

Dodgy Analogy

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Cornelius Castoriades was a tough-minded activist and intellectual who, under pseudonyms like Chalieu and Pierre Cardan, wrote for the group Socialisme ou Barbarisme which—in the 50s and 60s—theorised and gave encouragement to revolutionary notions of workers' self-management, organisation from below. (See Interview in Variant 15 Volume 1). Like many others he withdrew from active politics in the changed circumstances, the defeat post-1974, but did not in any way 'sell out', even as a respected academic on the 'socio-philosophical circuit'.

*In the late eighties what has variously been called Chaos, Complexity and Emergence theory had come to be a big player in 'social' as well as natural sciences. Initially it looks sympathetic, with its emphasis on organisation from the bottom up, but Castoriades had the bullshit-detector of tough-minded people and wrote in *Done and to be Done* (1989) "The hive or herd are not societies", this when the hive was such an important analogy for Complexity theory. As its populariser (and Wired magazine editor) Kevin Kelly puts it: "The marvel of 'hive mind' is that no one is in control, and yet an invisible hand governs, a hand that emerges from very dumb members." Castoriades' wariness of such stuff, he having been a populariser of notions of self-management, was clearly a threat to its ideologues. Thus at a conference of the Complexity Group at the LSE in June 1997, he was singled out to be patronised by one Gunther Truebner: "At a global level, the unpredictable dynamics of autopoiesis argues against the unrealistic view of those like Castoriades who believe that it is possible to move world society in a desired direction via deliberative global democratic process."*

Castoriades' wariness comes from a mistrust of the use of natural science analogies in the world of human relations, analogies which seem always to have the same result and perhaps, who knows, the same aim, that of making ahistorical assumptions about human society. In the language of structuralism and post-structuralism, the signifier is not respected for what it is and so can be used in an ideological and often far-fetched manner to say something about the signified, or rather to shape the signified. Exactly the moment to be wary.

I want to argue that analogies in either direction between the human world and that of natural sciences are a useless hindrance when used from a humanist progressive viewpoint; to be fought against when used to justify inequality and realpolitik; mocked when used as disappointment displacement by 'libertarian' theorists; and the ahistoricism in all three brought out into the open.

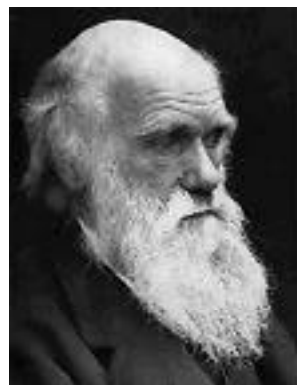
The Sokal affair

On the face of it, this theme, of dodgy analogies, is similar to the Sokal affair, in which the New York physicist in tandem with Jean Bricmont wrote a spoof article with the wonderful title *Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity*, which was accepted and published by the prestigious cultural studies journal *Social Text*. In fact it is this aspect of the business, the misuse of analogy, which has disappeared in the furious argument that has simmered on. Sokal sounds like someone who is very pleased with himself, and the editors of *Social Text* like parody patriarians of the left. No humble pie from them: when discovering that what they had published was a hoax they responded instead: "From the first, we considered Sokal's article to be a little hokey...His adventures in PostmodernLand were not really our cup of tea...Sokal's article would have been regarded as somewhat outdated if it had come from a humanist or social scientist."

The affair then, as a critical citizenry, is not our

business, especially when one sees how much of an ego 'n budget turf war it is between comfortable academics, despite *Social Text's* attempt to garner our sympathy thus: "There is nothing we regret more than watching the left eat the left, surely one of the sorriest spectacles of the twentieth century." Its supporters make valid points about the undermining of objective peer reviews in scientific journals under pressure from corporate research financing and that in general science does not take place in a historical or cultural vacuum, which is in part shown up by the back and forth of misleading analogy. However the journal's leading defender, Stanley Fish, himself falls back on a dodgy analogy well-used by social reality philosophers, i.e. that baseball is socially constructed and is also real. All very well, but if it were decided tomorrow that baseball was pointless it would cease to be a social construct, but what of the physical world?

The claim of Fish and *Social Text* is presumably that examining the social constructs involved in science is in itself a democratic project; that it puts questions in to beyond-question natural science. For such a project however, clear popularising of what scientific work is being done, plus investigations of what scientific developments are being followed and what not followed, and who is financing and patenting such work, is much more to the point.



Darwinian theory

The analogies taken from science and used in the most racist and inegalitarian manner are clearly those taken from the Darwinian theory of evolution. That it is his version that should set the tone and change the world, that and its timing, is also evidence of the theory as in part a 'social construct', one suited to the dominant culture of a recently industrialised and colonising Britain. It doesn't need *Social Text* or its theorists to tell us. Sinyavsky may have a spiritual axe to grind but is not far off when saying that:

"the theory of evolution has a hint of parody about it and arouses the suspicion that it originated under the influence of the factory, which inspired the basic analogies and suggested the idea of progress as a world-wide conveyor-belt." (A Voice from the Chorus).

Neither Darwin nor the geologist Lyell can fail to have been influenced by the Industrial Revolution in which small, imperceptible changes had made a revolution, and created markets in which a failure of flexibility, a failure to adapt were punished by market forces.

Analogy then is used both ways, in undeclared fashion in some scientific theorising, and then back again into the social world. Neo-liberalism/old *laissez faire* has never ceased to use Darwinian analogy: survival of the fittest as smugly articulated by US Treasury Secretary O'Neill for example at the World Economic Forum of 2002.

Or yet another management guru book this year from Seth Godin in which he argues that what biology has learned by studying the struggle for survival 'can inform us as we think about the struggle for products for market share; firms for talent; countries for tax base; or start-ups for venture capital'. The firm for political influence and public money might be closer to the mark! This follows on directly from the Social Darwinist, Herbert Spencer who coined the 'survival of the fittest' phrase. He was worried by the domestic British underclass, and in modern neo-liberal fashion (or Manchester liberalism as it was then called), opposed state intervention even in the matter of sewage. Using Darwin he could rationalise the extermination of that underclass if, for example, cholera could be kept to the ghettos.

What is historically perverse, and remains so, is that the other prop of capitalist economic ideology, that is neo-classical economics which emerges soon after Darwin, uses a completely different analogical framework from natural sciences. As Stephen Toulmin has pointed out, late 19th century economists sought to become the Newtons of the human sciences and elaborated their neo-classical equilibria in supposed imitation of his *Principia Mathematica*. Extraordinary how they got away with it when the 2nd Law of Thermodynamics and the mathematics of Poincare (these both before Quantum Physics) clearly implied how limited the Newtonian model was. An anti-temporal model which can stomach neither just Marx, nor Adam Smith.

Spencer was not interested in colonies or colonisation but an inhumane and truly repulsive racism which was present in the Darwinian view of the world attracted others. It has been used by racists ever since, and is also dependent on two-way analogy. 18th and 19th century scientific exploration was driven largely by economic and colonial ambitions with a fundamentalist edge to it, that is for European men to show their own superiority to themselves, and thus justify their entitlement to the rest of the world. Primitivist people like Darwin who, when first encountering naked Fuegians on the Beagle voyage wrote: "I could not have believed how wide was the difference between savage and civilised man. It is greater than between a wild and domesticated animal."

The analogy between men and animals, types of men, gave credence to rationalisations of a genocidal process of plunder. It is said that Alfred Wallace who had also hit on the idea of natural selection, 'was convinced that the wonderfully intricate ecosystems of the tropics were not made for man alone and that he loved their native inhabitants whom he found more graceful, ethical and democratic than Europeans. It was not however his version of evolution we have come to know, it is Darwin's who, in 1859 in a letter to Lyell, thought that the process of natural selection might also occur between the human races, "the less intellectual races being exterminated." It is said that he was horrified by first hand experience of racist genocides in Argentina and Tasmania but it obviously was not enough to deter him from going public with the thought of the letter in *The Descent of Man* (1871): "At some future period not very distant as measured in centuries, the civilised races of man will almost certainly exterminate, and replace throughout the world, the savage races." With such a lead it was hardly difficult for monstrous theorists like Robert Knox to rationalise the genocides that were to happen on an



even greater scale in Africa, and to do it without reference to the civilising mission of Christianity.

And so it goes on, 'Social Darwinism, only nowadays it's worse, with the Spencerian and racist strands tied together. In the face of all the evidence provided by many geneticist like the scrupulous and tolerant Reith lecturer Dr Steve Jones to the contrary, people like Charles Murray and his Bell Curve still now have not just credence but an impact on social policy with theories which invariably claim inherited differences in intelligence on racial grounds where the so-called underclass is also racially defined.

Its impact has been on welfare policies in a period when capital has decided it can no longer afford to be decent and more specifically been both a pre- and post-event rationalisation of the truly awesome number of Afro-Americans in prison, and the even greater number otherwise restrained by the US legal system.



Marx and the Darwinian

In the light of all this, it is sobering that Marx would have liked to dedicate *Capital* to Darwin, and that it was only Darwin's bourgeois fear of being associated with such a disreputable person which prevented it. One can see the attraction for Marx; Darwin as the demystifier, the revolutionary with a template of progress, a scientific template, whereas in fact it meant that *time necessarily involving change* could be restricted to the bio-geological sphere. Ironies abound here because like Sinyavsky a hundred years later, Marx wrote privately of how Darwinism was Manchester liberalism writ large. *History* in effect was allowed in the biological long term, but even then it derived from the existing conditions of capitalism.

Looked at now, the desire of Marx to create a scientific socialism, has become a terrible burden, one which made the rigidities, distortions, stupidities and crimes of Marxism-Leninism seem like continuity from Marx himself. Looked at now, it is a shame how notions of historical laws like falling rate of profit, have obscured the complex description of the tendency of the rate of profit to fall and its countervailing tendencies, one which illuminates much of what is happening now in the 21st century as does the analysis of equalization of rate of profit. I suspect that in the case of Marx the need for it to be scientific socialism is partly because at the time it was de rigeur if one was to be taken seriously but also to bolster the spirits with the thought that one day a humanist communism would have to come about.

The increased emphasis on scientific socialism is normally blamed on Engels and his *Dialectics of Nature* but it is not justified, it was a joint project. He has though been accused by hard-line ecologist Robin Jenkins of deliberately repressing the significance of the 2nd Law of Thermodynamics because he well understood that this clearly implied limits to the economic growth that would render capitalist property relations untenable, and limits to the general idea of progress.

Certainly the Christian intellectual Dean Inge welcomed entropy on precisely this score, but at the same time felt "that the sum of things should end in nothingness is a painful stultification of our

belief in the values of life." Ilya Prigogine on the other hand suggests that the irreversibility implied by the 2nd Law strengthened 'the idea of an historical development of nature', the very idea that had attracted Marx and Engels to the Darwinian theory of evolution.

The 2nd Law which states that in all transfers of energy, energy is lost, and disorganisation increases to the point of entropy has been used analogically in the service of many ideas beyond its scope. I do not believe it should be used at all in relation to human social relations whether 'progressive' or otherwise. It is this law which undermines the Newtonian equilibria by asserting the irreversibility of some processes, and thus the 'arrow of time', but this 'historical' natural law is still just that, a natural law.



Quantum Physics

Some forty to fifty years later Quantum Physics knocks away the props of equilibria some more. It was, and remains, exciting stuff, but it too produced its analogisers which are taken apart in a wonderful book of the 1930's, L. Susan Stebbings' *Philosophy and the Physicists*. She too is excited, and as a democrat committed to a well informed and critically intelligent public: sympathetic to popularised accounts of Quantum Physics she is sharp on analogies which far from clarifying, confuse or are misleading.

This often took the form of anthropomorphism (and still does, 'nature does this, and nature does that') and at other times is used to justify a form of philosophical idealism. "It is odd," she says, "to find the view that 'all is mysterious' is to be regarded as a sign of hope. The rejection of the 'billiard-ball view' of matter (i.e. Newtonian-based false analogies of the atom with astronomy) does not warrant the leap to any form of Idealism." Aware of this she notes that Lenin too was worried about the new physics on precisely this score but is somewhat sceptical as to his understanding it, and his ideological methodology. Another of those ironies that is bound to arise when leftists tangle with natural sciences as a source of ideology, is that Anton Pannekoek in his "Lenin and Philosophy" argued that Lenin himself is philosophically an idealist.

Stebbins is especially stringent on two points: an intellectual slither that allows the concepts of Quantum Physics to be applied to the everyday world; and the way analogy dressed as argument was being used to assert 'free-will'. Both of these have re-appeared to lurk in the dodgy analogies of computer age theorising wherein almost anything

that is non-Newtonian, that is 'mysterious', must be good. On the first point she quotes Ernst Zimmer: "A table, a piece of paper, no longer possesses that solid reality which they appear to possess; they are both of them porous and consist of very small electrically charged particles which are arranged in a particular way." If that is the case, as she asks, what does solid mean if nothing is solid?

In the matter of free will, it was true that a previous scientific determinism said it was an illusion, but to make of quantum physics and especially Heisenberg's Uncertainty Principle, that cause and effect are out of the window and the electron 'free to choose', and then from this make it a safeguard of human freedom from science is not sustainable... "Either way," she says of pre-and post-Quantum Physics, "this use of physical science to countenance a theory of interaction of humans is unwarranted." When cause and effect are out of the game in the social world we are on very dangerous ground as we can see for example in the US attitude to Kyoto.

Given this history, it is not altogether surprising that it is this physics which Sokal used in his analogical spoofs: asserting for example that Lacan's psychoanalytic speculations have been confirmed by recent work in quantum field theory; that Quantum Physics is consonant with 'postmodernist epistemology'; and then making a more inclusive pastiche on the same lines held together with words like nonlinearity, flux and interconnectedness, with Deleuze one of his targets. These are the buzzwords of the computer age theories of Chaos, Complexity and Emergence in which the non-localised phenomenon of QP has also been prominent, and which yet again cannot resist analogies with the world of 'human interactions'.

The Selfish Dawkins

Other theorising with analogical overtones have also been given a new lease of life by the computer age. Here I am thinking especially of Richard Dawkins, his selfish gene and his memes. Dawkins is an inveterate maker of analogies between natural sciences and the social-political world. In the 1989 edition of *The Selfish Gene* he starts to apologise but cannot help still defending the analogy of 'the working people of Britain' as individuals not understanding the need to restrain their greed for the good of the whole group. If it was wrong it was because "actually it's best not to burden scientific work with political asides at all." Why? Because they become dated, a comment which then allows him to turn this apology into an attack on J.B.S.Haldane.

There is also a kind of heroic masochism in his insistence on the primacy of the gene and its replication, with the species (including humans and therefore himself) having the role merely of its carrier. Replication of code being at the centre of this model, the computer age provides an analogy-become real, since it is also inherent to its technology. Thus he now writes of the possibility, that in his writing slides into likelihood, of the self-evolution of software code. With a generalisation breathtaking in its pomposity he writes, "Life is just bytes and bytes and bytes of digital information," just as for Zimmer it was electrically charged particles. At the same time he takes the same model into the social world with the notion of memes, 'media viruses', or as Dawkins puts it, "non-genetic replicators which flourish only in the environment provided by complex communicating brains." "The apparatus of inter-individual communication and imitation" is then analogous to the gene's concern with its replication. But the gene and meme must also have a phenotypic effect that allows it to survive into the next generation. On the face of it, this seems to depend on the discredited Lamarckian notion that acquired characteristics can be passed on to others or

genetically to the next generation, a theory which caused havoc to Soviet farmers following Lysenko, and has come up again recently in the Motorola-financed research of Sadie Plant which purports to show that Western teenagers sending text messages have developed more flexible thumbs, and that this is, or rather will be, evolutionary.

Allowing Dawkins his meme for the moment, he tells us that whether it is an idea or a tune, it must be popular. "If it is a political or religious idea, it may assist its own survival if one of its phenotypic effects is to make its bodies violently intolerant of new and unfamiliar ideas...If the society is already dominated by Marxist or Nazi memes, any new meme's replicatory success will be influenced by its compatibility with this existing background." In which case, we could well do without memes altogether since they would have to be both conformist and intolerant to successfully replicate. Fortunately we are doing without them, these analogies-made-real. It also implies, the meme as idea, a passivity on the part of receptors. It is this characteristic which it has in common with some of the ways in which Chaos/Complexity/Emergence theory has been used. "The marvel of the 'hive mind' as Kelly put it, "emerges from very dumb members."

Spooky butterflies

If Darwinian theory has the whiff of the factory about it, Complexity theory has not just the whiff, but has been enabled by the number-crunching capacity of computers and their networking facility. In one important respect it has also followed the phenomenon of Quantum Physics that Susan Stebbing did not touch on, that is the concept of non-locality, what Einstein called "spooky action at a distance", whereby atomic particles, widely separated, are somehow in instantaneous contact with each other. Again, it is to be remembered that this is a world of sub-atomic particles, but one can see how the 'butterfly effect' of Complexity theory, must have been inspired by it even if it is not so radical in its implications. Inspired by it and the holistic 'spaceship earth' notion which flourished briefly after the first landings on the moon, until it reverted to the neo-liberal version of globalization.

With the butterfly effect there is still a strong element of cause and effect, even if it is the case that a small cause may have a big effect far away. To be clear here, I have no intention of dissing theories and phenomenon lumped together as New Age, like the ideas of Rupert Sheldrake, the energy emissions of rocks, or those telepathic experiences we have probably all experienced; nor of a holistic view of the world or ourselves. What does need to be looked at warily though is the vague assumption that anything which claims to be non-Newtonian or non-reductionist, de-centralised, or holistic is good in itself. Not all management gurus are Darwinian, management guru Richard Pascale has urged a "holistic" approach to management and Tom Peters, management evangelist entitled one of his recent

best-sellers, "Thriving on Chaos".

In the case of the 'butterfly effect' it's as well to remind its theorists that BIG causes in one part of the world have even bigger effects in other parts and that these are located in fixed positions, with the underdeveloped world invariably the passive receptor of mostly negative effects caused by 57 varieties of self-interest in the first world. Since they believe that moving "world society in a desired direction via deliberative democratic process" to be a naïve illusion, they do not welcome this reminder. It is also not accidental that Castoriades should be in their line of fire, he as a theorist of workers self-management, decentralisation of authority and organisation from below, for on the face of it complexity theory seems to be on the same side so to speak, holding out the same promise. It is not the case.

Out of Control

It is perhaps unfair to pick on Kevin Kelly and his book *Out of Control*, given that he is a magpie of across the board natural sciences examples used in Chaos/Complexity/Emergence theory, but in the end he is important because he can't help but give the game away. He rushes the reader through a series of analogies using as his connector the phrase, 'very much as in', from hive, to whirlpool, to the brain, and to a colony of ants. In the chapter 'Machines with Attitude', we get a tour de force of flim-flam, jumped from quote to idea and back again. He begins with a quote from the philosopher Daniel Dennett, "The idea that the brain has a centre is just wrong. Not only that, it is radically wrong." At this point one is already wondering where this is going, given that Dennett is also a fanatical supporter of Richard Dawkins and ferocious attacker of holistic biologists like Richard Lewontin. His being used by Kelly is an early signal that despite the apparent complete difference in outlook there may be something similar going on between the 'determinist' Dawkins and Complexity theory, that is an underlying notion of human passivity.

From Dennett he moves to saying that the collapse of the USSR is solely ascribable to the instability of any centrally controlled complexity; to an approving reference to 'the bureaucracy of the brain'; to the notion that "there is no 'I', for a person, for a beehive, a corporation"; to the unacknowledged analogy from Quantum Physics that it is likely that intelligence is a probabilistic or statistical phenomenon. Suitably softened up from this scatter gun, we are then hit by Roger Brook's notion (one he is developing technologically) that "You can build a mind from many little parts, each mindless in itself." This is just one version of the essence of Complexity/Emergence

theory, that is 'the generation of higher-level behaviour or structures within systems made up of relatively simple components'. And it is attractive with its promise of the non-hierarchical, and one can see that the wonderful internet and its World Wide Web is a realised paradigm. But if it goes further, and the web itself is the analogical basis for a whole view of the world, it becomes a

rationale for the privileged of the world, when there is no one for the rest of the world to negotiate with for something better for themselves.

Writing of Roger Brook's use of small robots he says "With no centrally imposed model, no one has the job of reconciling disputed notions; they simply aren't reconciled. Instead various signals generate various behaviours. The behaviours are sorted out (suppressed, delayed, activated) in the web hierarchy of subsumed control." Then in a brazen piece of reader flattery and final candour he says, "Astute observers have noticed that Brooks' prescription is an exact description of a market economy." Brooks? The market economy is also where Kelly's hive analogies take us. It could equally well be von Hayek and his capitalist utopia of wholly rational consumers and their preferences; their simple but rational decisions making an economy that runs itself.

Kelly of course has to ascribe it to someone else, Roger Brooks, because at the same time he has a self-image as the rebel, the heroic pioneer. This romanticisation seems to be common to the users of dodgy analogy. It informs the tone of Richard Dawkins and those other serial analogisers, Deleuze and Guattari, the first of whom was outed for dodgy analogising by Sokal, but who would seem to be the complete antithesis to neo-liberal ideology given that they are 68ers who would certainly have been sympathetic to Castoriades' ideas in the days of Socialisme ou Barbarie. In their understandable reaction against the disaster of Marxism-Leninism, the non-hierarchical becomes an end in itself. In their understandable desire to celebrate this quality in the World Wide Web, they have recourse to the rhizome, an analogy taken from plant roots, and this analogy takes the place of argument. They can't stop there either but must then make an analogy out of nomads and create a self-image of the techno-nomad who, ironically is just another variety of elitist vanguard, the outsider variety who, though not a capitalist, is one of the world's relatively privileged.

