

Review

Mauro Gallegati*

If nature were a Commons would the homo economicus be a rational agent dropped in an evolutionary trap or an ignorant pedantic? A Note on *Ecology of Law. Toward a Legal System in Tune with Nature and Community*, by F. Capra and U. Mattei, 2015.

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Abstract: If nature were a commons would the homo economicus be a rational agent dropped in an evolutionary trap or an ignorant pedantic? Capra and Mattei wrote a subversive book. It points to the same revolution that the holistic, complex approach suggests by decoupling the economic process to integrating the web of life of the nature in law and economics.

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Perspectives on 'The Ecology of Law' by F. Capra and U. Mattei

1. "Visions of 'Eco- Law': A Comment on Capra and Mattei, *The Ecology of Law: Toward a Legal System in Tune with Nature and Community* (Berrett-Kohler Pubs., 2015)" by Kurt A. Strasser, <https://doi.org/10.1515/ael-2016-0058>
2. "If nature were a Commons would the homo economicus be a rational agent dropped in an evolutionary trap or an ignorant pedantic? A Note on *Ecology of Law. Toward a Legal System in Tune with Nature and Community*, by F. Capra and U. Mattei, 2015" by Mauro Gallegati, <https://doi.org/10.1515/ael-2016-0015>

*Corresponding author: Mauro Gallegati, Università Politecnica delle Marche, Ancona, Italy, E-mail: mauro.gallegati@gmail.com

Money exists not by Nature but by law
Aristotle.

The way in which economic literature has investigated the causes of the Great Recession reminds us of a saying of Mark Twain: “There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact.”

The search for the root causes of the crisis has gone from flawed economic policies (from deregulation of financial markets and debt explosion under the Bush administration to the excessive confidence of Alan Greenspan in market efficiency), from too easy credit conditions to sub-prime loans, from the greedy behavior of investment banks to their predatory lending in order to inflate the housing bubble, from flawed risk assessments to the collapse of the shadow banking system, from the boom in energy prices to the role of economic forecasts (whether or not intentionally erroneous) of credit rating agencies, up to the most elaborate theories of the increase in financial commitments or of over-indebtedness, to the economic crisis as an optimal response to an innovation in workers’ preferences.

More or less those are plausible readings, but all of them refer to a short period. Capra and Mattei (hereafter: CM) offer a novel and different interpretation: the actual legal system, based on the obsolete vision of mechanism and individualism, led us to underestimate the common goods, to live and pollute by over-producing as if humanity (and the economy) were not part of Nature. The crisis is therefore structural. The world will have to a-grow. If we continue to work to consume, our future will be a *Miserere*. It is necessary to imagine a new paradigm for transforming our life from the search of an ever greater GDP to the search of well-being.

Humanity cannot be assessed with references to a single dimension, namely that of production. Each country should pursue its own path, the one that its unique culture shows it, refusing the precept of a single path to follow.

The book lends itself to different levels of reading. Mine is that of an economist who often criticizes the mainstream vision, or the GDP-centric view of the economy. In support of my position there is a passage from CM, p. 8: “Today, all political debate are firmly anchored in the powerful academic disciplines of economics, which, by successfully claiming to be an exact science, determines policy making and legislation. Unfortunately, economics still applies to short-term reductionist, linear, and quantitative bias typical of traditional scientific thought, in consequence of the mechanistic paradigm. Having conquered the legal system through economics, this obsolete mainstream view, rooted in the duopoly of property and state, now fuels our ecologically destructive practices. So-called economic laws produce major distortions because they are based on the assumption that it is

natural and desirable for an institution to set growth target that induces extractive individual behavior while discouraging virtuous practices.”

The theory of complexity ends the time of certainty when scholars believed that every effect corresponds and is proportional to one precise cause. This subtle problem has effects on the dominant economic theory that is based on the assumption of equilibrium and linearity, but also on the hard sciences – physics and chemistry in the first place. As shown by Anderson (1972), the aggregate is not the sum of its components, but results from the interaction (which involves non-linearity) between its components. It involves the abandonment of the very idea of “natural law” and mechanism, of proportionality between cause and effect, and that the dynamic of a system can be reconstructed by summing up the effects of single causes acting on single components (Nicolis and Prigogine, 1977). By focusing on systems in equilibrium, economists implicitly accept that the number of possible states a system may attain is limited (and computable) and that search time dynamics is short and convergent compared to the “equilibrium” time.

The mainstream approach in economics is very quantitative and the reduction of the value of human life to the value of the goods and services produced and is, according to CM, p. 115, “the current form of the Cartesian mechanistic vision. [...] Private-sector incentives and legal structures [e]ncourage exploitative and short-sighted corporate behavior determinates the institutional, legal, and intellectual structure of the present extractive economic orders we call mechanistic trap”.

The mechanist trap is well evidenced by those who, like Irving Fisher, built in 1891 a hydraulic machine for calculating equilibrium prices. Years later, in 1950, William Phillips invented the MONIAC, a hydraulic computer which simulated the British economy. The ability to describe the economy as a machine is a fruit of the tradition of classical physics well able to describe a complicated subject, but not a whole, that is capable of evolution.

Both law and economy lay in the center of their investigation an abstract individual, an isolated atom, which exists apart from the others (*social atoms* in Buchanan, 2000). This view is far from being neutral, since it justifies the individual rights of property – from “natural law”. Also, it adopts a very short time methodology, which does not take into account the feedbacks from other agents and nature. So that, when one speaks of sustainability, one should speak of economic, social and nature together.¹

¹ Almost a century ago, the Judge Louis Brandeis said: “We can have democracy, or the wealth concentrated in the hands of a few, but not have both.” In democratic systems the rich can finance the political party that best serves their interests – not in Italy though, where they directly do it, as Mr.B. did.]

In economics, this produces two orders of problems.

The first comes from the anthropocentric view, which sees man separated from the environment, and thus economy from nature. The body of theory today may, at most, describe the economy as it was at the time of the industrial revolution, not that of today. The economy is treated as independent from nature. As if the natural capital was infinite, that is reproducible like a forest, and not non-reproducible, like a mine. In the first case one could speak of sustainable and disappearance of steady state development: innovation allows production to increase with less input. In the second case, however, if the capital is not reproducible, the concept of sustainability becomes an oxymoron. The innovation process, with non-reproducible resources, can delay the downfall of the economy only. By this I mean we should move towards a throughput economy and based on learning. Beyond GDP there is Nature. And Nature, mainstream economists tell us, cannot be considered unless a price can be imputed on it. Absent a market pricing, nature would be an externality which is a deadly condition for that theory (see also Biondi 2011). If we rely on the GDP which is independent from Nature, we assume a predatory attitude and, as we remember the philosopher and science historian Paolo Rossi said (1987), “the domain of philosophy may be erased with nature and with it, of course, the humanity.”

For sustainability economists mean economic sustainability alone, neglecting social and natural sustainability. In doing so, they reduce almost everything – and that is the other problem – to the GDP, as if life were at one dimension. In this case the growth is only material – *chrematistics* in Aristotle’s terms –, that is, accumulation of money, goods and services. But this is nothing but a sort of an illusion, which does not become true by repeating it endlessly (see Gallegati 2015). Growth is indeed a multidimensional concept, which affects several aspects of the life of humankind: the availability of a healthy life, the chance of enjoying nature, a good education, social relations and security as well. The need to go beyond GDP is established and the literature abounds with indexes that supplement the GDP or “replace” it with composite indicators. Politicians will follow: hopefully not as the crowd in Italian religious funeral processions. Although infinite growth – in a closed system – is impossible, mainstream economists “theorize” as if it is not true, thanks to their faith in innovations and productivity. Technology is only a part of the story, though. Legal institutions and law are necessary, as emphasized in the non-mathematical growth approach by Abramovitz-Fuà, speaking of *social capability*. To have a sustainable economic growth, it says, this has also to be environmentally and socially sustainable. Which overcomes the problem of the short time of the reductionist approach; therefore concepts

such as “property rights” over nature will be replaced by the concept – of a longer-term kind – of “common goods”.

Is GDP something more and different than an economic index? Is it able to tell us, albeit crudely, something about well-being? My answer is negative: if we want to live well, we must not follow the “instructions” of GDP. In this sense we must free ourselves from the myth of endless economic growth and understand that welfare is a holistic concept, not a market value as expressed by the GDP. This is the meaning of the idea of *a-growth* (Gallegati 2016).

The very idea of GDP assumes that there are in fact in front of us an infinite variety of needs. Thus the production of goods and services increase the product to gradually meet a greater number of needs. But then if there is an increase of “induced needs,” to satisfy them one needs to produce more; at the same time, as technology increases, employment decreases (and with it the aggregate demand, given that machines do not consume). In this way, however, a vicious circle sets up. If new needs are not invented there will be no new demand and new jobs. Since, however, resources are limited, this is a barrier to infinite growth that forces us to imagine a production without passing our life in the search for greater GDP than that for greater prosperity.

Alongside the review of the idea of GDP as a measure of our lives, we are accompanied by the search for welfare measures and – argue CM – an ecology of the law that recognizes the interactions between humanity and the environment. GDP derives from the market, sometimes it is useful to remember, and it is only a part of our lives. The motivations of those who believe that GDP is a measure, however approximate, of well-being are in a sense circular because there exist a number of needs and the level of well-being depends on the ability to satisfy them through goods; because needs are fulfilled through goods and services the more the GDP grows, the more these needs are met. Of course, there is much more beyond this simplistic worldview. Although there is a set of primary goods, new needs are constantly being added. In short, GDP is a number, but it is not neutral and valid for every season, but different according to different countries.

GDP per capita is often used as an indicator of a country’s standard of living, and economic growth as an indicator of its improvement. It has become common practice to judge whether one country is better than another based on the level of income per capita. In this way, the GDP growth rate was considered as an index of a country’s economic health, while at most it can be considered as only one of the indicators of a country’s economy. When we use the GDP as a measure of our lives (Stiglitz, Sen, & Fitoussi, 2010), we make a series of mistakes. There are in fact several types of problems relative to GDP.

Revisiting the concept of the GDP as a measure *tout court* of our lives – and here comes the second point, the semantic one – goes hand in hand with a search for well-being measures that should lead us from “living to work and consume” to *buen vivir*. The GDP derives from the market which, it is sometimes useful to remember, is only a part of our life. The motivations of economists who believe that the GDP is a measure, albeit approximate, of wellbeing are in a sense circular as they argue that a series of needs exist and the level of well-being depends on the ability to satisfy these needs with goods; because our needs are satisfied by goods, the more the GDP grows, the more these needs are met. Obviously there is much more than this simplistic view of the world: even if a set of primary goods does exist, new needs are constantly being added. GDP is a number, but it’s not neutral, nor does it hold true for every season, and it may differ significantly across countries.

GDP is not only a product of statistics, but it has very deep connections with the theory of growth. Being well integrated with the traditional theory, it is very technical and formal, without any anchoring to the moral sciences (in contrast to the approach of the economic policy of the classical school). This is to say that GDP is “neutral” index, a touchstone, a natural result of the system from the point of view of economic policy, this means that a model is suitable for all countries and historical periods, since maximizing profits means maximizing GDP, i. e. maximize welfare.

The problem that CM emphasizes is that we are applying long-term Newtonian logic issues, which should instead be addressed through holistic tools and networks. In particular, in economists’ jargon, macroeconomics determines microeconomics through networks. The social network is in fact a network of communication and knowledge where the individual exists only in interaction with each other, that is, in networks. So it is hard to imagine the existence of a bank where the information is perfect and there are no agents who ask for credit. If future is risky (that is, computable as the outcomes generated by a roulette) and not uncertain (as the possibility of a world war in ten or twenty years from now), insurance is possible. This is why general equilibrium theorists argue that there is not room for money and banks in their model.

The dream of social science, of building robust frameworks allow prediction, is shattered by the absence of statistical regularities, in phenomena dominated by persistent interconnectivity. Absent stable mean and finite variance, the probabilistic assessment of individual outcomes becomes much more difficult. This point reflects the more pervasive and structural issue of *non* linearity and emergence in complex systems. Again, if it is not possible to know the likelihood of one event, we cannot apply statistical approaches to reduce the economic system through a mathematical model.

The axiomatic and reductionist mainstream economics tells us that modernization and growth are measurable through money and prices, putting aside any nonmonetary human values (see again the highly valuable work by Biondi, 2011). Should we be like human-hamsters working to consume more and more to participate on in the process of accumulation and consumption? What remains to be hoped with the authors is that the revolution of complexity arrives finally to the social sciences stretching to the horizon and the long-term consequences of our actions, as if we actually care about the future.

If nature were a commons would the homo economicus be a rational agent dropped in an evolutionary trap or an ignorant pedantic? CM wrote a book that some will consider, rightly, subversive. It points to the same revolution that the holistic, complex approach suggests by decoupling the economic process to integrating the web of life of the nature in law and economics.

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