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Capitalism and Metaphysics

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PHYSICAL CAPITALISM

Capitalism would on the face of it be seen as integrally *physical*, integrally material. Indeed Marxism -which analyses and in practice is to supersede capitalism- is known as dialectical *materialism* or historical *materialism*. Commodities are physical. The logic of the commodity, of the cause and effect of economic structure on superstructure is modelled on and consistent with Newtonian *physics*. The mechanism of capitalism, the supply and demand, the ubiquitous exchange, is already understood in Renaissance and very early modern Galilean physics. The capitalist commodity is abstract and homogenous: it is interchangeable with a number of different concrete goods, again very much on the model of the atom in physics. The Karl Marx of *Capital*, of *Das Kapital*, thought the laws of capitalism as akin to the laws of the physical and natural sciences: hence Marx's praise for Darwin's *Origin of Species* in *Capital* (vol. 1, pp. 342,372). Indeed *Capital's* capitalism is like a great machine, in which at stake is the reproduction of the total social capital. This is a machine in which the physicality of the means of production engages with the physicality of labour to produce a physical product. Capital in this sense as use-value has an amazing tangibility that is physical. Capital itself is indeed a 'social relation', a social relation that works through the abstraction of the commodity and exchange-value and indeed the becoming abstract and homogenous of labour power and constant capital. Yet the commodity and exchange are constituted in the field of the physical. The physical in Newtonian mechanics is abstract, homogenous and quantitative. There is thus an abstract physicality in Newtonian physics and indeed in Newton's calculus² that fully filters through the nature of capitalism. Indeed it is in perhaps such a sense that we should understand technology as 'second nature'.

If capitalism and the economy are physical then where does this leave that residue of the physical, or better that which transcends the physical, i.e. the metaphysical. How does capitalism stand in relation to metaphysics? For Gramsci for example the superstructure is metaphysical. Gramsci contrasts the infrastructure, the economic infrastructure, which works like a physical mechanism, like a mechanical body with the Geist, the mind, the spirit of the superstructures. Indeed 'hegemony' which is superstructural is essentially metaphysical. Yet with the determination of the economy, and the subordination of superstructures to economic reproduction, the metaphysicality of the superstructures is relegated to a mere function, and

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² In contrast of course, Leibniz's differential calculus is metaphysical.

functionality, in which functional prerequisites are interchangeable, though not reducible to Newtonian mechanical causality. Newtonian these relations still foreground capitalism as physical.³ Similarly in cultural studies and media studies in which the founder, Raymond Williams talked about 'culture and society', or society and culture. Here 'society' is a class society drawn from economic relations of production. In the economy and hence social class on the side of the physical. Culture and Williams was an analyst of culture -taught indeed in the humanities- is surely on the side of the metaphysical. But what counted were social class and the social. This was the differentia specific of Williams's notions. In the end it was the physical that explained the metaphysical: it is the second nature of economy and class relations in society.

This bears similarity to classical sociology, whose physicality is often more Darwinian than Newtonian. Here we have positivism in sociology, i.e. on the model of the physical, standing in contrast to the *Geisteswissenschaften*, the metaphysicality of the arts and humanities, the mind-sciences. And classical, functionalist sociology has distinguished between social norms, on the one hand, and cultural values. Here we have the physicality of norms, which are indeed determinate rules that govern action through bringing particulars under universals. Then there were cultural values, connected to things like language and literature (in a canon) and above all religion⁴ that themselves are functional pre-requisites for the reproduction of society and social norms. Cultural values more interestingly had to do not with the 'somatic' of the social body, but with the equivalent of germ cells, passed from generation to generation. Where norms are abstract and general and public, the germ cells that are values are passed on in private through, not the abstract and general, but the concrete and particular of the family and intimate relations. Yet there is again the primacy of the social or the physical.

In cultural studies and media studies *per se*, we see a window open on the metaphysical in the work of Marshall McLuhan. In many respects it makes sense to speak of two competing tendencies in cultural and media studies, and perhaps in a future sociology of culture/media, of 'Williamsites' against McLuhanites.⁵ Williamsites say culture (or media) and society, McLuhanites says the social is already mediated. Williamsites say the cultural or mediatic

³ Indeed in natural selection, the changing physical environment selects from a mutating species. If this is successful in reproduction, i.e. in preserving its germ cells and germ cell line, then a new species emerges. But a large number of other possible species could have met the functional prerequisites for being selected. The assumptions here are of a certain interchangeability of species. Further the species is not the individual. If the individual is monad the species is atom. The species is somehow primarily extensive and physical. 'Speciesization', or the emergence and origins of species are different than individuation. If the species is physical, the *individual* -we will see- is metaphysical.

⁴ Here classical sociology and especially Weber in identifying the metaphysical with the world religions is paralleled by the thought of Walter Benjamin. Benjamin disagreed with Nietzsche's location of the metaphysical in the aesthetic in Nietzsche's *Birth of Tragedy*. Instead Benjamin located this in the religious. I am grateful to Sam Whimster for discussions of the metaphysical in the context of *The Protestant Ethic*.

⁵ I am indebted to Sarah Kember for this insight.

message is social, McLuhanites that the medium is the message. McLuhan is a metaphysician, privileging the (mediatic-metaphysical) communicant over the (socio-physical) citizen, privileging the light-through of television, computers and the stained-glass windows of the Cathedral over the light-on physicality of cinema, the novel, Protestantism and science. McLuhan as a metaphysician was a not-so-closet Thomist and Aristotelian. His putative technological determinism, his physicalist technology came under the sign of communication. Moreover, in the notion of light-through media, spirit is shining through technology. Thus for McLuhan technology itself is metaphysical. The for-itself of technology may well be physical and determinist, but technology's in-itself would be metaphysical.⁶ This essay, I am afraid, operates under the assumption McLuhan and not Williams was right. Or more precisely the assumption is that Williams was right until about 1989 – about when we can date the definite rise of globalization, new media and the domination of finance, bio-tech and communications sectors in the world economy. After that we need to be McLuhanites. After 1989, capitalism becomes *metaphysical*.

How is contemporary capitalism metaphysical? And indeed what is metaphysics? In Max Weber, at least implicitly there are three -I would say four- main socio-historical epochs. The first is the sort of immanentism of totemic or animist or gift societies: societies of symbolic exchange in which spirit is immanent in nature. The second is the era of metaphysics, in which in the world religions -Judaism, Taoism, Islam, Christianity, Buddhism- spirit moves into a transcendental relation to nature. Nature becomes more or less mechanical, while spirit moves into a transcendental sphere. It is only now that we get metaphysics. We receive metaphysics primarily through Aristotelian substantial forms and Thomist (also Aristotelian) theology. But it is there equally, we will suggest below, in 'Eastern' religions. The metaphysical and world religions, beginning from millennia before Christ through about the Renaissance, mark the dominance of the metaphysical. The Renaissance -and Galileo, Descartes and Hobbes alongside Renaissance perspective in art and architecture- signal the rise of the physical: this of course in a sort of quiet alliance with the Reformation. What is at stake here is atomism, collision, external cause and exchange. This is present in descriptions already by Galileo. Atomism means that things are equivalents, somehow homogenous. There may be many different types of atom. But each contains many things which are equivalent to each other. There is here a physical world of collision and exchange, of cause

⁶ This bears comparison to Heidegger's 'Frage nach der Technik'. For McLuhan, technology's ontological structure, its very Being, is its light-onness is metaphysical. Heidegger said in contrast that there must be an 'Überwindung der Metaphysik'. We agree very much with Heidegger's idea of a search for the being of technology. But what Heidegger calls metaphysical has more in common with what this essay understands as physical. The notion of metaphysics here is drawn from Leibniz in the first instance; then developed through Walter Benjamin's metaphysics of language and Max Weber's sociological account of the world religions. Eminent Weber scholar, Wolfgang Schluchter has understood these world religions as metaphysical.

and effect, of atoms. [The commodity presumes that there is only one type of atom. Atoms are sorts of species. Different atoms have different qualities and extension.] Galileo's influence on Hobbes (as Leo Strauss noted) is well known. Thus the Hobbesian state is dealing with a world of collisions of atoms, those atoms being the subjects of the state. For the purposes of Hobbes, the subjects are identical. They are identical to one another and hence come under a principle of identity. In chemistry we can speak of 100 different types of atoms, with different qualities and different extension. In Hobbesian political philosophy this is reduced to one type of atom. The Hobbesian political being is later, in its assumptions of identity, Rousseau's citizen and the Marx's proletarian. All are atoms, a homogenous mass under the principle of identity. Hence they were in a class, whether bourgeois or proletarian: they were atoms in a class. This is also the logic of classification: the logic of genus and species. Both class and classification, and there can be no class without classification, partake of the logic of atomism, the logic of the physical.

Thus in an earlier physical capitalism there is a logic of the atom, a political logic of the atom. This is a logic of *equivalence*, in which one atom, one citizen, one proletarian is qua citizen, qua proletarian identical to any other. *Metaphysical* capitalism, today's metaphysical capitalism eschews this logic of political identity. It breaks with political identity for a politics of *difference*. This of course is what is described by Hardt and Negri in *Empire* as the politics of the 'multitudes'. But it is also the politics of difference that have been at centre stage for the past decade or two, and addressed at length by writers such as Stuart Hall. This is part of what is at stake in capitalism becoming metaphysical. I will develop below what is at the root of the notion of difference in metaphysics. But let me focus on one more point, it is that perhaps most important is this just-mentioned notion of *exchange*. Already Galileo and early modern physics is speaking about nature, mechanistic nature, eminently physical nature, spiritless nature as a space not just of collisions but of '*exchanges*'. We have here in the notion of the physical, this Renaissance and Enlightenment (Cartesian-Galilean and Kantian-Newtonian) idea of the physical, not just cause and effect, but *collisions*. When the chaos of collisions begins to form patterns and laws, it starts moving into a logic of cause and effect. But we see also another type of order put on the chaos of collisions and exchanges, and this is the state (Hobbes), it is law and the state: it is normative regulation through law and the state (and later the institutions of society). So there are two ways in which the chaos of collisions is regulated and brought under law. The third way has to do with the *exchanges*, whose law is forms in the economy, the capitalist economy. Yet whether it is collisions, or exchanges or politics or economics or science (and science is the guiding light) or even art and architecture, it is equivalents or atoms that are colliding, exchanging, and coming under

scientific laws or the positive law of the state. The third type of chaos, of exchanges, is brought under regulation by the hidden hand of the market. Random exchanges, where A takes the place of B and B takes the place of A, are regularised, and come under law. Physics starts with random exchanges of atoms: economics continues with exchange of goods and services.

In physical capitalism, whether in politics, economics, science, law or social institutions, equivalents or atoms come under law. This is the essence of physical capitalism: the in-itself of a mode of being whose very in-itself is that it has no an-sich. Physical capitalism in all cases is about law and equivalents. Both dominance and resistance in physical capitalism is about equivalence, law and equivalence. When capitalism becomes metaphysical, we no longer have law and equivalents, or universal and particulars, we have in the place of equivalence, inequivalence or difference, in the place of law we have singularity. And inequivalence, difference and singularity are the principle not just of resistance but of *domination* in capitalism's metaphysical era.

SUBSTANTIAL FORM: METAPHYSICS OF SELF-ORGANIZATION

The key to all metaphysics -whether Western or eastern- ancient or contemporary is the idea of substantial form. It is this Aristotelian and Thomist idea (though also Buddhist and Hinduist) idea. Leibniz retrieves this idea in his philosophy of difference, which is also a philosophy of individuation: the philosophy of the monad. It is an ancient idea. It is the idea of the soul. It is the monad in Leibniz's later philosophy and the 'proper name' in Walter Benjamin's metaphysics of language. Let us remember that the physical emerges as the cultural dominant in the Renaissance, the metaphysical, makes a brief reappearance in Leibniz, and as Deleuze notes, the Counter-reformation of the Baroque. The mechanistic atom of Descartes and the logic of Renaissance perspective is in McLuhan's sense very much a light-on notion of the medium, whether it is the light of the disembodied cogito, 'I', focusing on the mechanistic atom or the disembodied eye as the focal point for Renaissance perspective. In Leibniz's return to substantial form there is a light-through or something like a soul, something like mind in all organic matter, and now by extension in also in inorganic matter. This soul is the substance in substantial form. McLuhan's light in the media is the substance of substantial form in which the form is the medium. Thus the counterreformation of El Greco's eerie and as-if-live and illuminated-from-within cityscapes is repeated in

McLuhan's stain-glass Cathedral windows and contemporary media. This contrasts fully with illuminated-from-without Renaissance perspective and Renaissance cityscapes.

If forms, whether atoms or in art or architecture, or media, or even economic goods, are illuminated from without they are forms without substance. In these cases substance-from-without (from the 'I' or the eye or homo economicus) illuminates the forms. Such empty forms include Marx's value-form, i.e. the commodity. Substantial forms are illuminated from within. In substantial forms metaphysical substance inhabits -and animates- physical form. Metaphysical substance gives life to physical form. In the Cartesian cogito (as in Galilean physics) the cogito as substance is external to and throws light upon material, mechanistic and empty form. Leibniz in his monad, i.e. his notion of individual substance puts the cogito or something like mind back into the form. The form comes to life, takes on a bio-graphy of its own. The form is no longer determined from without, it gains determination from its own substance: it takes on its own logic.⁷ Contemporary capitalism in its new media, its brands, its predominance of finance and bio-tech, its logic of design and research-intensive, incessant innovation is metaphysical in this sense. Once research and the idea are within the economy rather than mainly without capitalism become metaphysical. Its forms become substantial. Yann Moulier Boutang speaks of contemporary cognitive capitalism. Once the 'I' leaves its third-person objectivity as disembodies metaphysical substance and enters the very mechanism of capitalism itself, cognitive capitalism can be understood as 'cogito-capitalism'.⁸

According to Aristotle a thing has four types of cause: efficient cause, material cause, formal cause and final (teleological) cause. Material cause is the way to which a thing is determined by what it is made of -say, flesh and blood, wood, clay- man is made of earth for example in *Genesis*. In efficient cause a being is determined by something else acting upon it, like one body colliding with another body in physics and imparting movement to the second body: this is the Galilean and Newtonian sort of cause discussed above. Final or teleological cause is more interesting. This is not just about the determination of an individual in regard to the individual's furthering of the greater glory of God or in harmony with God's will. But it is at stake in Darwinism, in which species is no longer determined by the classificatory logic of genus. But species is something that is originated through the final cause, the teleological

⁷ Physical capitalism features thus determination from without. This has two modes. 1) We have determination of the particular (its movement, figure and spatial location) by an external material cause through the externality of the causation. For example $f = ma$, where an external force determines the acceleration of a body in inverse proportion to its mass. 2) There is external determination via the subsumption of a particular by a universal. By a genus that determines a species, by a universal that subsumes and determines a particular. In 1) and 2) it is a law, or law that is effective.

⁸ This paper would not have been possible without discussions beginning in 2002 with Maurizio Lazzarato. Lazzarato introduced me to monadology. See his recent *Les revolutions du capitalisme* (Paris 2004).

cause of nature. Nature selects. This is interesting to sociologists and social-science more generally, because via Spencer and others, original sociological positivism has more to do with Darwinian as it was teleological cause than with Newtonian efficient cause. Natural-final cause and divine-final cause differ in that God determines the individual, while nature determines the species. The species is a class containing identical 'atoms' with similar qualities, while the individual is different from every other individual. The individual is intensive while the species is extensive. Every individual is unique in the eyes of God, while individuals are part of a species in the eyes of nature. Hence individuation in metaphysics is different to specialization in evolution. Yet a species is not reducible to a Newtonian atom. A species only emerges through fruitful biological reproduction. The origin of a particular type of atom has more to do with the logic of discovery than evolution. Moreover, in metaphysical individuation the individual who are metaphysical is eternal. It is born with Creation and ends only with Annihilation. In Darwin there is emergence in connection with teleological cause. Not original creation. Species come and go, though it is a teleological cause at their origin. Thus teleology is merged with physicality in Darwin. Also there is more a metanarrative to metaphysical final cause than in Darwin. Species come and go. The soul is meant to get better and better, closer and closer to God, more and more rational. Finally of course species work through the reproduction of generations. This is physical reproduction, most often sexual. What counts is a germ entity, it is substance as germ. In contrast the metaphysical individual does not have to reproduce to self-perpetuate. The species for Darwin does not evolve. It originates and emerges but does not evolve. You get evolution with the origin of more complex species. And nature will not necessarily select these. In metaphysics it is the individual itself that evolves.

Most important for our purposes among the four Aristotelian causes is formal cause. This is cause, or determination that resides in the form itself. It comes from the form's substance. At stake is self-organization. But though formal cause is metaphysical, self organization is also physical. And it emerges not in ancient or early modern metaphysics, but in contemporary capitalism in which there is a convergence of the metaphysical and the physical. That is, there is a convergence of metaphysics and capitalism. If today we speak of self-organization, self-forming may be the operative term in metaphysics.⁹ Formal cause is the extent to which beings self-form. Efficient, material and teleological cause have to do with the way forms take their shape mainly externally through their matter, outside force or an external selector. Formal cause is the way our singular substance shapes us. It comes always from within, like the light of contemporary media.

⁹ See Georg Simmel's *Schopenhauer and Nietzsche*.

My point is that today's capitalism is about substantial form, about formal cause. It is that the metaphysical nature of contemporary capitalism goes beyond its immateriality, though it of course includes this immateriality. The main point is that if physical capitalism is based largely on a politics and economics of equivalents, i.e. of atomism and identity, then metaphysical capitalism is structured around a politics and economics, and for that matter culture of in-equivalence. Of the monad and of difference. Physical capitalism's efficient cause is displaced by metaphysical capitalism's formal cause. In formal cause it is the substance that is in the form. It is substance, as it were the form's 'virtual' that is the main source of causation. And this to repeat is not just a principle of resistance in metaphysical capitalism but also a principle of domination.

CAPITALISM: FROM PHENOMENON TO NOUMENON

Metaphysics, from Plato onwards has been about the 'in-itself'. 'Physics' in contrast is about the 'for-itself', or the for-us. Metaphysics has been about the noumenon, physics about the phenomenon. In Descartes there is the metaphysical cogito and physical mechanism of the body, in which of course the latter is the triumph of 'physics' in philosophy. Leibniz as we mentioned gives us a modern metaphysics in his monadology. In Leibniz the physical always follows from, is driven by the metaphysical. Every substance, every monad had a body. Idealism changes this. Kantian critique is the critique of metaphysics. It comes with the post-Newtonian Kant's break with Leibniz. Thus in the Critical Philosophy, metaphysics stays but is reduced to the condition of possibility of the physical. The ideas of reason (i.e. metaphysics) are the condition of possibility of the concepts of the understanding. Things, for Kant, are both physical and metaphysical. As physical they are for themselves or for us. As physical we know them via the concepts of the understanding. The thing as metaphysical is noumenal, it is the thing-in-itself.¹⁰ We cannot know these through the concepts of the understanding. The thing-for-itself is a species, it is an atom; it stands in a relation of equivalence to other things. Reason – in the form of the concepts of the understanding comes to it from the outside as a sort of light-on the thing, as universal to particular, as genus to species. Reason is *in* the form. Literally of the Ideas of reason come to the thing-itself, which is not the species but the individual, the singularity from the *inside*. Reason *infuses* the

¹⁰ Kant's twofold nature of the thing is of course repeated in Marx's two-fold nature of the commodity. Although Marx is inconsistent. When he first introduces the notion of use-value, he treats it in some senses as noumenal. Every use-value is different from every other for example. At other points he speaks of use-value as if it were comprised of units of utility, as sort of precursor to marginalist economics. We will want the Marx of noumenal use-value. Here the good is a singularity. The point is that in today's capitalism it is an *abstract* singularity.

thing. Hence knowing as Deleuze in *Différence et Répétition* suggests in the one case is a matter of explication, in the second a matter of implication. The idea comes from inside the thing-itself. The idea is that bit of the thing that is like mind. It is the formal cause of the thing. It is -as Levinas underscores in his phenomenology- its ontological structure. And this structure of the thing as individual is of course the world of that individual thing. The world of that thing as a set of relations, and as series of relations. The in-itself is thus as Leibniz said - and Kant knew- the sufficient reason of the thing.

The point I am trying to make is that the thing, the object, the good, the service in metaphysical capitalism is an in-itself. The goods and services of capitalism become metaphysical. It is the formal cause of the determinations of the object. It is the principle of the thing -whether this thing is collective political communities or financial products- self-organizing and disequilibriate thing when capitalism becomes metaphysical. In classical capitalism the exchange of equivalents leads to equilibrium (and reproduction), then in today's capitalism the exchange of inequivalents leads to disequilibrium and 'production'. If the understanding, the *Verstand* determines from outside in genus species type classification than *Vernunft* or reason determines the thing from the inside, like the illuminations of El Greco's cityscapes. This is not just 'Deleuze'. It is much Walter Benjamin and Leibniz. It is Niklas Luhmann.

Kantian idealism is idealism to the extent that the metaphysical is at the root, it is the condition of possibility of the physical. Yet Kant is an Enlightenment philosopher, whose first critique limits severely metaphysics's realm. Hegel for his part insists that the metaphysical be realised in the physical, be played out in the physical. It must be grounded in the physical. Thus morality or the moral imperative must be played out in *Sittlichkeit* (convention) in *The Philosophy of Right*. Thus the state must be grounded in civil society, etc. The same is true in *The Logic* and *The Philosophy of Nature*. In each this physical, in which the metaphysical is grounded then sets itself up in opposition to the metaphysical, as does predicate to subject, as does material to substance. This is the 'antithesis' that leads to a new metaphysical. With Marx of course it is the physical that is the driver, the physical and the for-itself, the phenomenon that generates the noumenal of the metaphysical whether it is the state or ideas (ideology) themselves. Indeed if use-value is singular and thus noumenal/metaphysical it is an effect of exchange-value which is the physical, though abstract. Normally the physical is abstract and homogenous. It is as we noted atomistic. Thus in Marx is the noumenal ideas of the superstructure or the noumenon of the state are generated by the for-itself of civil society. Marx's is a dialectic of matter, not a dialectic of substance. And in a dialectic or any sort of Critical Theory -white Kantian, Hegelian or Marxist- there is an ontological difference

between noumenon and phenomena which is much greater than in Leibniz's ontology of difference in which substances have matter as it were glued onto them as exteriors. The point is that in Marx, one abstract physical -the commodity economy or the relations of production in the economy- i.e. in which labour-power and means of production and products take form of commodity and quantitative units of utility to be exchanged as equivalents. This abstract physical generates another abstract physical, this time political, which is social class. There is contradiction and we move to new relations of production in the economy.

In metaphysical capitalism there is instead an economy of difference. There is difference in products, the idea as interior to, infusing production and no longer on the outside in the academy. As research becomes research and development, the idea no longer explicates. It implicates. It is *implicit* in production. It is implicit in the product as part of a brand.¹¹ The relations that these productive forces generate are relations of difference. Exchanges that were once of equivalents, are now of inequivalents. Is the market the best way to understand this? Or is some notion of co-evolution? Or must markets be reconceived as co-evolution? Have markets changed? Co-evolution is not system and environment as might be a functional, sociological explanation of markets, but a system-system relation, in which heterogeneities are exchanged. This was the case in original symbolic exchange. But contemporary co-evolution works a lot differently from symbolic exchange. In the new capitalism, that is surely intensive more than its is extensive, is not, pace Baudrillard, just a question of the play of surfaces and the collapse of the noumenon (and the idea) altogether, in favour of the object. Instead it is the re-appearance of the noumenon on the surface itself of the object. The intensive can now also be the material. The difference between substance and matter is cancelled. The noumenon is everywhere. Deleuze's deepest noumenon, difference-in-itself as the relation of differential quantitative intensity becomes a for-itself on the surfaces of intensive capitalism. The noumenon, the substantial form, becomes the self-organizing system. It is no longer hidden on the interior. Ontological difference disappears, between noumenon and phenomenon, between phenomenal base and noumenal superstructure. The idea enters the base at the very heart of the commodity, and the commodity is exploded to become something else. That something else is clearly a singularity, a self-organizing singularity. Yet this is a singularity realises or better actualises value and surplus-value. Such a singularity takes on life and is a virtual in its own self-transmogrification. Hence we have literally an economy of virtuals in today's virtual society.

¹¹ Here the brand is a virtual, the substance that generates a whole series of forms.

CAPITALISM BECOMES METAPHYSICAL: MONEY COMES TO LIFE

In Don De Lillo's *Cosmopolis*, Eric Packer is a 28-year-old asset manager in April 2000, the month of the dot.com crash. Eric works in finance, in money. He is speculating during the 24 hours of the novel against the yen. He works in the idiom of finance. Eric, who had read a poem, in which 'a rat becomes the unit of currency', lives in the world of his seamless, hermetically sealed limousine, in a world of finance, of derivatives, in which money becomes a living, breathing, indeed heaving database. Eric lives in an environment of pure abstraction: abstract money, abstract sex, an environment of abstract equivalents.

'He understood how much it meant to him, the roll and flip of data on a screen. He studied the figural diagrams that brought organic patterns into play, birdwing and clambered shell. It was shallow thinking to maintain that numbers and charts were the cold compression of unruly human energies, every sort of yearning and midnight sweat reduced to lucid units in the financial markets. In fact data itself was soulful and glowing, a dynamic aspect of the life process. This was the eloquence of alphabets and numeric systems, now fully realized in electronic form, in the zero-oneness of the world, the digital imperative that defined every breath of the planet's living billions. Here was the heave of the biosphere. Our bodies and oceans were here, knowable and whole.' (p. 24)

What could be more abstract and physical than money? Exchange-value itself is the exchange value of a commodity – be it a consumer product, labour-power or constant capital. Money is what mediates between exchange-values. If every use-value has an exchange value, then money is exchange-value's exchange-value; it is instrumental rationality's instrument, hence today's idiom of 'financial instruments' is not misplaced. Productive capital circulates C-M-C', in which M (money) is exchanged against labour-power and constant capital, and C' is of greater value than C. Money or financial capital circulates M-M', without the mediation of anything like C, the commodity. The commodity is two-sided said Marx, the two-fold nature of the commodity: on the one side concrete and particular, i.e. use value, on the other abstract and general, exchange-value. Money however is only one-sided, it is never concrete and particular: always universal and abstract. Money is the universal equivalent. For Marx all commodities are particular equivalents of money. That is

because all other commodities are use values too. Money's use-value is its exchange-value or how it functions in exchange. Without money we do not have exchange of equivalents on markets. On markets what happens is not that commodities exchange but money exchanges for exchange-values of particular equivalents. Money exchanges for particular equivalents. Commodity A and commodity B do not exchange places but money and commodity A change places. And commodity A becomes an equivalent because of money. In the absence of money, it is a particular inequivalent, i.e. not a commodity at all. Money converts use-values (as concrete and particular) into exchange values; it converts monads into atoms; it converts singularities into commodities. And commodities are at the same time monads and atoms; intensities and extensities. As Leibniz says every monad has a body. Except for money. If money cannot be exchanged it is a bit like yesterday's papers: without use-value. It is the commodity that is never a singularity. It is arguably the only thing whose in-itself is a for-itself. It would seem the only being, whose intensity is extensity. The three classic media are language, money and the media of communications themselves. Language's in-itself as Walter Benjamin noted was the religious, the Adamic language of Paradise. That is language's in-itself is the symbol. Its for-itself is signs. Money's in-itself, as we noted, is its for-itself. Its metaphysics is already physics. As for the media: the television or computer screen, its for-itself is its light-through in-itself. The screen like contemporary capitalism is already metaphysical.

Yet in a metaphysical capitalism, in today's immaterial capitalism money itself is no longer just a medium. It is a product. Banks have turnover, profit, market capitalization. Banking is the largest 'industrial' sector of the FT's (Financial Times) Global 500. 66 of the World's largest 500 corporations are banks. Citigroup is the World's fifth largest corporation by market cap (\$259 bn).¹² Bank of America is the world's tenth largest corporation, HSBC is 11th and Morgan Stanley 16th. What was a medium, and this is also true in the media sector - has become a thing, a product: an instrument in the case of money. We have now financial products. And firms employ ever more mathematicians to develop an ever greater diversity of financial products. This is banking's R&D. We have flexible specialization, post-fordism in banking, in which the labour of design, of R&D of financial products comes to match the labour of production. This is the case especially for derivatives, as now we come to speak of 'traditional' and 'derivative financial instruments'. As Lee and LiPuma note, derivatives are constituted in the idiom of risk. If share prices are a matter of taking bets on the future profitability of a firm, then derivatives, as Linda Davies writes in *Into the Fire* are a question of taking bets on people taking bets. So the exchange-value of a firm is no longer just the

¹² No. 1 is General Electric at \$299bn.

already abstract exchange-value of its assets, of its fixed and circulating constant capital, and the variable capital of its labour force. It is more abstract than exchange value. The exchange-value of a firm now is the sum of a collection of bets on its future profitability. The exchange value of a firm has to do more with capital-markets than product markets. Yet money is becoming increasingly a product. Derivatives -whether futures or options- are yet more abstract than this. They are bets on the sum of other people's bets or just as much hedges – bets placed to minimise risk of people losing from their own bets. More and more, the M-M' of financial risk-markets drives the M-C-M of production. Surely there is risk in productive investment. But M-M' is pure risk. Derivatives are then attempts to hedge the risk of owning things that are subjects to price fluctuations.¹³ Investment in derivatives is this a mode of risk management. Yet they have notoriously susceptible to corruption or financial collapse, for example, the Long Term Capital Management crash in 1998 and the Barings and Enron scandals. The unintended consequences of managing risks are risk creation, thus fitting perfectly the theories of Ulrich Beck. Moreover, attempts at equilibrium push the chronic disequilibrium of today's intensive capitalism.

Yet this hyper-abstraction of market capitalisation and derivatives, one betting on the future, and the other betting on -and against- bets on the future – this abstract physical that is even more abstract than the physical, this hyper-extensity of money is at the same time shot through with intensity, with life, with the metaphysical.

For De Lillo's Eric, money, in its even further double abstraction as data and digitised on a screen, brings into play the life and intensity of 'organic patterns, birdwing and clambred shell'. This money as screen-data is doubly mediated, indeed trebly so as mediated thirdly through the language-exchange of traders (Knorr-Cetina). Yet these 'numbers and charts' he continues are not a question of the alienation, the 'cold compression' of man's 'energy' and 'yearning' into the 'dead and spotless financial markets'. Indeed instead money as screen-data (and here we have the fourth mode of mediation and abstraction, i.e. of mathematical symbols) itself is metaphysical. It is 'soulful' (as monads)¹⁴, and 'glowing' (light through). Yet this abstract cognitive digital is at the same time noumenal as an 'imperative': 'it is the breath of the billions, the heave of the biosphere'. If the media-screen becomes heaving, biological and live in David Cronenberg's *Videodrome*, money takes on life in De Lillo's *Cosmopolis*.

So capitalism, at its most abstract, much more abstract than the commodity, at its most extensive abstract physical is at the same time at its intensive and metaphysical. A doubly

¹³ Derivatives divide in to futures and options. Modern futures markets were originated at the Chicago Board of Trade in the mid 19th century, trading wheat, porkbelly and copper futures. From the 1970s, currency futures have played an important role. To own a future is to contract for future delivery at a specified price.

¹⁴ Even animal monads are souls – Leibniz.

abstract risk-process of M-M', once derivative of the concrete production process C-M-C', is now at centre stage driving the production process.¹⁵ In the FT 500, in the hegemony of market capitalization. In the UK phenomenon, where the finance sector in the City of London is the lifeblood of the entire British economy, and the world's (i.e. London) most thriving labour market. The new capitalism is based in sectors not of goods or even of services but of *media*: of media as screen, as money and as language (education, affect sectors) as genetic code in biotechnology. Yet these very media have become products, have become things in an age when capitalism has become metaphysical.

FIRST ENDING

At the centre of all this is the shift from a physical capitalism, based on external determination and identity to a metaphysical capitalism whose principles are self-organization and difference. Walter Benjamin in a late and indeed very 'physical' and materialist essay 'Über das mimetische Vermögen', wrote about an original mimetic faculty, whose phylogeny derived from immanent principles of magic in which dance and cultic phenomena would, in their nonsensuous similarity, imitate the movement of the stars and the sun. Then there would be a point at which 'the newborn child was thought to be in full possession of this gift (of mimesis), and in particular to be perfectly molded on the structure of cosmic being'. This transmogrification of macrocosm in microcosm was the birth of metaphysics – in which the light, the energy, the life, indeed later the reason of the sun, was impregnated into the microcosm of the now non-sensuous soul, in which each soul different from every other. Metaphysics gave us the God of monotheism who is at the same time light, life, energy and reason. Georges Bataille wrote of the 'solar anus' in which the very lowest, indeed so low as to be extruded in excess is permeated with the light, energy, life and reason of the sun-God. Thus Bataille's friend Benjamin speaks of the profane illumination from the unconscious, from the discarded commodities of capitalism. What Bataille and the late Benjamin were invoking was the becoming-physical of metaphysics, the spiritualization of the base in metaphysical capitalism. In today's metaphysical capitalism, light, life, energy and reason are at the heart of the media and of the economy, and the above-discussed media-economy. Here light, life, energy and reason shine through the intense machinery, and drive the production of economic difference, of the entire self-transgressing network of inequivalent- exchange of the new global order.

¹⁵ I am indebted to Roy Boyne and to Jakob Arnoldi for discussion of the notion of derivative.

SECOND ENDING

Max Weber's oeuvre obsessed with the metaphysical. Weber carried out long studies of the world religions and wrote a detailed *Religionssoziologie in Wirtschaft und Gesellschaft*. Weber -unlike Durkheim- wrote hardly at all about tribalism, about symbolic exchange and magic, or about the gift, animism and totemism. Whereas Durkheim asked how can capitalist (or modern) society be cohesive? Weber was obsessed with the genetic question of the origins of capitalist modernity. Thus Durkheim looked at the social bond in tribal societies and looked for an equivalent in modern capitalism. Weber, rightly more concerned with 'fact', was looking for the principle of emergence of the historical individual that was capitalism. Weber looked at all the world religions, at the range of the metaphysical cosmologies and asked out of which of these varieties of the metaphysical can the physical be born. That is which of these varieties of metaphysics contains within it the germ of the physical¹⁶. His answer was Protestantism. Inside Christian metaphysics, the ideal interests of ascetic Protestant prophets had as consequence the retreat of the sacred and the expansion of the realm of the physical. In this process arise the 'third person truths' of objective investors and the objective scientists that Robert Merton wrote about in his work on Protestantism and the rise of modern science. The Reformation was one early-modern pillar of the Enlightenment. The other of course was the Renaissance. Galileo and Descartes were not Protestants. Thus there is a certain Renaissance ethic at work in Panofsky's *Perspective as Symbolic Form*, where again we see the birth of the physical from the metaphysical and the rise of third-person truths.

The *Protestant Ethic* was about the rise of physical capitalism, i.e. Western capitalism. And western objectivity was conducive to this rise. But when science and for that matter social science become metaphysical, the observer is no longer objective. He/she is embedded in the system. We have observer effects and what Francisco Varela calls first-person truths. First-, and not third-, person truths have from time immemorial and continue to be the paradigm of Eastern and South Asia religions, the religions of India and China. In physical capitalism's linear systems, in which cause was external and reproduction was paradigmatic, Western third-person truths were at the heart of capital accumulation. But now in twenty-first century capitalism, systems come to self-organize, non-linear systems and embedded observers rise to dominate in science, social science and the arts. Could Francis Fukuyama

¹⁶ See Whimster 2004.

be wrong? Are we moving towards a world dominated not by the equilibrium and equivalences of the neo-liberal market, but one in which exchange of inequivalence and disequilibrium will be selected by the increasingly global environment? In such an age -as economics becomes metaphysics- capital will accumulate in the East.