomatic truth of orthodox economics

> "…stands in stark contrast to a broad set of regularities in human behavior discovered both in psychology and what is called behavioral and experimental economics. The cornerstones of many models in finance and macroeconomics are rather maintained *despite* all the contradictory evidence discovered in empirical research. Much of this literature shows that human subjects act in a way that bears no resemblance to the rational expectations paradigm and also have problems discovering 'rational expectations equilibria' in repeated experimental settings" (Colander *et alii*, 7-8).

Economics as cornucopian fantasy: endless abundance, human mastery, and God's hand

Karl Marx recognized that bourgeois capitalism served a revolutionary role by promoting historical modernization away from feudalism and toward industrial society, but in the process became a more sophisticated form of domination. Similarly, the neoclassical tradition served a positive historical role but today fails to recognize its own contradictions and to grasp the emerging "eco-awareness" (Scharmer and Kaufer, 2013) form of modernity. In *The Bridge at the End of the World* (2008), James G. Speth ponders this tension between economics-as-benevolent science and economics-as-service-to-power, which he calls the "Great Collision":

> "For all the material blessings economic progress has provided, for all the diseases and destitution avoided, for all the glories that shine in the best of our civilization, the costs to the natural world, the costs to the glories of nature, have been huge and must be counted in the balance as tragic loss" (Speth, 2008, 1).

Tellingly, environmental economics itself eschews core issues of sociopolitical organization, notably unequal power formation, capture of regulatory power by moneyed interest, deep capture – cooptation of culture and minds – by hegemonic forces, the cosmic interdependence between the human and non-human worlds, and the need for a new systemic synthesis between anthro- and biocentrism. Its rational-instrumental and Positivist paradigms can't fathom ecosystem and cosmic dynamics nor the *relative, transient status of homo sapiens on earth*. Among the traditional forms of capital generally recognized by economists – human-social, institutional, built, and natural – dominant economists select an often decontextualized, unmoored version of human agency – one *homo economicus* who is substantially detached from its social and natural milieu. In their *social cosmology*, it is an *article of faith* that independent human agency allows human society to dominate and shape their natural environment at will. Environmental economists generally believe in the possibility of systematic substitution of human capital for natural capital (Hartwick rule updated by Robert Solow). In addition, as resources dwindle or become more expensive, as climate deteriorates, as biodiversity erodes, taxation (Pigouvian taxes), price formation and value determination (contingent valuation, ecovaluation, choice modeling), private property regimes (Hernando de Soto, Coase theorem about the "3Ds" of private property) and prosperity itself (environmental Kuznets curve) will address man-made problems. They rightly point to the astounding upward trends since the Industrial Revolution – more production, more resource extraction, better standards of living for widening numbers – to argue that the future will be essentially an extension of the past, only better, stronger, higher, and faster. Wilfred Beckerman is a case in point:

> "[T]he main reason why we will never run out of any resource or even suffer seriously from any sudden reduction in its supply is that whenever demand for any particular material begins to run up against supply limitations, a wide variety of economic forces are set in motion to remedy the situation… [E]conomic growth is in no danger of coming to an end because of resource constraints" (Beckerman, 2002, 13-14).

This raises several objections. One, there is not "away" in the "throw-away economy": everything is connected to everything else; and natural sinks are not infinite. Two, Beckerman's is very much a first-world view: in the current system, the global center (dominant regions, countries, classes, groups, and gender) prospers in good part thanks to *la dependencia* of the global periphery. Three, the market works better for rival and exclusive goods through the private property regime, but fails at protecting public access good and non-rival goods, notably the ecosystem, which sustain life in all forms. And four, French political environmentalist Hervé Kempf notices a paradigmatic paradox: since they believe that economic growth is past, present, and future, since they believe "in the infinite return of the same," mainstream economic experts behave like believers in fixed traditional societies (2013, 5). Yet history shows that nothing is eternal in human affairs, and that economic systems must change to survive. This is especially true because demographics (population pressure) is a multiplier of environmental change: I=PAT.

Neo-classical economics limits itself to a silo or fragmentary approach. It theorizes the use and value of natural resources – land, water, energy, etc. – but does not rise to ecosystem thinking, the Big Picture, earth itself. Fritjof Capra and Pier Luigi Luisi argue that neoclassical economics is a 19th-early to mid-20th century-type of science, a science of the parts (and a flawed one, at that) whereas contemporary science "has shown repeatedly that all natural phenomena are ultimately interconnected, and that their essential properties, in fact, derive from their relationships to other things" (Capra and Luisi, 2014, 2). Inspired by the "secular and material orientation" and "the manipulative mentality of the Industrial Age," modern economics tried to devise a Positivist social physics by using a universal mathematical language but its mathematical models "are defined on the basis of assumptions that often make the models quite unrealistic" (Ib., 47-49). Its core illusion, the belief in infinite growth, "is the result of a clash between linear, reductionist thinking and the nonlinear patterns in our biosphere – the ecological networks and cycles that constitute the web of life" (Ib., 56) when in fact economics should "ground the understanding of social phenomena in a unified conception of life and consciousness" (Ib., 297).

Mainstream economics posits the boundlessness of nature as a theoretical and practical absolute and justifies – nay, glorifies – our current system of limitlessness extraction, production, and consumption. Its proponents consider economic growth as indefinite and open-ended, natural resources as indefinitely fungible, and nature as an exogenous, given, stable factor. Or to be more precise, they believe in a series of infinites: of resources, energy, natural sinks, substitutability of forms of capital, human ingenuity, profit and growth (Simon, 2015). With dire consequences. The ecological economist Eric Zencey explains: "When an economy is not rooted in resilient systems, market forces are far from being impersonal, noncoercive, and automatic" (Zencey, 2012, xv). Therefore, "[i]n a finite world, free markets built on infinite-planet assumptions are just the other road to serfdom […] In the world that we have made, it's not planning but the absence of planning that is the road to serfdom" (Ib., 18, 31).

Mainstream economists point to increasing technological progress as the key factor behind this *ad perpetuam* growth. The famed neoclassical economist Julian Simon presented human intelligence as "the ultimate resource" (Simon, 1983; 1998) and won his famed bet against Paul Ehlich, the neo-Malthusian demographer who, it is true, has a troubling record of making brash statements and failed predictions (Sabin, 2013). But ecological modernization rests on several discredited predicates. First, sciences and technologies enjoy a transcendent, apolitical status in our societies and always work for the betterment of all and nature – this ignores the abundant literature on the structural implications of the technostructure ("Big Science") in terms of unequal access, exclusion, scientific divide, etc. Second, technologies are key to the realization of the environmental Kuznets Curve – but the EKC works for some limited type of environmental degradation (visible and immediate effect) and is largely disproven on the global scale. Third, the dematerialization of the economy is a structural trend – but energy descent, and material decoupling and delinking are not happening at the aggregate level despite the diffusion of backstop technologies, as both the Jevons paradox and the Khazzoom-Brookes postulate ("rebound effect") demonstrate. Ecological modernization ignores the run-away consumption that reverses technological gains. And fourth, path dependency (the closing of alternate options due to past choices and sunk costs) and the ratchet effect (making it impossible to go back to earlier alternatives) close many doors to technology-based reformism. Experts identify two broad types of ecological modernization: weak (focus on technological solutions, widely compatible with environmental economics and the sociopolitical status quo) and strong (technological changes plus social, cultural, and political reformism) (Jänicke, 2008; Mol, Sonnenfeld et Spaargaren, 2009 ; Mol et Sonnenfeld, 2014). Clearly, capitalism needs more than Big Science to reform itself, especially given its ability to penetrate and co-opt culture, as demonstrated by its association with conservative Christianity. Therefore, only the strong ecological modernization and a substantial cultural and normative transformation may help address capitalism's crisis of sustainability.

The same fantasies of human centeredness (anthropocentrism) and self-importance (egocentrism) that drive neoclassical economics also inspire conservative American Christianity. The same holds true for other regions and religious expressions, but it is especially clear in the case of conservative American Christianity, and bears vast consequences for both the U.S. and the world. Their theoretical convergence also makes for political alliance. Princeton University historian Kevin Kruse retraces the invention of a version of Christian America by corporate America, which still predominates today. In the 1930s, "big business needed rebranding" (2015b), and the National Association of Manufacturers sought to "rehabilitate a public image that had been destroyed in the crash and defamed by the New Deal" (2015a, 3). As Roosevelt casted his reformist policies as *Social Gospel* – Christian charity applied to the common good – , a coalition of reactionary businessmen and clergymen “advanced a new blend of conservative religion, economics and politics […] aptly anointed ‘Christian libertarianism’” (2015a, 7). Kruse details the evolution of American public religion, from personal and ceremonial deism intended for a harmonious civic life (the Founding Fathers’ intention) to a witches’ brew of intolerant piety, aggressive patriotism (American exceptionalism), and corporate apologetics. Eisenhower and Reagan, in particular, played a key role in this theocratic drift of American politics in the name of fighting godless communism and defending (an idealized version of) liberty. This version of Christian America goes well beyond the traditional civil religion “where the nation’s institutions and its destiny take on an indeterminate, quasi-sacred quality” (Green, 2015, 2). A deep yet supple deism was part of the Founders’ worldview; religiosity has remained part of the American national character and rhetoric, and this ubiquitous force was meant to unite. Christian libertarianism however was devised for economic, political, and cultural warfare by reactionary special interests against moderates, progressives, and government reformism. And true to form, in a move common to ideologies of power, it also sought to hide its historically-determined and questionable origins by presenting itself as natural, original, and transcendent. Kruse reveals these hidden foundations, the genealogy of power for Christian libertarianism:

> “The rites of our public religion originated not in a spiritual crisis, but rather in the political and economic turmoil of the Great depression. The story of business leaders enrolling clergymen in their war against the New Deal is one that has been largely obscured by the very ideology that resulted from it” (2015a, 292).

Both neoclassical economics and conservative Christianity believe that capitalism results from higher authoritative laws – rather than messy fights among competing social forces and mind capture – and is by essence a force for good. Here, Kruse illuminates another key commonality: their concern for the common good emphasizes “the values of individualism” as both rest “on the fundamental belief that an individual rises or falls on his or her own merit alone” (2015b). Species-centric and self-centric economics and religion also converge in materialism, which in religious matters is the so-called prosperity theology. Mega church pastor Joel Osteen preaches thus, with his trademark carnivorous smile:

> “But God wants us to constantly be increasing, to be rising to new heights. He wants to increase you in His wisdom and help you to make better decisions. God wants to increase you financially, by giving you promotions, fresh ideas, and creativity. […] To experience this immeasurable favor, you must rid yourself of that small-minded thinking and start expecting God’s blessings, start anticipating promotion and supernatural increase” (Osteen, 2005, 5-6).

Railing against such materialism posing as spirituality, Robert Bellah (1927-2013), one of the most distinguished sociologists of religion in the United States, reflected in 2004 on “the future of religion” in the U.S.:

> “The way ‘spirituality’ is often used suggests that we exist solely as a collection of individuals, not as members of a religious community, and that religious life is merely a private journey. It is the religious expression of the ideology of free-market economics and of the radical ‘disencumbered’ individualism that idolizes the choice-making individual as the prime reality in the world” (Bellah, 2004).

Harvey Cox (1927-), one of the most prominent contemporary American theologians, also observes the conjunction of a “comprehensive market theology” and a “total market” that absorbs all manifestations of human life: the human mind and body, the numinous, family life, the arts, unstructured time, etc. (Cox, 1999). After his World War II exile in the United States, Swiss cultural theorist Denis de Rougemont observed that in the U.S. the Christian religion is meant to make life sweeter and easier, while in Europe it retains its sterner, old-world preoccupation with preparing us to die. Prosperity theology may be seen as an extreme in this quintessentially American focus on self-affirmation, self-betterment, and self-promotion. Therefore, many tenets of the Gospel of Wealth are highly compatible with neoclassical economics: humans have rightful dominion over Creation and are entitled to infinite material abundance, physical and mental abundance are inseparable, personal empowerment is key to success, wealth is a sign of right thinking/right worshipping, prosperity is governed by laws that God (or economic science) revealed to humanity, following such laws will guarantee prosperity, success is measured by living “without limits” and by home and big items ownership, etc. In the Gospel of Wealth, a traditional Calvinist sense of personal election converges with the belief in the excellence of capitalism and in American exceptionalism.

This conflation of muscular Christianity, nationalism, and capitalism is nothing new in the Anglosphere. The English political economist, famed free trader and polyglot John Bowring (1792-1872) was the fourth governor of Hong Kong (1854-1859) and a noted colonial administrator. He famously stated: “Jesus Christ is Free Trade and Free Trade is Jesus Christ” (Bowring, 2014, 19; Johnson, 2012, 2) – and he was a liberal-radical in his age! John Quincy Adams, sixth president of the United States, echoed such views: “The moral obligation of commercial intercourse between nations is founded exclusively upon the Christian precept to love your neighbor as yourself” (Johnson, 2). Oceans apart, but the same ideology: both men made these strikingly parallel statements in 1841 as justification of the Opium Wars (1839-1860) that started the dismemberment of China by Western imperialists.

For its defenders of yesterday and today, Christian libertarianism promotes individual rights, freedom of conscience and action, and insures the greater good through emphasis on individual agency. For its critics, it is another step in the secularization and cooptation of religion by Mammon and expresses a very American sense of narcissistic entitlement. The Gospel of Wealth and neo-classical economics laud materialism, consumption, and conspicuous consumption; both reject social liberalism and government reformism. Both explain capitalism in terms of superior forces (religious for Christianity, universal laws for economics), rather than messy, subjective human contingency and bitter power struggles, and believe that human agency must serve the system – not challenge it. Both cultivate fantastical notions: belief in an individual, separate, and sovereign self; concurrent celebration of narcissism and entitlement; an aversion to critical history and politics (since God’s infinite good will and objective market rules determine winners and losers); and a bizarre estrangement from the natural world (since God and objective market mechanisms promise prosperity everlasting). Indeed, as countless critics observe, our current environmental crisis is also a moral-spiritual crisis, a crisis of meaning (Warner, 2004).

Methodological individualism: social atomism as prerequisite for elite domination

All conceptions of society, politics, and economics rest on conceptions of human nature, of people’s rights and duties, and on the founding social compact, both in its horizontal dimension (citizens interacting among themselves) and its vertical dimension (relation between citizens and authority). In this respect, neoclassical views reflect a particular Western bias that emerged in the 18th-century (Adam Smith's baker's self-interest) and solidified in the 19th: that of the isolated, rational, utility-maximizing actor. Today, economic conservatives and libertarians are animated by an anti-community understanding of individual freedom. Milton Friedman opens up his classic *Capitalism and Freedom*, a key reference for modern free-marketers, with a fiery declaration of radical individualism: "To the free man, the country is the collection of individuals who compose it, not something over and above them" (Friedman, 1971, 1-2). In his equally famous anti-Corporate Social Responsibility article published in 1970, he doubled-down: "Society is a collection of individuals and of the various groups they voluntary form." (Friedman, 1970). In 1987, Margaret Thatcher also famously contented that "There is no such thing [as society]! There are individual men and women and there are families and no government can do anything except through people and people look to themselves first" (Thatcher, 1987). In fact, for Friedman, individuals are Robinson Crusoe (Friedman, 1971, 13, 165-66).

Economic libertarians celebrate such contentions as common-sense calls for personal responsibility and freedom; opponents bemoan them as wicked selfishness. The expression *homo economicus* is attributed to John Stuart Mill who clearly stated that political economy does not address

> "…the whole of man's nature as modified by the social state, nor the whole conduct of man in society. It is concerned with him solely as a being who desires to possess wealth, and who is capable of judging the comparative efficacy of means for obtaining that end" (Mill, 1874, Essay 5, paragraphs 38, 48).

What John Stuart Mill proposed as a deliberately fragmentary definition or a working framework became, in part under the influence of rational choice theory, neoclassical orthodoxy. Neoclassical views of humans as *homo economicus* describe only one aspect of social agents' behavior and sell the part for the whole. Veblen famously ridiculed this conception of social beings:

> "The hedonistic conception of man is that of a lightning calculator of pleasures and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift about the area, but leave him intact. He has neither antecedent not consequent. He is an isolated, definitive human datum, in stable equilibrium […] self poised in elemental space" (Camic and Hodgson, 2011, 153).

Cost-and-benefits analysis is methodologically true in a very broad sense but economic calculus bears countless exceptions, is context-dependent and is anthropologically and philosophically lacking, not to mention socially and environmentally destructive. While it is true that in a market economy most economic decisions are made in a decentralized fashion and are widely distributed among large numbers of individuals, companies, and groups, economic agents are not disembodied entities floating in the ether; and methodological and practical individualism – loneliness – carry high cost in our mass societies. Paradoxically, many orthodox economists celebrate methodological individualism yet underline the importance of social capital – social connections and networks, voluntary associations, trust in neighbors, associates, partners, adherence to common social expectations and behaviors, respect for the law and social norms of business – as a foundational element of an open, rule-based market. The American sociologist Robert Putnam confirms these findings:

> "For a variety of reasons, life is easier in a community blessed with a substantial stock of social capital. In the first place, networks of civic engagement foster sturdy norms of generalized reciprocity and encourage the emergence of social trust. Such networks facilitate coordination and communication, amplify reputations, and thus allow dilemmas of collective action to be resolved. When economic and political negotiation is embedded in dense networks of social interaction, incentives for opportunism are reduced. At the same time, networks of civic engagement embody past success at collaboration, which can serve as a cultural template for future collaboration. Finally, dense networks of interaction probably broaden the participants' sense of self, developing the 'I' into the 'we', or (in the language of rational-choice theorists) enhancing the participants' 'taste' for collective benefits" (Putnam, 1995, 67).

The French sociologist Émile Durkheim showed the role that *anomie* – a term he coined to describe the erosion of social links and of one's sense of belonging – plays in individuals' anguish and self-destructiveness. In his noted *Bowling Alone* (2001), Robert Putnam shows how from the 1950s to the 2002, Americans have become increasingly disconnected from family, friends, neighbors and collective structures. And social activists and community organizers stress the high cost of individualism, from the erosion of the family unit to individual pathologies (addictions, suicides, teen pregnancies, etc.) and all manners of deviant social behavior.

Free marketers also pay insufficient attention to societal scales and to the paradox of collective action: "rational" behavior at the micro level create sub-optimal results at the aggregate level. In this respect, road traffic is an apt metaphor for the market: if people were motivated by utility maximization and rationality in complex situations, roads would be much safer. It makes individual sense to leave the office around 5 o'clock every night, but this aggregate behavior creates traffic jam, stress, and accidents. Anarchic and anti-social impulses in a highly complex and fluid environment (the road, the market) that are not channeled by regulatory powers put individuals on a collision course with others. In the absence of monitoring or coordinating mechanisms (police on the road, regulatory authorities in market), individual agents pursuing their own interest based on incomplete information may individually advance but on a social level they create "sub-optimal outcomes" or "disamanities," to use economics newspeak. Rationality and utility-maximization, already debatable concepts at the individual level, become even shakier at the aggregate level.

With its exaggerated emphasis on decontextualized individual agency, neoclassical economics also ignores a key finding of feminist scholarship, that of *intersectionality*, the combination of various forms of inequality and domination that hinders agency for some groups and individuals. For instance, women are exposed to specific biological, legal-societal, and cultural constraints that create specific challenges to the full realization of their potential. Neo-classical theories defend a legal-formalistic conception of individual freedom (free floating, foot-loose economic decision-makers) in order to obliterate historical-sociological realities (individuals are embedded in situations and communities and seldom function as *homo economicus*) that stand in the way of capitalistic accumulation. Theories regarding atomistic agents moving freely across market opportunities are invalidated by multiple frictions ("stickiness") within markets, by power formations that freeze the advantage of some agents over others, by rent-seeking, by regulatory capture (control of regulatory mechanisms by vested interests), etc. Whereas capital and corporations move freely and fast across vast distances and borders, people and small businesses are embedded in real families, communities, and situations; they have a different relation with time and space. In other words, there is a natural "stickiness" (resistance) of groups and individuals to the logic of capitalistic accumulation, to hyper-mobile markets, while symbolic, dematerialized capital roams around. It is no accident that the neo-classical views of footloose, hyper-rational agents describe best the financial sector, which has proven to be the most socially destructive part of neoliberalism. If these theories are incorrect, why are they defended?

A first explanation touches on reflexivity: defining reality is bending and shaping it. The Boston University feminist economist Julie A. Nelson proposes a nuanced explanation for what she calls the "simplistic view of economics," "the cookie-cutter content of the most popular K-12 teaching materials, standardized test, university introductory and intermediate microeconomic and macroeconomic theory textbooks and graduate "core" theory courses." She explains that framing economic relations as "a free standing, fundamentally private, mechanical and ethics-free sphere," as impersonal and purely technical, "stack[s] the deck in favor of individualism and selfishness" (Nelson, 2012). If the hegemonic culture describes individuals as selfish and exploitative, it feeds our fears of survival, encourages self-protection and isolation, and substitutes for organic social connections in the form of materialistic consumption. This self-fulfilling prophesy confirms the concept of positive feedback loop, which is central to systemic analysis: the energy a system sends out comes back to reinforce the dynamics of the system. In this instance, intellectual-cultural *preferences* (energy) in favor of economic libertarianism emanate from economists (originating sub-system) and come back as *facts* to reinforce the general system in the direction of the original message. Sociology and psychology have long established the importance of socialization and internalization of collective messages in the definition of self.

In *Cultural Violence* (1990), Johan Galtung (a key creator of the field on conflict resolution) illuminates a second function of methodical individualism for the hegemonic classes:

> "A violent structure leaves mark not only on the human body but also on the mind and the spirit. The next four terms can be seen as parts of exploitation or as reinforcing components in the structure. They function by impending consciousness formation and mobilization, two conditions for effective struggle against exploitation. *Penetration*, implanting the topdog inside the underdog so to speak, combined with *segmentation*, giving the underdog only a very partial view of what goes on, will do the first job. And *marginalization*, keeping the underdog on the outside, combined with *fragmentation*, keeping the underdogs away from each other, will do the send job" (Galtung, 1990, 294).

Thus individualism is the organizing principle that underlies elite's policies of penetration, segmentation, marginalization and fragmentation. Ayn Rand on the far-Right and Garrett Harding on the Green Left show this connection between radical individualism and Social Darwinism. Rand provides the potent brew of self-aggrandizement, narcissism, Nietzscheism (the entrepreneur as transcendent hero) and Social Darwinism needed by the libertarian right to assert its hegemony. She systematically reduces altruism to a vice and elevates selfishness and will to power as paramount virtues and conditions for individual freedom

(Rand, 2015). Harding, despite his "tragedy of the commons" fame and environmental credentials, is vindictive toward the weak, the poor, and the immigrants. He advocates a lifeboat philosophy where the powerful ought to reject and punish the poor and vulnerable in order to save the environment (Harding, 1974a, 1974b, 1991, 2001).

For labor and consumer markets to be "optimally competitive" and "frictionless," corporations need an atomized society and will do their utmost to make reality conform to the neoclassical paradigm. This is why the labor market and the marketing machine have a vested interest in isolated and selectively desocialized individuals. Community bonds, family solidarity, local communities, churches, voluntary groups and the whole web of civil society ties are essentially *res extra commercium* – things outside the commercial realm. They provide their members with non-monetarized common goods such as strong civic culture, solidarity, a sense of belonging and identity that are detached from consumption. Therefore they must be brought into the merchant sphere by both the intellectual and social disciplines. The marketing machine does not like fully-informed citizens and organic communities: it needs to increase isolation, envy, and competition where they already exist, and introduce them when they do not. This is precisely the role played by mass individualism and materialism.

Utility maximization: materialism as doctrinal prerequisite for social isolation and deep capture

Rational choice theory provides the psychological foundations for neoclassical economics. In the conclusion to his 1992 Nobel Prize address, the Chicago school economist Gary S. Becker emphatically states that

> "…no approach of comparable generality had yet been developed that offers serious competition to rational choice theory. […] The rational choice model provides the most promising basis presently available for a unified approach to the analysis of the social world by scholars from the social sciences" (Becker, 1996).

Rational choice theory broadly posits individual calculations of costs and benefits and agents rationality: *how* agents come to their decision, not *what* decision they make. The University of North Carolina economist Irvin B. Tucker interprets "consumer choice theory" with reference to the standard canon (total utility, marginal utility, diminishing marginal utility, consumer equilibrium income effect and substitution effect) without mentioning any holes in the doctrine (Tucker, 1997, 145-59). In another classic college textbook, the neoclassical economists Marc Lieberman and Robert E. Hall seem to offer a more realistic view of reality but, constrained by the Procrustean requirements of doctrinal orthodoxy, they wiggle their way out of the conundrum, and reassert the article of faith that individuals seek to *maximize* their utility: "Another feature of preferences that virtually all of us share is this: We generally feel that *more is better*" (Tucker, 1997, 106). Experience belies such black-and-white contentions. In fact, individuals seek to optimize – not maximize – utility by juggling divergent preferences and forces in situations of imperfect and fragmented information, as Joseph Stiglitz demonstrated – and his work in this field was distinguished by the Nobel Prize in economics.

One observes a triple slide in this materialistic economism: social facts are reduced to their economic dimensions, economic activities to profit maximization, and individual behavior to consumerist materialism. The expression "consumer sovereignty" was coined by the British economist William H. Hutt (1899-1988) in his 1936 *Economists and the Public.* It posits that consumers rather than producers are the primary and ultimate authority of what economic services and products benefit them most. In essence, consumers' preferences shape the production of goods and services. It has become a central tenant of mainstream economists and the Austrian school economist J. Patrick Gunning even deems it central to Ludwig von Mises' theories (Gunning, 2009, 4). Such affirmation of the free primacy of individual choice feeds the corporate bottom line for it is a battering ram against social forms and forces that impede unbridled consumption and profit maximization. Forces of resistance to capital accumulation that must be shrunk or eliminated include: individual autonomy, community life, social justice, personal and social spaces for non-profit activities, and environmental stewardship.

Under the current system, utility maximization overwhelmingly equates with materialistic satisfaction. This tenet serves capitalistic accumulation by reducing human being to consumers. It describes some, but not all of us, and applies perfectly to neurotic individuals, addicted shoppers, and psychopathic corporate actors. Orthodox economists recognize that individuals are caught between utility maximization and the law of diminishing marginal utility (Tucker, 1997, 108-09), which expresses the diminishing pleasure that consumers experience as they acquire more stuff. Psychologically they experienced this law of diminishing (emotional) return as compulsion, rote repetition, boredom, emptiness, anxiety. The "paradox of hedonism" (pleasure or happiness can be attained only indirectly), the Easterlin paradox (there is no automatic or proportional correlation between increased possessions and increased happiness), happiness economics, the Gross National Happiness (GNH) Index, the Green and Happiness Index (GHI), the Social Progress Index (SPI) may provide alternative economic frameworks to neoclassical utilitarianism. And philosophy, spirituality, morality and faith may provide alternative views of human nature and objectives.

Well-adjusted and principled individuals know that materialism cripples our emotional and spiritual lives: more is often less. As they sense contradictions within their model, many neoclassical economists concede that behavioral economics "point out that some human behavior is not consistent with *any* type of maximization" because "they incorporate notions about people's *actual thinking process*." Despite this remarkable admission, they also insist that "the standard economic models work so much better" and dismiss behavioral economics as merely "an extra limb that extends the theory's reach to some anomalous behavior" (Lieberman and Hall, 2005, 122-23). Reality pokes enough holes in "these assumptions economists make" (Schlefer, 2012) that specialists concede countless exceptions, exemptions, and exclusions to their core beliefs, while still protecting said assumptions as fundamentally valid – an example of cognitive dissonance within members of a scientific community. Gary S. Becker provides a case in point in his 1992 Nobel prize address with his departure from the core *homo economicus* postulate, yet he immediately negates his nuances by applying his brand of economic logic to countless non-economic topics such as law, crime, or family: "[T]he economic approach I refer to does not assume that individuals and motivated solely by selfishness or gain. It is a method of analysis, not an assumption about particular motivations. […] Behavior is motivated by a much richer set of values and preferences" (Becker, 1992). In other words, all sorts of motives move actors in various spheres of social activities, yet the economic rationale as understood by neoclassicism still holds across the board!

The ultimate form of alienation, of loss of connection with self and community, is loss of personal awareness and the capture of mental, emotional, and psychological agency by market forces. This *deep capture* leads to the self being estranged from self, and internalizes the manufactured reality concocted by marketing, television *programming*, and corporate media. Rather than informed participation and cost-benefit analysis, a false consciousness often prevails in individuals' economic behavior. As the economist Victor Lebow famously stated as early as 1955,

> "Our enormously productive economy demands that we make consumption our way of life, that we covert the buying and use of goods into rituals, that we seek our spiritual satisfaction and our ego satisfaction in consumption. The measure of social status, of social acceptance, or prestige, is now found in our consumptive patterns. The very meaning and significance of our lives today is expressed in consumptive terms. […] These commodities and services must be offered to the consumer with a special urgency. We require not only 'forced draft' consumption, but 'expensive' consumption as well. We need things consumed, burned up, worn out, replaced and discarded at an ever-increasing pace. We need to have people eat, drink, dress, ride, live with ever more complicated and, therefore, constantly more expensive consumption" (Lebow, 1955).

These alarming trends have grotesquely sped up, hardened, and metastasized since the 1950s, aided by orthodox economics as it refuses the notion of limits to growth, to consumption, and to ecosystems and natural resources.

Rationality, bounded or not: hiding the messy dynamics of human behavior

Rationality in the service of utility-maximization, key tenets of neoclassical thought, is a convoluted way of saying that people like what they like and want as much of it as they can get. Here, Galtung's critique regarding elite strategies for penetration, segmentation, marginalization and fragmentation of the dominated, is most enlightening. The social purpose of putting the onus of decision-making on *supposedly competent autonomous individuals* is to hide the collective mechanisms – outright lying, hidden persuasion, manipulation, multiple forms of censorship and framing – deployed to "manufacture consent" (Herman and Chomsky, 1968) to this economic system and this system of power relations. It is to make this strange social order seem natural and self-evident – since we are born selfish and are natural-born consumers – and sell it as the best possible – nay, the only world – for individuals. It is meant to discourage critical thinking regarding social structures and alternative modes of social organizing: why run against nature when individuals are competent? It is meant to highjack democracy: why object if individuals know what's best for them? And finally, it is meant to hide the alarming importance of psychopaths for this business world.

In fact, decision-making in economic – and other – matters incorporates a range of heterogeneous motivations mixing reason, cognitive-emotional flaws, neuro-biological forces, individual *Weltanschauungen*, social conditioning, habits and gregarious influence, cost-and-benefit utilitarianism, misinformation, miscalculation and bias, amnesia, as well as moral, ethical and altruistic aspirations, animal spirits, and antisocial, even psychopathic, tendencies. This is why Alexander Hamilton quipped that "People are not reasonable, they are capable of reason". In 1936, John Maynard Keynes famously wrote:

> "Even apart from the instability due to speculation, there is the instability due to the characteristic of human nature that a large proportion of our positive activities depend on spontaneous optimism rather than mathematical expectations, whether moral or hedonistic or economic. Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as the result of animal spirits – a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities" (Keynes, 1936, 161-62).

Alan Greenspan himself, despite being chair of the U.S. federal reserve from 1987 to 2006 and a chief actor of financial neoliberalism, has to admit the failure of economic science in the wake of the 2008 crisis which "represented an existential crisis for economic forecasting" (Greenspan, 2013, 88). He asks with some Angst: "Why was virtually every economist and policy-maker of note so blind to the coming calamity? How did so many experts, including me, fail to see it approaching?" (Ib., 89) His answer: Keynes' animal spirits, for people are predictably irrational.

The American sociologist and economist Thorstein Veblen (1857-1929) is credited for coining the term "neoclassical economics" in 1900. Alfred Marshall (1842-1924), Carl Menger (1840-1921), Léon Walras (1834-1910), and William Stanley Jevons (1835-82), the founders of neoclassicism were his contemporaries. Veblen disagreed with the neoclassical theories that emerged around him and his alternative vision of economics, which over time developed as institutional economics, shares with other heterodox and innovative schools of economics (notably evolutionary economics and behavioral economics) the belief that economics is embedded in history, psychology and ethics, anthropology and sociology, biology and neurosciences. These theories rejects the neoclassical view of human nature, which posits that individuals are rational (i.e., fully informed… except when they're not, when their rationality is 'bounded') utility maximizers who approach market transactions fully informed from a cost-benefit perspective. Individuals are perceived as manifesting stable preferences across time, settings and cultures. With respect to such views of human motivations, three dissenting economists rightly point out that "[h]ow preferences are formed or whether they correspond to biology or physical reality is considered to be outside the scope of economics" (Ayres, van den Bergh and Gowdy, undated, 3).

For another group of economists preoccupied by the "systemic failure of academic economics," the mainstream discipline "reduces economics to the study of optimal decisions in well-specified choice problems. Such research generally loses track of the inherent dynamics of economic systems and the instability that accompany its complex dynamics." (Colander *et alii*, 3). Indeed, why should we believe that individuals are guided by rationality and well-understood self-interest in complex economic decisions, when all around us social behavior provides a wealth of contrary evidence? If cost-benefit analysis and rational choice inspired humans in their everyday conduct, all drivers would be prudent, courteous, and safe, save for weather problems and freak accidents. And as individuals would be better informed before marrying, marital unhappiness and divorce rates would dramatically plummet. Beyond easy sarcasm, the fact that masses of people make their most important decisions – driving, crossing the street, marrying, etc. – with stunning incompetence shows the limits of cost-benefit analysis.

In *Protestant Ethics and the Spirit of Capitalism* (1905) Max Weber showed the connection between positive psychological-cultural traits (creativity, sense of duty, deferment of gratification, self-discipline) and capitalistic entrepreneurship. That is the positive side of capitalism, yet its shadow also looms large. Gary Becker applied neo-classical theories of choice to criminal choices, and *Freakaconomics* did the same for drug dealers (Levitt and Dubner, 2009). Many neo-classical economists are similarly interested in street-level gangsters but demurely look away as capitalism is largely shaped by sociopathic individuals. In fact, the pathological personality often operates mainstream and disproportionally contributes to capitalistic growth *and* societal toxicity. The *Society for the Scientific Study of Psychopathy* (SSSP) defines it thus:

> "Although psychopathy is a risk factor for physical aggression, it is by no means synonymous with it. In contrast to individuals with psychotic disorders, most psychopaths are in touch with reality and seemingly rational. Psychopathic individuals are found at elevated rates in prisons and jails, but can be found in community settings as well" (SSSP, 2015).

Power (financial, political, social, or religious) *attracts* and *rewards* countless sociopaths. Indeed, the SSSP's clinical definition of psychopathy – "dishonesty, manipulativeness, and reckless risk-taking" – describes many business and corporate leaders. In *Driven to Lead: Good, Bad, and Misguided Leadership* (2010), Paul R. Lawrence, an authority in the field of organizational behavior, argues that "Leadership is not simply an external effect on other people; it's what is actually happening inside the brain" (driventolead.com). With a firm grounding in evolutionary biology, Lawrence posits the existence of four fundamental human drives: to acquire resources and offspring, to bond, to comprehend, and finally to defend ourselves, our loved ones, and our property. The conflicts and compromise among these urges – Freud's *Trieben,* or vital impulses – form a complex tangle of motives. Acquiring and defending inspire self-interest and are common to territorial animals, whereas complex bonding and comprehending define the human species, and inspire self-restraint and good will. In power-hungry leaders such positive drives are severely deficient.

Likewise, in *Snakes in Suits: When Psychopaths Go to Work* (2006), industrial psychologist Paul Babiak and criminal psychologist Robert D. Hare (the creator of the Psychopathology Checklist Revised, or PCL-R, used worldwide by researchers, clinicians, and law enforcement personnel) provide ample evidence of the *banality of evil* among corporate leaders. As demonstrated by the chronic pandemic of white-collar crime, especially in the United States, these predators thrive in such open, fast-paced, and under-regulated environments with their heady mixtures of high risk, immense financial and ego rewards, and socially-rewarded domination over others. The sick ego loves to worship itself through power, so their marauding is enabled by today's culture of neoliberalism that celebrates solipsistic, predatory, and self-aggrandizing individualism. Their misdeeds are also facilitated by dodgy politicians, many of them fellow psychopaths who *admire* their corporate counterparts, and many others seduced, cowed, or corrupted by money and neoliberal economics. Psychopathic "characteristics and traits […] conflict with the generally accepted norms and laws of society" (Babiak and Hare, 2006, x), but not with how corporations operate under the Washington Consensus and Wall Street's hegemony. In fact, many corporations and industries (notably FI.RE, or finance and real estate) are the natural milieu and *institutional extension* of modern psychopaths:

> "Egocentricity, callousness, and insensitivity suddenly became acceptable trade-offs in order to get the talents and skills needed to survive in an accelerated, dispassionate business world […] [L]ack of specific knowledge about what constitutes psychopathic manipulation and deceit among business people [is] the corporate con's key to success" (Babiak and Hare 2006, xi-xiii).

The "ring of power" can be summarized as follows: twisted yet highly functional individuals channel their will for domination into exploitative capitalism and are richly rewarded and honored. Elite economics provides the false consciousness, the veil of illusion needed to simultaneously hide, deny, justify and glorify this charade. In the U.S., cunning masters of the economic game consolidate their power through corporatocracy, regulatory capture, deep capture, and by what Mike Lofgren (2014) calls "the deep state," the subsurface complicity among Democrats, Republicans, and public agencies on behalf of the military-industrial-espionage-security-corporate complex. Given its hyper-rationality, its lack of social and national allegiance, its obsession with maximum accumulation, its imperialistic ambitions against other social spheres (individual and community autonomy, regulatory independence), the financial sphere embodies the neoclassical fantasy of *homo economicus.* This is why progressives such as Jim Hightower, Ralph Nader, and Robert Reich demand that American companies pledge allegiance to the United States, in order to moor them in a real community.

Hiding cultural violence: methodological and linguistic obfuscation of power relations

Key economic institutions and practices (market, trade, entrepreneurship, investment, innovation, risk-taking, money, credit mechanisms, etc.) precede capitalism by millennia but have been *rationalized* by neoliberalism, which dresses up its particular choices as science. For instance, Paul Hawken reminds us that "[o]ne of the reasons we like the term "market economy" is because we picture the market square with farmers and craftspeople" (Hawken, 2010, 86). In this example, the dominant discourse manipulates our natural yearning for close and protective communities (Ferdinand Tonnies's *Gemeinschaft*) while promoting anonymity and competition (*Gesselschaft*). While fostering status anxiety, retail therapy, and conspicuous consumption, it proposes an alternative verbal and mental reality that serves to dissimulate the economy of domination – and we use "economy" here in the dual sense of the term.

In his canonic *History of Economic Analysis* (1954), Joseph Schumpeter denounced as "Ricardian vice" (what he considered) David Ricardo's habit of oversimplifying his economic hypotheses to bolster his assumptions, of devising abstract model building with a few basic variables that bothered little with empirics (Schumpeter, 1954). In a similar vein, the economist Erik S. Reinert speaks of the "sterile formalism" of Darwinian economics where "the models had become more real than reality itself" (Reinert, 2013, 58, 63). For critics, such abstractions are further dis-embodied by the mathematical formulations at the core of mainstream economics, which they castigate as formal, autistic, and disconnected from flesh-and-blood reality. E. Roy Weintraub provides an authoritative consideration of *How Economics Became a Mathematical Science* and acknowledges that since "economics is intertwined with mathematics in the twentieth century, in order to understand the history of economics we need to understand the history of mathematics." In fact, "economics has been shaped by economists' ideas about the nature and purpose and function and meaning of mathematics" (Weintraub, 2007, 2). This trend draws fire from a sub-set of mainstream economist and from dissenting experts. For instance, Nobel Prize laureate Wassily Leontief analyzed the contents of the *American Economic Review* and contrasted the proliferation of mathematical models with the paucity of application and results:

> "The connection between mathematical models of finance markets (expressed for instance by the Black-Scholes equation) and the anti-social and anti-economic behavior of financial markets raises core epistemological questions for economics. Yet it satisfies one key fantasy of capital accumulation, that of a frictionless market, a market where transaction costs are nil, where economic transactions unfold without the usual fuss and costs associated with real-world, social exchange or 'trans-actions'" (Daly and Cobb, 1989, 32).

Ronald H. Coase (Nobel Prize in economics in 1991) also provides a sinuous defense of economics' methodological imperialism. First he acknowledges the narrowing of its method:

> "This impression is reinforced if we have regard to the articles which appear in most of the economic journals, which, to an increasingly great extent, tend to deal with highly formal technical questions of economic analysis, usually treated mathematically. The general impression one derives, particularly from the journals, is of a subject narrowing, rather than extending, the range of its interest" (Coase, 1978, 204).

Then he tries to wiggle his way out this conundrum:

> "[T]here are, at present, two tendencies in operation in economics which seem to be inconsistent but which, in fact, are not. The first consists of an enlargement of the scope of economists' interests so far as the subject matter is concerned. The second is a narrowing of professional interest to more formal, technical, commonly mathematical analysis. It may say less, or leave much unsaid, about the economic system, but, because of its generality, the analysis becomes applicable to all social systems" (Ib., 207).

What is left "unsaid" in such formal models that concentrate on technical issues in highly technical terms is an enormous chunk of sociopolitical reality, messy power struggles, the clash of economic ideas, and the position of economics as a social science embedded in political and historical practices. As the economist McCloskey argues, "Words, ideas, rhetoric make for a 'humanomics', an economics with full humans let back in" (2015b). McCloskey is considered a conservative University-of-Chicago style economist, and describes herself as a "Christian libertarian" (www.deirdremcclosekey.com), but she does take exception with formal, a-contextual theorizing:

> "The average economist, especially the average young American economist, is ignorant of what happened yesterday in the economy. In a recent survey of American graduate students in economics […] only 3 per cent said that knowing something about actual economies was important for success as an economist. But the economists […] are going to continue resisting historical facts and historical argument until they recognize that they themselves are historians, tellers of stories. The anti-empirical character of economics, shielded from criticism by a naively empiricist philosophy of inquiry, is startling to outsiders […] Economists have for a century or so been

> enchanted by mathematical physics. Some decades ago they cast off their identities as worldly philosophers and economic historians, donning the garb of social physicists, tough and masculine and quantitative […] They adopt a philosophy of inquiry that they think goes along with being physicists" (McCloskey, 1988, 643).

McCloskey also connects elite economists' professional orientation with the incentive system provided by the power structures: "They follow the course of honors in physics, from big government grants to the Nobel prize" (Ib., 643). Her mention of economics as a "tough and masculine" exercise reveals the role played by American masculinity in this discipline. Indeed, neoclassical economics is deeply steeped in the American national experience, character, and mythology. A-historical economics very much reflects American mainstream culture with its historical amnesia and reflexive glorification of its uniqueness. The U.S. celebrates its history-as-change but sees itself largely immune from history-as-tragedy. Or to be more exact, because of American exceptionalism, tragedy remains an exception, an anomaly in the long arc of American progress, while it is the norm for "the rest of them out there." A sense of tragedy is not in the American character, winning optimism is. Awareness of limits and respect for measure are not in the American character, boundless energy and materialistic celebration are. A sense of individualism, narcissism, competitiveness and acquisitiveness also inspires American personhood. Therefore, moral progress through cumulative and infinite material growth – America's self-evident destiny – also inspires neoclassical economics. America is elected by history, by God, and by its own fundamental goodness; therefore it alone has discovered the Big Secret for human happiness, individualistic democracy and its own brand of capitalism and economics. Elite economics also serves American global interest through the intellectual diffusion and practical imposition of Reaganomics and neoliberalism.

Therefore, as James Galbraith explains, the discipline needs to clarify the relationship between empirics and theorizing, contextualize mathematics, and reset the boundaries of observation:

> "Empirical work should be privileged. Real science does not protect bad theory by concentrating on matters that cannot be observed. It is, rather, a process of interaction between conjecture and evidence […] Mathematics should mainly clarify the implications of simple constructs, not obscure simple ideas behind complex formulae […] A focus on social structures and the data that record them requires new empirical methods […] The study of dispersions, of inequalities, is intrinsic to the study of power. Neoclassical economics with its bias in favor of the sample survey, the Gini coefficient, and the assumption of normality in the distribution of errors has, to a degree, neglected the mathematical and statistics of dispersion measures […] Likewise the study of social structures cannot be done wholly with parametric techniques held hostage to the dogma of hypothesis and test…" (Galbraith, 2008, 497-98).

Economics then suffers from mathematical autism and "physics envy," as even conservative sources acknowledge (*Bloomberg*, 2006; *Economist*, 2011; see also Clarke and Primo, 2014 for a summary). Yet such strict methodological choices are no accident: they serve to dissimulate the construction of the truth regime through control of professional discourse. British International Political Economy (IPE) scholar Nicola Phillips observes that in the United

States the discipline has moved away from the pluralism and intents advocated by its founder, Susan Strange, and toward "the contraction and demeaning of pluralism [and] a sharp methodological homogenisation" (Phillips, 2009, 85). She sees "a fairly small handful" of IPE professional journals act as gate-keepers of the field, with contributions disproportionally authored by men (86%) from hegemonic universities (29% from just 11 U.S. universities) (Ib., 86). The twelve IPE journals that dominate the profession – where faculty want to publish for tenure, promotion, and other organizational rewards – are from the U.S. and far from being generalist outlets as claimed, work "within the liberal paradigm," and the vast majority of IPE articles they publish use quantitative methods (Ib., 87). They opt for micro-issues, for a "narrow empirical focus on a small handful of advanced industrialized countries," for strategically important regions for the United States (notably, East Asian economies) and in these regions for issues related to finance, trade, competition, regulation and such, rather than for "questions of global development, migration, poverty, labor standard, environment and climate change, and so on." Of course, such choices come at the detriment of big picture issues, integrative thinking, and critical perspectives (Ib. 91-93).

Among the approaches thus excluded from the orthodox IPE discourse are Marxism, constructivism and ideational paradigms, feminism, "post-structuralism and other critical, non- and post-positivist approaches" (Ib., 88). Therefore Phillips contrasts the openness and eclecticism of the British school of IPE with the narrow approach defended by the dominant IPE community in the United States, and sees IPE's intellectual landscape better reflected in a wide range of social science journals, rather than in the reference disciplinary journals. The vigorous debate launched in the IPE profession by Benjamin Cohen's book *International Political Economy: An Intellectual History* (2008) and the flurry of scholarship that ensued (Maliniak and Tierney, 2009; *Review of International Political Economy*, 2009) reveal this closing of the American IPE mind.

The notion of "negative externalities," a key concept for environmental economics, provides a clear illustration of such intellectual obfuscation. Negative externalities are the detrimental social and environmental consequences of economic transactions that are not mediated by market-based instruments and in particular, not expressed in the price-formation system. They are excluded from official accounting at the aggregate level with the GDP, which considers accidents, pollution, crime and countless social ills as productive as long as they generate business and value-creation. They are also ignored at the micro-economic level through companies' conventional accounting systems. Milton Friedman called them "neighboring effect" or the negative impact of economic activities on their close surroundings – but today we know that they are global, systemic, and often self-sustaining. They represent an effort on the part of environmental economics as a discipline to account for market disaminities and sub-optimal outcomes in an economic system that they deem otherwise self-regulating, self-improving, self-correcting and optimized – the Pareto equilibrium.

In fact, externalities are "external" only in the language of conventional economics and conventional politics, for those who benefit from them. They are external to the system of economic power and its intellectual representations, to the hierarchy that produces the dominant discourse and practices. They are gains ("positive externalities") for hegemonic classes, groups, and countries, and often a condition of their prosperity, and are externalized by power practices and conventional accounting, which are power relations embedded in law and accepted business practices. But they are indeed negative for those groups (subaltern classes and groups, dominated regions, etc.) at the periphery of power formation. "Negative externalities" is econ-speak to avoid the much more damaging concept of "structural contradictions," and serves to hide the fact that negative externalities trickle down the power ladder while the lion's share of positive externalities moves up the power ladder. One example is how first-world corporations, consumers, and societies transform developing countries and poorly regulated countries with weaker civil societies, into pollution havens by exporting their polluting activities and dumping their industrial waste.

The notion of "lawful economic activity" provides yet another example of this cloaking strategy. Free-marketers argue that capitalism is essentially benevolent since it operates within the law, the highest authority in democratic nations and organized societies. Yet the integrity of the law is increasingly corroded by regulatory capture; and the law's social purpose – to serve the common good by allocating rights and responsibility and organizing accountability fairly – is systematically highjacked by economic forces. The powerful make the laws and break them with impunity; they institute one set of laws for the best and another set of laws for the rest. They set a public law for the dominated and a private law for themselves, a *privus lex*, a privilege. Examples of this corruption of law and democracy include banks that are too big to fail, the shielding of individual criminal executives from penal responsibility, and the mobilization of public resources for corporate welfare and bailouts of misbehaving finance institutions.

Together, regulatory capture and deep capture show that individual freedom in economic matters is often manipulated by power structures. This is why orthodox economics, as facilitator of unequal power relations, *must* postulate the *essential* freedom and responsibility of all economic agents, big and small: it needs to hide the reality that *practical* freedom is an unequally distributed common good. In Marxist terms, elite economics postulates formal, bourgeois freedom in order to dissimulate and deny the crisis of effective social freedom. In our *Animal Farm*, the pigs – the agents that structure, co-opt, and articulate economic power for their own benefit – are more equal than other animals.

Being partly scientific, neoclassical economics has not yet exhausted all its positive contributions; but it has shown its true colors and its limits as a systematic and systemic ideology. As a *comprehensive* tool for organizing socio-economic relations, it lingers on as an increasingly obsolete technology blocking the way toward a new environmental and social paradigm. Yesterday, prior to the rise of global environmental awareness, Daniel Bell could focus solely on "the cultural contradictions of capitalism" (Bell, 1976) without reference to its ecosystem limits. But today Marxist analyst David Harvey identifies seventeen of them (Harvey, 2014) and the neoliberal avatar faces its ultimate structural contradiction: the limits to earth's carrying capacity, the degradation of ecosystems, the over-use of natural resources, and climate change. Capitalism harbors an immense capacity for both further deterioration *and* dramatic self-improvement. Its critics have many times predicted its *future* demise, when in fact vast regions *already* suffer from economic exploitation, and social dislocation aggravated by resource attrition and climate change. Tomorrow is already here, has been here since the dawn of capitalism, and it looks very different when viewed from the core or the periphery, for instance the Horn of Africa, where climate change is contributing to chaos (Parenti, 2011).

This explains elite economics' role. With many of its scientific claims battered by the earth itself and its historical purpose increasingly questioned, its social function is increasingly to 1) organize mass individualism on behalf of power structures, 2) help hide and "outsource" negative externalities and, 3) provide the veil of illusion needed to soldier on. Take for instance, the profession's herd-like celebration of Enron (micro-economics wrong at the unit level) and its inability to predict the 2008 systemic collapse (macro-economics wrong at the system level). In other words, before they are economists, neoclassical economists are humans; and before they are globalists they are Americans – or largely reflect a chosen version of the American experience. This discipline needs to free itself from exploitative power structures in order to help commerce recover its true ecology (Hawken, 2010) and its relations with good and evil (Sedlacek, 2011). Let all neoclassical economists meditate these admirable truths from Adam Smith's *Theory of Moral Sentiments* (1759), whose opening lines posit human sympathy as fundamental to all societies:

> "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it. Of this kind is pity or compassion, the emotion which we feel for the misery of others, when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrow of others, is a matter of fact too obvious to require any instances to prove it; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous and humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it" (Smith, 1759, ch. I).

Then as a moralist Adam Smith explains how greed and reverence for it corrupt this fundamental human drive of sympathy. "The corruption of our moral sentiments," he says, "is occasioned by this disposition to admire the rich and the great, and to despise or neglect persons of poor and mean condition":

> "This disposition to admire, and almost to worship, the rich and the powerful, and to despise, or, at least, to neglect persons of poor and mean condition, though necessary both to establish and to maintain the distinction of ranks and the order of society, is, at the same time, the great and most universal cause of the corruption of our moral sentiments. That wealth and greatness are often regarded with the respect and admiration which are due only to wisdom and virtue; and that the contempt, of which vice and folly are the only proper objects, is often most unjustly bestowed upon poverty and weakness, has been the complaint of moralists in all ages" (Smith, 1759, ch. III).

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SUGGESTED CITATION:

Michel Gueldry, “The double discipline of neoclassical economics: when the map both hides and reveals the territory”, *real-world economics review*, issue no. 72, 11 Dec 2015, pp. 27-57, http://www.paecon.net/PAEReview/issue73/Gueldry73.pdf

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