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COMMENTARY

A Fundamental Agreement: The French Presidential Elections

Colin Falconer 2

ARTICLES: MATERIALS & MATERIALISMS 1

Diderot's Egg: Divorcing Materialism from Eliminativism

Isabelle Stengers 7

Going into the Mould: Materials and Process in the Architectural Specification

Katie Lloyd Thomas 16

Clouds of Architecture

Mark Dorrian 26

The Inorganic Open: Nanotechnology and Physical Being

Nathan Brown 33

REVIEWS

Eugene Thacker, *Global Genome: Biotechnology, Politics, and Culture*
Rishab Aiyer Ghosh, ed., *Code: Collaborative Ownership and the Digital Economy*

James Tobias 45

Iain Hamilton Grant, *Philosophies of Nature after Schelling*

Dustin McWherter 49

Alberto Toscano, *The Theatre of Production: Philosophy and Individuation between Kant and Deleuze*

Iain Hamilton Grant 52

David Cunningham and Nigel Mapp, eds, *Adorno and Literature*

Matthew Beaumont 55

Eva Geulen, *The End of Art: Readings in a Rumor after Hegel*

Jarkko Toikkanen 57

Henri Lefebvre, *Critique of Everyday Life, Volume III: From Modernity to Modernism (Towards a Metaphilosophy of Daily Life)*

John Roberts, *Philosophizing the Everyday: Revolutionary Praxis and the Fate of Cultural Theory*

Gregory Seigworth 59

OBITUARIES

Jean Baudrillard, 1929–2007

Richard J. Lane 61

Seduction, Death and Dandyism

David Macey 64

Philippe Lacoue-Labarthe, 1940–2007

Christopher Fynsk 67

A fundamental agreement

The French presidential elections

Colin Falconer

After twelve years of a relatively weak right-wing presidency under Jacques Chirac which saw several waves of mass struggle (beginning with the public-sector strikes of December 1995), a five-year period of cohabitation with Socialist prime minister Lionel Jospin from 1997 to 2002 and, more recently, huge gains for the Socialist Party in local and regional elections, Nicolas Sarkozy's victory marks a new and more serious attempt to implement neoliberal policies. For some, such is the scale of the defeat for the Left that a new epoch has begun. For left-wing anthropologist and political activist Alain Bertho, for example, the election marked 'something radically new and probably irreversible, an "event" and not an "accident" ... a new conception of the State'.

It would be easy to conclude from such writings that the end for the Left is nigh – though that is certainly not Bertho's intention. Predictions of doom are indeed common in progressive circles. The danger is that such predictions tend to be self-fulfilling. There is a real risk that demoralization of left-wing activists, internal manoeuvres in the Socialist Party and recriminations between supporters of different radical candidates will create a vicious circle, corroborating the most pessimistic analyses. Sarkozy's success was impressive, as were his first pronouncements and decisions as president: the man himself has proved to be a consummate political 'artist'. There is no doubt that June's parliamentary election will magnify his victory. However, his 53 per cent share of the second-round vote hardly represents a Napoleonic plebiscite. Before French progressives head for exile, we need to examine what happened.

Sarkozy

First, 'the most stupid Right in the world' (as French conservatives themselves often used to say) has finally got its act together, under the leadership of a talented parvenu 52-year-old lawyer. No other potential candidate could claim to have the drive, ability or cross-class support to beat the Socialist Party candidate and go on to implement the ambitious programme of counter-reforms that big business in France has long envied its British counterparts. The party which Sarkozy fought to take over and led into the election, the UMP, has finally become what the French Establishment has long dreamed of – a united party of the Right, going from the populist and nationalist 'hard Right' to the social-liberal Centre.

Despite occasional 'wobbles', as when Sarkozy's so-called 'love affair' with the USA led him to flatter President George W. Bush (hardly the most popular man even in French business circles), the UMP's election campaign was ruthless and well organized.

Most importantly, Sarkozy's brand of populism mixed with deep conservatism enabled him to weaken the far Right and unify disparate groups of voters. The vast majority of those who deserted the Front National's ageing Jean-Marie Le Pen switched to Sarkozy. Remarks such as 'Those who criticize France are not obliged to live here', and his famous boast that he would 'rid you of this scum' (referring ostensibly to young delinquents, but generally interpreted as an attack on young people of black African, West Indian and North African origin), undoubtedly tapped into a deep strain of racism and authoritarianism. In particular, Sarkozy benefited from a solid bedrock of support from older voters, very probably in reaction to the suburban riots of November 2005 and, crucially, a recent incident at the Paris Gare du Nord when hundreds of young people clashed with riot police.

The natural candidate of France's business leaders, with close ties to large capitalist groups such as Lagardère and Dassault, Sarkozy also appealed to many conservative-minded and authoritarian manual workers, including (one suspects) many ex-Communist voters. Identified as the main advocate of deporting undocumented immigrants, he has taken care to make gestures towards established immigrant groups. While defending France's secular republican tradition, he has spoken of the positive role of religion in holding society together and floated the idea of 'positive discrimination'.

Sarkozy's victory was built on a carefully constructed mosaic of social groups with often conflicting interests. In Socialist or Communist strongholds, his speeches were littered with references to working-class heroes such as the early-twentieth-century Socialist leader and martyr Jean Jaurès, and the leader of the 1930s' Popular Front Léon Blum. His emphasis on 'the value of work', his claim to represent the hard-working ('those who get up early' as opposed to those who do not want to work) enabled him to appeal to middle-class voters, the self-employed and private-sector employees on the grounds that he would be hard on 'spongers', public-sector strikers, social security claimants, so-called 'feather-bedded' civil servants and so on.

A key theme of Sarkozy's campaign was an attack on France's much-maligned 35-hour week, not only as a hindrance to business (especially small firms) but also as a restriction on the 'right' of workers to boost their income through overtime – summarized in the slogan 'Work longer to earn more.' When, in the later stages of the campaign, a massive golden handshake to the former chairman of EADS, the Franco-German aeronautical consortium – a company which recently announced several thousand redundancies – caused widespread revulsion and led to walkouts by EADS workers, Sarkozy skilfully responded by announcing that he would introduce a law banning such practices (curiously linking them to the loosening of moral values supposedly brought about by the revolutionaries of May 1968).

The emphasis on rewarding individual effort and allowing 'honest' workers to keep the fruits of their labour by cutting income tax, as well as Sarkozy's promotion of a property-owning democracy, are classic right-wing recipes reminiscent of Margaret Thatcher. Another similarity is the assault on 'progressive' ideas in education and on moral permissiveness, culminating, in a classic case of right-wing *revanchisme*, in the promise to 'liquidate the heritage of May 1968'. His ideal, Sarkozy said, was 'the school of Jules Ferry' – the founder of the French public education system in the 1880s and a leading advocate of colonization. Many teachers, it seems, were open to such arguments, despite their traditional left-wing leanings – helped no doubt by Ségolène Royal's inept remarks about making them work longer hours.

On visits to parts of the South, where support for the Front National is strong and there are many repatriated French settlers from Algeria, Sarkozy waxed lyrical about France's imperial past, including positive references to Bonaparte's Egyptian campaign and the 'enlightened' colonialism of Marshal Lyautey in Morocco. Skilfully playing on the notion of France's 'civilizing mission' as the incarnation of the republican triptych

of Liberty, Equality (of opportunity) and Fraternity, he combined emotional appeals to French patriotism with tear-jerking references to France's role in bringing peace and harmony to the Mediterranean, the Middle East and Africa.

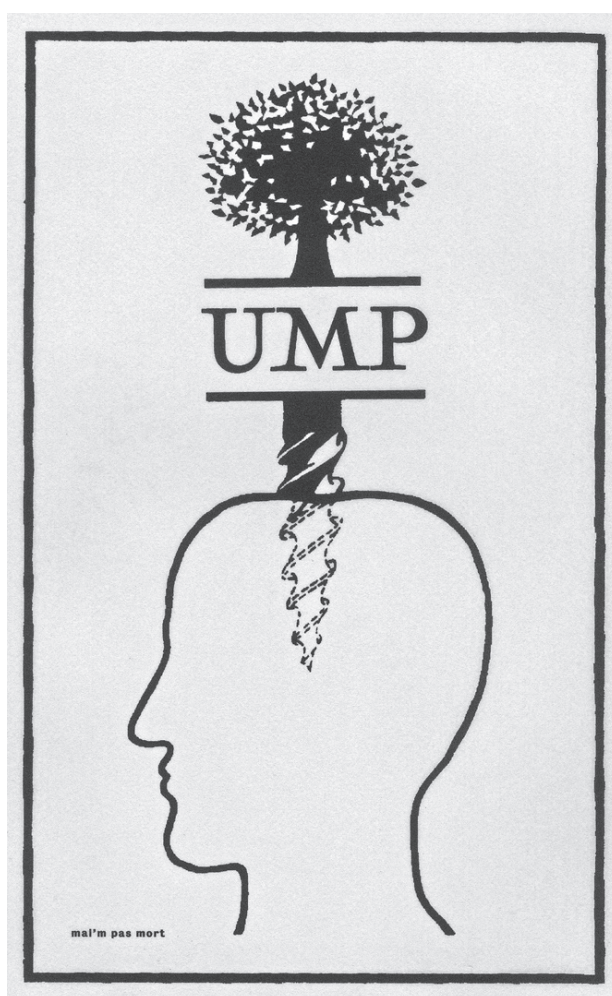
A recurrent theme of Sarkozy's speeches was his opposition to so-called 'political correctness', especially his attack on 'national repentance' – a reference to recent controversies on the responsibility of the French state during the Nazi occupation, the slave trade and the colonial period. Sarkozy's election also marks a break with France's so-called 'Arab policy' in the Middle East. A strong defender of the Israelis, he obtained nearly 90 per cent support from France's large Jewish community, according to one poll.

Following the election, the Sarkozy show has continued. Seven of the fifteen ministerial posts were given to women, including one of North African origin as Justice Minister. Several left-wing personalities were also offered jobs, including Bernard Kouchner, a maverick ex-Maoist, who became foreign minister. Even before the election, various ex-left-wing figures had declared their support for Sarkozy, including André Glucksmann and several representatives of the 'national-republican' wing of French socialism, such as the historian Max Gallo. These new recruits to 'Sarkozyism' have no political base, and have long abandoned any socialist principles they once had (Kouchner was one of the few French politicians to support the American war in Iraq; Glucksmann has been a vociferous opponent of multiculturalism and theorist of 'national identity'). They were enough, however, to create some confusion in the socialist camp and give the government an appearance of what the French call *ouverture* (making concessions to different political forces). Has there been, then, a historic shift to the Right in French society?

The facts do not completely bear out this view. The Left's combined vote in the first round was indeed historically low, the Communist Party is probably clinically dead as a national political force, and the hopelessly divided radical Left managed a little over 10 per cent – an impressive score by international standards but extremely disappointing after the excellent results obtained in 2002 and the successful united-front 'No' campaign in the 2005 European referendum.

However, some care should be taken when interpreting these statistics. The pressure to vote tactically (or 'usefully' as the French say) was immense, leading for example to many radical leftists voting Socialist, and Socialists voting for the centrist François Bayrou. Royal's 9 million-plus votes in the first round already represented twice the total obtained by then Prime Minister Lionel Jospin in 2002. Bayrou's share of the vote tripled from 2002, reaching a surprising 18 per cent. In the second round, many of these voters returned to the Socialist camp, allowing Royal to obtain 47 per cent on a huge turnout.

Unlike Chirac in 1995, Sarkozy was unable to make a breakthrough among the youngest voters. In multiracial working-class areas like the Seine-Saint-Denis, his constituency was often significantly narrower than Chirac's, the main trend being a shift from the Communists to the Socialists and to a lesser extent Bayrou. In the first



round, according to one poll, only 1 per cent of Muslims voted for the UMP candidate, compared with 37 per cent of Catholics. Only 17 per cent of unskilled manual workers voted for Sarkozy in the first round (46 per cent in the second round) and 25 per cent of white-collar workers (49 per cent in the second round), as against 37 per cent of businessmen (82 per cent in the second round). Voting patterns also correlated strongly with income, with higher-income groups voting massively for the Right.

Royal

So, does Sarkozy's victory represent the end of left-wing politics as we know it, a definitive turning-of-the-page in which class interests no longer fashion political allegiances and individualism rules? There was nothing inevitable about Sarkozy's electoral success, and nothing proves that he will have a free ride in the future. Sarkozy himself will no doubt have reflected on, and learned from, the fate of Thatcher, Bush and Berlusconi. Before his election, the new president was far from being a universally popular figure – much less so than the affable, *bon vivant* Chirac. Widely and reasonably seen as power-hungry, unscrupulous and disloyal, his image with 'moderate' voters is still far from positive. He first came to prominence as mayor of the upper-class ghetto of Neuilly in the suburbs of Paris, where he obtained 83 per cent of the vote in the second round.

Most importantly, Sarkozy's policies and postures have frequently produced hostility and accusations of exacerbating tensions. His attitude towards young offenders, his knee-jerk defence of the police and his apparent belief in genetic explanations of various forms of deviance, while undoubtedly popular with many, met with real opposition from social workers, judges and researchers. When 'Sarkozy's police' overreached themselves, protests were not limited to young *casseurs* or radical community workers. In many cases, the opposition of fellow pupils, teachers and others forced the administration onto the defensive and victories were won.

On other issues, too, Sarkozy walked a very thin line. His view that immigrants should accept the values of the host country is undoubtedly shared by the majority, but his proposal to create a Ministry of Immigration and National Identity raised considerable hackles. His publicly proclaimed belief in the positive role of religion in inculcating moral values, combined with his admiration for all things American, as well as his apparent espousal of the idea of 'positive discrimination', exposed him to suspicion of *communautarisme* (a serious charge in France).

Finally, Sarkozy not only defended previous policies on pensions, social security reform, privatization, university reform and taxation – all designed to make workers and students pay a greater share of the costs, free capital for profitable investment and give French industry a more competitive edge – but he stated clearly that he intended to go further. On all of these questions, previous governments have faced massive opposition and in some cases have been forced to make major U-turns. In this election, however, Sarkozy faced no frontal opposition from the so-called 'main' candidates, who were broadly agreed on the necessity for such measures, differing only on the extent and the pace of the 'reforms' and the methods to implement them. Sarkozy, Royal and Bayrou had all pronounced in favour of the neoliberal European constitutional treaty during the 2005 referendum campaign.

Royal's campaign undoubtedly inspired more enthusiasm than Jospin's in 2002. Both Sarkozy's and Royal's rallies were successful, with 60,000 attending the last big Socialist meeting in a Paris sports stadium, but so were Bayrou's, Besancenot's and even those of last-minute candidate Jose Bové. This was a highly politicized election which culminated in a massive turnout of over 80 per cent in both rounds. But Royal's public speaking and debating skills, though by no means ridiculous, failed to match Sarkozy's professionalism and sheer nerve.

The real weakness of Royal's campaign, however, was political. Her main originality was the notion of 'participatory democracy', which led her to hold a series of meetings in which she mainly 'listened' to members of the public. While initially praised as proof of innovativeness and openness, it soon became clear that this would lead to no major policy proposals. In the final confrontation with Sarkozy, her 'openness' could easily be interpreted as 'evasiveness', as when Sarkozy challenged her on reform of the 35-hour week. Whereas the right-wing candidate seemed to have clear ideas, Royal repeatedly answered that she would let the 'social partners' (employers' and workers' representatives) negotiate changes to the law, while refusing to say which changes she thought were necessary. On a series of major issues, Royal often seemed content to reiterate general principles and vaunt the superiority of her 'values'.

On the fundamental questions of economic policy and liberalization, Royal's policies differed little from those of Sarkozy. Indeed, Sarkozy managed to sound more determined to 'save' French industry from threats of relocation than the Socialist candidate. On taxation, Sarkozy attacked the Socialists' alleged commitment to redistributing rather than producing wealth, and his pledge to impose a tax ceiling for high-income earners was a clear enough indication of where his main loyalties lie. However, many voters fell for his arguments about high levels of taxation discouraging initiative and encouraging the flight of entrepreneurs.

The mainstream left opposition singularly failed, then, to counter propaganda in favour of free-market economic policy, not because of poor communication or tactical mistakes, but because it fundamentally shares such assumptions. This adaptation to 'liberalism' can be expected to continue. Royal herself is prepared to mastermind this conversion to 'economic realism', but other leaders, such as former economics minister Dominique Strauss-Kahn, are even clearer in their intention to purge the party of its few remaining references to the need to transform society.

On matters of democracy and political representation, Royal fared little better. Her policies of limiting elected politicians to a single function, devolving more powers to the regions, increasing the prerogatives of parliament, introducing a 'degree' of proportionality to the electoral system and creating popular 'juries' to assess politicians' performance represent very limited democratic reforms of the state. Sarkozy's vision of a highly centralized, even authoritarian, state and his Gaullist view of the presidency, while chilling for defenders of human rights, had greater appeal to French voters tired of unkept promises and influenced by incessant talk of 'national decline'.

On racism and immigration, as on the treatment of young offenders, Royal's more 'compassionate' stance could not hide the fact that here too there was a wide measure of agreement between the two candidates. The Socialist candidate's response to Sarkozy's rhetoric on the subject of national identity was to start singing the Marseillaise at the end of meetings and encourage people to fly the French tricolour. On the question of undocumented immigrants, Royal failed to attack Sarkozy's hard line as Interior Minister head on, and the two candidates agreed that the problem should be dealt with 'case by case'. On voting rights for non-European immigrants, both agreed that there was a case for according such rights in municipal elections. Sarkozy's advocacy of harsher punishment for offenders was matched by Royal's early talk of military-style treatment centres for young offenders and a policy of 'zero tolerance' and restoration of traditional values. Only Royal's commitment to legalizing gay unions (a late conversion, as it happens) contrasted with Sarkozy's more reactionary views.

The problems on the Left are unlikely to go away. Indeed, we may witness further implosion both on the parliamentary and the radical Left (also in a parlous state) in the months to come. But history is not written in advance, and the French working-class and student movements have proved particularly hard nuts to crack in the past.

Diderot's egg

Divorcing materialism from eliminativism

Isabelle Stengers

I have taken the invitation to speak about materials and materialisms* as an opportunity to re-examine the position I adopted nearly thirty years ago now, when writing *La Nouvelle Alliance* (translated as *Order Out of Chaos*) with Ilya Prigogine.¹ In that book, I proposed a definition of materialism from the scientific point of view, and more precisely of materialism as a challenge to the sciences. Materialism, I wrote, demands 'that we understand nature in such a way that there would be no absurdity in affirming that it produced us'. At that time, this sentence was meant only to emphasize that the far-from-equilibrium physics which was presented in that book was a step in this direction, because the possibility of matter spontaneously adopting, far from equilibrium, a collective self-organized form of activity was somehow diminishing the gap between life and non-life.

Today the situation has changed. On the one hand, what I took for granted thirty years ago – that understanding nature is at stake in natural sciences – would now be hotly contested by those who are busy deconstructing and eliminating any connection between the sciences and the claims associated with understanding. But, on the other hand, new and academically more and more powerful protagonists have appeared, who would endorse the demand I formulated, but would give it a rather different meaning. Indeed, they happily equate understanding with actively eliminating everything about 'us' that cannot be aligned with their conception of what matter is all about. This is why – and it will be the theme of this talk – I now propose that the demands of materialism cannot be identified in terms of knowledge alone, scientific or other. Rather, just like the Marxist concept of class, materialism loses its meaning when it is separated from its relations with struggle.

Struggle must obviously be distinguished from the academic war games conducted around so many versions of what can be called 'eliminativism'. In 'Democratic Materialism and the Materialist Dialectic', in *Radical Philosophy* 130 (March/April 2005), Alain Badiou critically associated the postmodern claim that there are only bodies and languages with what he called 'democratic materialism'. I would emphasize that the eliminative claim expressed by 'only' may well sound democratic, in the sad sense of erasing all differences that oppose general equivalence, but it is first and foremost part of such an academic war game. Indeed the ones who make this claim take the classic academic high ground: they know while others just believe.

Against such a 'democratic' materialism, it is tempting to invoke Spinoza: 'We do not even know what a body can do.' But we also have to invoke other, more compromising voices. It is academically fashionable to quote Spinoza today, but less so to recall that both religion and the craft of magic implied some knowledge of what language can do – of the power of words crafted to bless or kill, or save, or curse – of ritual words or ancestral words. Only languages indeed!

However, my point here is not about what we know, and what we do not know, or refuse to know. My point is that as soon as materialism is identified with eliminativism – with elimination as an achievement in itself, accompanied by the proud opposition between those who believe and those who know – the connection with struggle is lost. It becomes a matter of mere rivalry for a very disputed title: who is the thinking brain of humanity? Such a rivalry was sadly exhibited some years ago, in the famous 'science wars', with scientists aggressively reacting against the thesis that science was a practice like any other. Whatever

* This is a revised version of a paper presented to the *Radical Philosophy* conference, Materials and Materialisms, London, 12 May 2007. The articles that follow derive from talks at the same event. A further selection of papers from the conference will appear in *RP* 145.

the dogmatic rigidity of this reaction, it would be a mistake to identify it with a mere defence of their privileges. It may well be that some of the angry protesters would have accepted, as would any heir to Marx, that sciences are practices, and that whatever claims to truth, objectivity or validity they produce, these have to be actively related to those practices. But what scientists heard, and what made them angry, was an attack by academic rivals and judges, claiming that science was 'only' a practice, as 'any' other, implying that those rivals and judges possessed the general definition of a practice.

It is important in this connection to refer to the struggle of radical scientists such as Hilary and Stephen Rose against what they defined as bad science. As Hilary Rose forcefully testified, this struggle was made difficult because their radical allies were not ready to recognize that there are 'bad sciences', as this would imply that there is something like a 'good' science. As if the only opposite of bad is good. As if the point was not to characterize the practices of science in order to resist those who betray the specific constraints of those practices, and also the allies who encourage or take advantage of this betrayal. Today, the relevance of such resistance has become a matter of public and political concern. Together with the wide protest and struggle against GMOs, it is the conception of living beings that dominates contemporary biology that has been turned into a stake in the dispute. The issue is not only the risks of biotechnology, or the problems of bioethics, or even patents, but the very mode of production of scientific knowledge, with the certainties of lab biologists silencing those colleagues who work outside of the lab and ask different and perplexing questions. The great voice of Vandana Shiva is raised not only against biopiracy and the privatization of life forms but also against the abstract definition of those life forms that is exhibited in the project of modifying them at will. It would be a catastrophic mistake, I believe, to recognize the importance of Vandana Shiva's struggle against capitalism, but to associate her protest against the paradigm of contemporary biology with words like holistic, traditional or romantic. Hers is a call not for 'an other science', but for a relevant science, a science that would actively take into account the knowledge associated with those agricultural practices that are in the process of being destroyed in the name of progress.

The thesis I am defending – that materialism should divorce from eliminativism in order to connect with struggle – does not deny that elimination may have been utterly relevant when it entailed struggling against

the allied powers of state and church, for instance. Today, however, the situation has changed. Elimination has become the very tool of power. It is not only a tool for capitalism, but also for what I would call, together with Hilary Rose, 'bad science'.

Physicalism

I will not speak here about physics, even if the point may also be made in that case. I will rather speak about physicalism, as referred to by other sciences, meaning the decided elimination of whatever cannot be connected with a rather vague version of what physicists claim to be reality. Physicalism is a weapon for the new protagonists I alluded to above, who are busy conquering new territories by disqualifying everything that cannot be aligned with what they call 'materialism' or 'naturalism'. Humanities are the target. This is exemplified by Daniel Dennett denouncing what he derisively calls 'skyhooks' – miraculous lifters that he defines as transcending the working of evolutionary processes. In order for those processes to be compatible with physics, Dennett claims, they must be understood in terms of replicators and the competition among replicators, producing what he call 'cranes'.

In order not to confuse academic polemic and operations of conquest with a materialist struggle, it is important to be concrete. Such operations, undertaken in the name of progress and reason, are about power. Take two recent books, Daniel Dennett's *Breaking the Spell: Religion as a Natural Phenomenon* and Richard Dawkins's *The God Delusion*. What is characteristic about such books, and the flourishing industry of evolutionary psychology more generally, is the complete ignorance and contempt their authors entertain about the work of their colleagues: historians of religion or anthropologists, for instance. As if this work, the controversies and learning it has produced, the slow and difficult resistance it entails against the easy temptation of projecting the ideas of the West onto other people (that is, of judging them in terms of this standard) was of no interest at all. Dennett would say that all this work is saturated with skyhooks, as are all cultural studies, because they try and take seriously what should be eliminated, reduced to the working of evolutionary cranes. Further he would argue that it is now irrelevant since the cranes' science is a truly objective science, the universality of which has nothing to do with the ideas of the West. This science will not be stopped by scholarly niceties. Its object is the 'real' human behind cultural appearances, the human defined as the result of the working of evolutionary cranes. 'Alas, poor Darwin'...

Anthropologists or historians of religion and others will protest that this leads us back to the imperialist nineteenth century, but if their protest remains in the academic world, if the situation does not become a matter of political concern and struggle, it will be of no great avail. They will be left to dry up in their libraries, with all the research money and new students going to the new evolutionary anthropologists who travel everywhere in order to submit people to questions the aim of which is to identify universal human affective and cognitive features.

This may be only an academic war, but, like the conception of life forms dominating contemporary biology, as denounced by Vandana Shiva, such wars may also be breaking the ground for other kinds of operation. I am thinking of the future great scientific revolution that is now heralded, the great NBIC convergence – the convergence between Nanotechnology, Biotechnology, Information Technology and Cognitive Science. Such a convergence requires a definition of what is to be conquered in the perspective of the legitimacy of this conquest. That is, it requires an elimination of all obstacles as not really mattering, just like the Indian peasants' knowledge must not matter if GMOs are to prevail. And this is precisely what skyhook-hunting and -slaying is doing. The universal acid of the so-called dangerous idea of Darwin is eliminating, dissolving away, all reasons to resist the redefinition of humans as a piece of engineering that can be understood in terms of algorithms, and modified at will. And those who struggle against this operative redefinition of our worlds will have against them the authority of reason and science.

Now a radical theorist may claim that cultural anthropology or history of religion were of interest in the colonial epoch, but that in the present epoch of global, delocalized capitalism, dematerialization, substrate-independent algorithms and universal flexibility are what matters. The changes in contemporary science would then just be the expression of this transformation. This is a very smart proposition indeed, but it may be a bit too smart, as it first warrants that the one who produces such an analysis is not a dupe, does not entertain any illusion. Nobody will be able to say to him or her 'What! You still believe that...' This is a good position in the academic game, but a position that is not connected with any possibility of struggle. It rather emphasizes the power of capitalism to do and undo, and all the theorist can tell to besieged, angry or protesting scientists is: despair, lose your illusions that what you were doing was worth doing, was mattering. Eliminative materialism indeed.

Like Donna Haraway – who has chosen now to dare to write no longer about fashionable cyborgs but about her dogs, about the creation of a relation that matters between her and the dog Cayenne, with whom she practises agility sports – I am convinced that we need other kinds of narratives, narratives that populate our worlds and imaginations in a different way. When writing about Cayenne and about what she has learned with her, Haraway is exposing herself to her colleagues' derision, and knowingly so, but she is making present, vivid and mattering, the imbroglio, perplexity and messiness of a worldly world, a world where we, our ideas and power relations, are not alone, were never alone, will never be alone. As she recalls with joy and wonder, human genomes can be found in only about 10 per cent of the cells that live in what we call our body, the rest of the cells being filled with the genomes of bacteria, fungi, protists and such. This is materialism of another kind, a kind that may be connected with the many struggles that are necessary against what simplifies away our world in terms of idealist judgements about what would ultimately matter and what does not.

It is in the same spirit that I wish to associate the question of materialism today with the active memory of Denis Diderot, and more particularly with the well-known exclamation that marks his *Conversation* with D'Alembert: 'Do you see this egg? With this you can overthrow all the schools of theology, all the churches of the earth.'

Wit, flesh, blood, eloquence – and polemic

As we know, Diderot is traditionally classified among French materialists who are heirs to Baconian empiricism. It is important, however, not to confuse Diderot's 'Do you see this egg?' with the expression of a Baconian trust in the power of empirical knowledge against theology or metaphysics. D'Alembert, the one he addresses in his *Conversation*, the one who is asked to 'see the egg', was not a metaphysician. He was what we would call now a physicist, but at that time a physicist was interested in natural phenomena, in chemistry, medicine, magnetism or electricity. D'Alembert was a mathematician and a mechanist, one who contributed to ending the speculative quarrels between Newtonian, Cartesian and Leibnizian interpretations of motion, of conservation and of force, and to turning the science that started with Galileo into a definitive set of functional, self-contained equations, what was to be called 'rational mechanics'.

In other words, Diderot's *Conversation* with D'Alembert may be read as witnessing a struggle that

is foreign to the historical Bacon because it concerns the very scope and meaning of modern science, a kind of science that Bacon ignored for obvious historical reasons. What Diderot challenges is the benign indifference and scepticism of D'Alembert, the mathematician but also the academician: D'Alembert who promotes a closed definition of rational science, and ignores – considering it a matter of arbitrary opinion that must be kept outside science – everything that exceeds such a definition.

This is why, when Diderot tells about the egg as what enables the overthrow of all schools of theology and all temples on the earth, it is not only the theology of a Creator God he alludes to, featuring the One who, through some Intelligent Design, organized common matter into a being able to get out of the egg, to move and be moved, to feel, suffer and rejoice. It is also that other temple, the academic science of his time, the egg should overthrow. Diderot is fighting a double fight: against a theology with God as the author of the world, and against the authority of a science which refuses the challenge of the egg, in the name of its own restricted definitions. For him the question 'What is matter?' does not have its answer in a particular science. If there must be a materialist understanding of how, with matter, we get sensitivity, life, memory, consciousness, passions and thought, such an understanding demands an interpretative adventure that must be defended against the authority of whoever claims to stop it in the name of reason.

Diderot did not only add 'wit, flesh, blood, and eloquence' to English materialism, as Karl Marx wrote in *The Holy Family*; he also added polemics, polemics against what was considered the epitome of human reason, the mathematical science of matter and motion. At the end of the *Conversation* D'Alembert just wants to sleep, but Diderot warns him 'you will dream on your pillow about this conversation'; and indeed what follows is the famous *Dream of D'Alembert*, with a delirious D'Alembert haunted by Diderot's proposition that the egg requires matter to be gifted with sensation, imagining the famous cluster of bees, with a bee pinching a neighbour, and the neighbour another one, and suddenly the whole swarm gets animated as one unique being...

Let me be clear. I am not proposing a revival of Diderot's materialism as a good definition of a sensitive matter against the bad physicalist one. If I am an heir to Diderot, if I wish to situate myself as such, it is because of the demanding, not the eliminativist, nature of his materialism. Diderot's materialism is not demanding that we *respect* challenging facts. Few

facts are challenging by themselves. The egg offers no challenge – it is an egg. Diderot's empiricism is not about the facts and only the facts. He does not ask D'Alembert to observe the egg, but to accept *seeing* the egg, seeing the developing embryo, the small chicken who breaks the shell and comes out. What Diderot asks D'Alembert is that he *give* to the egg *the power to challenge* his well-defined categories.

Recalling that what a temple, any temple, signifies is separateness, the stake for Diderot is that science does not become a new temple, marked by a cut or, to follow Louis Althusser, by an epistemological rupture – between scientific, rational definition and everything else that may be ignored, eliminated, silenced as only a matter of opinion. Accept 'seeing' the egg, Diderot asked. Accept grappling with the messiness of the world, Haraway now asks. This does not mean produce a theory, but pay attention to the idealist temptation, which is inside science as it is inside any claimed separation giving to ideas the power to separate, silence and disqualify. I must admit I feel this temptation at work when Alain Badiou proposes a general definition of science on the model of set theory. Whatever his will to affirm the event and the procedures of truth against rational calculation and reason, the separation is too clean, and makes too many victims. A temple is needed in order for the truth-event to punch a hole in its roof, and the kind of knowledge Haraway gained in agility sport will probably not be admitted in this frame.

My proposition should not be confused with a free-for-all position claiming that all opinions are to be equally admitted. This would be only the reverse of the same coin, a very Dostoyevskian coin by the way. If God does not exist, everything is permitted. If we have no criteria to oppose reason against opinion, we will have to admit everything and illusion will rule. I am not a judge, thinking in terms of what to admit and what not to admit. Opinion as such does not interest me. It functions indeed as an abstract Dostoyevskian term fabricated in order to trap us and have us recognize that we need science, or theory, or whatever. It transforms us into a thinking brain having to direct an opinionated body. What I am interested in is *practice*, the *plurality* and *diverging* character of practices. If Haraway is able to become a witness for her dog Cayenne, it is because of the practice they entered together, of agility sport. And if D'Alembert was able to participate in the definition of what are called the laws of motion, it is because he was an heir to the very strange practice Galileo initiated: the experimental practice that succeeded in turning heavy

falling bodies into reliable witnesses of the way their gain of speed should be described.

I propose as a materialist motto: we never get a relevant answer if our practices have not enabled us to produce a relevant question. How could D'Alembert's physico-mathematical categories be relevant for the egg when they were not the result of practices that address, as mattering, the development of the chicken in the egg? The point is not that the egg has the secret of what matter is. The challenge of the egg points to what is required from matter in order for the development of the chicken not to be a miracle, or the expression of some intelligent design. And the tentative answers to that challenge depend on the practices for which such a development matters.

The power of wonder

One of the many beauties of the English language is the double 't' in the spelling of 'matter'. It moves us away from substance, or any kind of stuff with which a general reason or cause for what we observe can be associated, and it connects us with the verb 'to matter'. But here many philosophers will immediately react. They will object that I am confusing epistemology and ontology, the problem of knowledge and the problem of the way things exist for themselves and by themselves. And some will even add that this confusion is the sign that what I am proposing is just another version of an instrumentalist conception of knowledge, reducing it to the answers we get to the questions that matter for us. This is a replay, again and again, of the same powerful tune that also poisoned the history of orthodox Marxism since Lenin.

I must admit it took me some time to overcome the surprise I experienced when I first encountered this kind of objection. It was some time before I realized how swiftly one proposition had been transformed into another one. My proposition had emphasized that a problem must matter in order to get a possibly relevant answer. The proposition that came back against me was that we impose on what we claim to understand the kind of questions that matter for us, so that all our answers can be explained away, reduced to our own human, too-human interests. The same ambiguity characterizes the use of the term 'interest'. Either we use it as what explains our questions, or we affirm that to be interested by something has the character of an event, since it gives to that something a power it does not generally possess: the power to cause us to think, feel and wonder, the power to have us wondering how practically to relate to it, how to pose relevant questions about it.

In order to make this point more forcefully, let us call what Diderot tried to mobilize against D'Alembert scepticism: 'the power of wonder'. This is a dangerous term, obviously, because of its association with mysticism, bowing down in front of what cannot be understood. But Diderot was not asking that D'Alembert bow down in front of the wonderful miracle of the egg. He was just asking D'Alembert not to explain it away with his conception of matter. To wonder is a verb that, as a French speaker, I envy English speakers. It means both to be surprised and to entertain questions. It thus may refer to the double operation Diderot wanted to achieve on D'Alembert: to have him accept being affected, troubled, surprised, but also being forced to think and question his own knowledge, not in terms of its sad limitations, but in terms of the restricted set of practical situations in which it is positively relevant. The point was not to have the wondering D'Alembert enter into the demanding practice upon which depends the eventual production of relevant questions about the egg, but to have him renounce any claim that would imply a privileged link between his knowledge and general overbearing adjectives like 'rational', 'objective' and 'scientific'.

Wonder, as I understand it, is not a general attitude in front of a wonderful world. What is general – the idealist attitude – is the explaining away of what would complicate our judgements, or, worse, what we see as dangerous, encouraging irrationality. This is why silencing the power of wonder is not to be identified with a scientific attitude. Rather, it designates science as it has been mobilized in defence of public order.

Together with the historian Robert Darnton,² I would situate the end of Enlightenment in France as when scientists officially accepted this role. It was at a time when French authorities decided to react against the popularity of Mesmerism, which spread across France like an epidemic, and was not devoid of political dimensions. Indeed, Franz Mesmer's magnetic fluid was taken as a concrete affirmation of human equality, because it put into relation any humans, whatever their social class. The scientific commission named by the king included renowned scientists such as Lavoisier and Benjamin Franklin. Confronted with the surprising effects and affects attributed to Mesmer's fluid, they put into action a procedure that turns experimentation into a true judicial trial, imposing on the fluid the question *they* decided was crucial. And, rather unsurprisingly, the magnetic fluid was found guilty of not existing, its effects proving to have imagination as a necessary condition. Imagination, a natural animal feature, was thus defined as a sufficient explanation,

Mesmer was only a quack and there was no need at all to wonder about magnetic healing. Circulate! There is nothing to see.

The commissioners' argument may appear strong, and it is still in use today, but it manifests its authors' complete ignorance or contempt for the practice they were condemning. Already Paracelsus, the father of magnetism, had proclaimed that this force was impotent without will and imagination. This, however, was not the commissioners' problem – their problem was to bring reason to a population that was no longer defined, in the Enlightenment mode, as a potential ally in the process of emancipation, but as gullible, ready to follow any quack or swindler. Modern science as a blind destroyer of traditional practices did not begin with colonization but in Europe, when scientists accepted the role of guardians of an infantile public.

We cannot affirm the constraining relation between intelligibility – as it must be produced and as the commissioners did not produce it – and practice, as its mode of production, without also defending the power of wonder against the alliance of science with public order. But this means learning how to address scientists, how to activate their disentanglement from the role of guardians of rationality that has captivated them and put them at the service of power, both state and capitalist power. In the so-called 'Science Wars', if scientists had been asked 'What is your practice? What matters for you as practitioners?', it may well be that the resulting situation would have been much more interesting from the point of view of political struggle. It may even be that some scientists would have been confident enough to tell about the so-called knowledge economy as it threatens to destroy their practice.

How should we listen to such anxious scientists? The temptation is to explain away their disarray in terms of resistance to renouncing their pretence to disinterested knowledge and autonomy. The knowledge economy is nothing new: scientific knowledge's first value is, and has always been, its potential consequences for interested economic and industrial partners. This looks like a materialist interpretation, explaining away the eventual disarray of scientists to a matter of ideology. The problem is that this is also the interpretation proposed by promoters of the knowledge economy, except for the fact that they do not speak about ideology but about psychological resistance, a refusal by scientists to change their habits, to become more flexible. The two interpretations thus converge on the fact that the scientists' disarray is not worth taking into account. They will still have the resources, the equipment and the facilities they need. The only point being that

they will have to propose research programmes that are in explicit agreement with the interests of their partners.

I think that the anxious scientists know better, and that the convergence in not seeing the point of their protest and disarray marks the shortcoming of what merely *looks like* a materialist interpretation. What is at stake in a practice, in any practice, cannot be reduced to the generality of a socially organized human activity. When you address a practitioner, you do not address only a human with a specialized activity. Practices are always collective, and you address somebody who belongs to a collective, the gathering of which cannot be reduced to a question of mere ideology; the gathering of which, furthermore, *can well be destroyed*, for instance if it is effectively dealt with as mere ideology.³ Scientists know better because they know their practice may be destroyed even if they go on working.

Celebrating the exception

This is why I claimed that the statement 'science is only a practice like any other' was bound to provoke war, independently of the scientists' exceptionalist claims about rationality and objectivity. What was denied or eliminated is the importance of the question of what matters for each practice and of how what matters effectively connects practitioners. For instance, if we take the science of motion initiated by Galileo, Heidegger was quite right to emphasize that the scientists involved did not really think about questions like matter, space or time. But he was quite wrong to conclude that those scientists do not think. What matters for them, what causes them to think, imagine and object positively diverges from what may matter for philosophers. What matters for them – and because of which they may quite happily subvert any settled conception of space, time and matter, including the settled ones in their discipline – is the very specific achievement of an experimental science. In *The Invention of Modern Science*, I characterized this achievement as 'the invention of the power to confer on things the power of conferring on the experimenter the power to speak in their name'.⁴ Galileo's inclined plane proving able to turn falling bodies into reliable witnesses of the way their accelerated motion should be interpreted marks an event, something new in human history, and what matters for experimental practitioners, what they celebrate when announcing that 'nature has spoken', is the eventual repetition of such events. Again, an experimental device has achieved the practical high feat of having the phenomenon make a

difference such that it forces any competent, interested person to bow down and agree.

I know that many critics of science have found it necessary to deconstruct this high feat, and affirm that phenomena are unable to make such a difference, that scientists always talk in the name of a reality that remains decidedly mute. This, for experimenters, indeed means war, because it is a direct attack against what first matters for them, the verification of which gathers them as practitioners and causes them to imagine and object. And I would add that this war is completely beside the usual point, namely that it is needed in order to demystify the exceptionalism claimed by scientists. What is needed instead, and drastically so, is that experimental eventual achievement not be abstracted from the practice that produced it; that experimental objectivity be not transformed into the normal reward for a general rational or scientific method, a method that would silence the power of wonder and explain away the egg in terms of belief statements about the possibility of reducing it to the terms of physicalist working cranes. What is needed against scientists' exceptionalism is that the experimental achievement be indeed celebrated as an event, as the exception, not the rule. Diderot's egg has not become an experimental reliable witness.

Celebrating the exceptional character of the experimental achievement very effectively limits the claims made in the name of science. For instance, the way Lavoisier and his colleagues invented a scientific judiciary process against Mesmerism is best described not as an objective demonstration, but as a case of instrumentalization, unilaterally imposing a binary alternative on what they dealt with. Theirs was no achievement at all since the situation they created is unable to produce a reliable witness for the way magnetic cures should be interpreted. It only authorizes a verdict against one possible and unnecessary interpretation, a verdict the only interest of which was to serve public order, to silence the irrationality of the public.

Taking seriously the singularity of experimental practices also leads to understanding the strong possibility of their destruction by the coming knowledge economy. The point is not that the scientific enterprise would lose a neutrality it never had. From the beginning, experimental scientists have taken an active, and even entrepreneurial, part in industrial and commercial development. What is at risk is rather the very social fabric of scientific reliability; that is, the constitutive relation between an experimental achievement and the gathering of what can be called 'competent colleagues',

colleagues assembled by the question of verifying, objecting, of putting to the test the eventual power of an experimental fact to force agreement by silencing other possible interpretations. Such a social fabric emphatically does not ensure anything about propositions that have failed, for whatever reason, to become a matter of collective practical concern. But it relates the reliability of the consensus about an experimental scientific proposition to such a collective concern, to the critical attention of colleagues who will use their imagination to test and criticize a claim, whatever its interest and promises.

This quite specific social fabric will be destroyed when scientists as practitioners do not depend upon each other any longer, but are tied instead to competing industrial interests. It becomes then a matter of survival to confirm the kind of promises that attracted the appetites of investors, and to produce patentable results. As the future of those results is independent of concerned colleagues, what will prevail is the general wisdom that you do not saw off the branch on which you are sitting together with everybody else. Nobody will then object too much, if objecting against a scientific argument may lead to a general weakening of the promises of a field. This amounts to saying that, with the knowledge economy, we may have scientists at work everywhere, producing facts with the speed that new sophisticated instruments make possible, but that the way those facts are interpreted will now mostly follow the landscape of settled interests. In other words, the deconstructivist–eliminativist view will then be fully verified. We will more and more deal with instrumental knowledge. But the verification will not result from the deconstructivist's daring perceptiveness, but from the fact that capitalism will have destroyed yet another practice, just as it is an ongoing process of destruction of the commons.

Here is probably my greatest divergence from the orthodox Marxist tradition, and this divergence is directly connected with my materialist standpoint, linking knowledge-production with practices. We live in a cemetery of already destroyed practices, as capitalism, together with state regulations and ongoing pressure to conform to the demands of public order, is a Great Destroyer of practices. But it may also be claimed that radical materialist thinkers have turned a blind, or even a blessing, eye on the ongoing destruction of practices and the attachments those practices cultivate. And it is still the case: when confronting the disarray of scientists who understand that the knowledge economy means the destruction of their practice, many are tempted to answer: 'Well, for a long

time you have believed that you could be a partner of capitalism, that you would be respected because you were useful. You have just learned that capitalism respects nothing. Do not come and complain about the destruction of your practice. Rather, come and join those who struggle, as one among the multitude.'

My proposition is that we do not accept at face value the scientists' complaint that rationality is under attack, that economy should stop and respect the temple of disinterested science, but that we take seriously the fact that rejecting scientists' complaints on those grounds itself leaves the field free for the destruction. Indeed, it justifies it, even if regretfully. My point is that there is no practice the destruction of which cannot be justified, either by the privileges they benefited from, or by their alienating archaism, or by their closure and resistance to change, but all those reasons, if they amount to justifying why destruction is not a cause for struggle, also amount to giving free elbow-room to capitalism in its ongoing destructive redefinition of the world.

My proposition is not restricted to scientific practices. Those practices are privileged only because they force us to make a crucial transition from materialism as a theory of knowledge to materialism as concerned by production, and also destruction, of what exists. What I am confronting here is the fact that the orthodox Marxist vision, whatever its conceptual beauty, left practices undefended. It even defined practitioners as 'not to be trusted' because they would always cultivate their own way of having situations and questions matter, or, in brief, because they have something else to lose than their chains. And we get the same perspective again when Michael Hardt and Antonio Negri celebrate the general intellect, and propose that we consider the multitude not in terms of identities that are in danger of contradicting each other, but in terms of singularities that have no identity to lose and may thus act together in the production of the common.

The dilemma 'either identities or singularities' is a binary choice that primordially expresses, as do all such choices, the transcendent power attributed to abstract discursive reasoning. The point is not to choose, but to escape. Here, this means emphasizing that practices do not contradict each other. Rather, they have diverging ways of having things and situations matter. They produce their own lines of divergence as they produce themselves.

The difference between a contradiction and a divergence is not a matter of fact, of empirical or logical definition, but a matter of struggle: it is something that must be produced and maintained against the idealist oblivion of practice. Indeed, we get contradiction as

soon as practice is forgotten and the answers obtained by practitioners present themselves as free from practical constraints; that is, free to be compared to each other and to contradict each other.

However, divergence does not permit the conceptual derivation and warranting of the production of the common, as Hardt and Negri envisage it. We could say that practices are commons, but that the addition of the commons does not logically lead to the common. I am not at all sure that I can imagine physicists and practitioners of such crafts as tarot-card reading or of the art of healing affirming together anything else than a rather empty common goodwill tolerance. As I remarked about Diderot's egg, the power of wonder with which Diderot tried to infect D'Alembert was not intended to inspire a common conception of matter, but to have D'Alembert accept that his conception of matter was not *the* 'rational' one, but the one his practice produced as relevant.

What may happen among diverging practitioners is the creation of what Deleuze and Guattari describe as 'rhizomatic connections': that is, connections as events, the event of an articulation without a common ground to justify it, or an ideal from which to deduce it. We may recall the famous example given by Deleuze of the '*noce contre nature*', between the wasp and the orchid. Their connection is an event that matters in diverging ways for the wasp and for the orchid. Its achievement is not to lead the wasp and the orchid to accept a common aim or definition, but having the wasp and the orchid presuppose the existence of each other in order to produce themselves.

Challenge and diagnosis

How can such events be correlated to the need and concern for unity in struggle or the production of the common? This problem should be addressed in materialist terms, as a practical one, not as a problem the solution of which must be conceptually grounded and warranted, as is the case with the nice image of the multitude as the fountainhead of human creativity. Such an image suggests that if the price of a concept of the common related to free singularities is the destruction of divergent practices, this destruction is no great loss anyway. The fountainhead will produce whatever we may need. The plausibility of this idea may be related to the past polemical use of the concept of practice, when it was mainly in charge of the elimination of any transcendent source of authority, but was not a matter of interest or concern as such. This allows us not to 'see' the systematic destruction of practices, or of commons, as part and parcel of the

power of capitalist expansion, that both conditions it and feeds it. From a materialist, non-eliminativist standpoint, a standpoint that does not accept the nude abstraction of the 'creative human', it may well be that this destruction is the destruction of what enables humans to think, imagine and resist.

Starting from that standpoint, in *La Sorcellerie Capitaliste*⁵ I have, together with Philippe Pignarre, addressed the problem of the kind of unity in struggle that may be produced without smoothing away the diverging plurality of practices. We have not produced a general answer but some practical suggestions that may arouse an appetite to counter the nostalgia of a conceptual solution. I will limit myself here to the presentation of a challenge and a diagnosis.

The challenge, which I deem a materialist challenge, is that whatever the mess and perplexity that may result, we should resist the temptation to pick and choose among practices – keeping those which appear rational and judging away the others, tarot-card reading, for instance. The need for such a resistance is something naturalists have learned, when learning to avoid judging animal species as either useful or pests. This does not mean that some animal species cannot be considered as destructive or dangerous. In the same way, some practices may well be considered intolerable or disgusting. In both cases, the point is to refrain from using general judgemental criteria to legitimate their elimination, and to refrain from dreaming about a clean world with no cause to wonder and alarm.

This challenge is not for the future. I come now to the diagnosis. If we have chosen the term 'sorcery' in order to characterize capitalism, it was not as a metaphor, but as an active proposition. It was meant to produce wonder, the kind of wonder the present-day situation may well provoke, when capitalism is utterly divorced from all the usual pretence relating it to human progress, but has nevertheless lost nothing of its power. Such a situation, which nobody would have anticipated thirty years ago, may certainly be explained, but the many clever interpretations provided may also appear as so many versions of the famous Bergsonian retroactive move, when, after an event, the past is understood in its light, and is given the power to explain it. Retroactively there is no wonder. Associating capitalism with sorcery aims first at thwarting this move – that is, at dramatizing the event, at giving to it the power to have us wonder. But it aims also at asking the questions that all sorcery traditions in the world would ask: that is, the question of the vulnerability that the sorcerer's attack is exploiting and the correlative question of the necessary protection against such attacks.

Becoming able to take these questions seriously is connected to the challenge I have just presented. Issues like vulnerability and protection were part of practices the destruction of which has consensually signified the coming into adulthood of humankind, leaving behind superstitions and what was described as belief in supernatural powers. From this point of view, explaining capitalist power through alienation is much more convenient – a bit too convenient, since it both confirms the West's self-assigned mission of demystifying the world, and ratifies what philosophers have not stopped diagnosing, namely that humans usually resist the truth they are indicating, whatever this truth. This criticism is rather well known in post-colonial studies. But the point here is not to criticize but to accept – against the conceptual convenience of concepts such as alienation – to have practices and their destruction mattering. It may well be that their convenient dismissal as causes for thinking, feeling and struggling is part of our vulnerability to capitalist attacks. Is it not the case, indeed, that capitalism is exploiting to its own advantage any trust we may have in a conveniently settled perspective, turning it into an opportunity for new operations? Is it not the case also that conveniently escaping a confrontation with the messy world of practices through clean conceptual dilemmas or eliminativist judgements has left us with a theatre of concepts the power of which, for retroactive understanding, is matched only by their powerlessness to transform? Naming sorcery as the power of what has been able to profit from any assurance our convenient simplifications entailed means that we may have something to learn from those practices we have eliminated as superstitious, the practices of those for whom sorcery and protection against sorcery are a matter of serious practical concern. I do not claim we should mimic those practices, but maybe we should allow ourselves to 'see' them, and wonder.

Notes

1. Ilya Prigogine and Isabelle Stengers, *La Nouvelle Alliance: Métamorphose de la Science*, Gallimard, Paris, 1980; translated as *Order Out of Chaos: Man's New Dialogue with Nature*, Shambala, Boulder CO, 1984.
2. Robert Darnton, *Mesmerism and the End of the Enlightenment in France*, Harvard University Press, Cambridge MA, 1968.
3. For practices and their eventual destruction, see Isabelle Stengers, *La Vierge et le neutrino*, Les Empêcheurs de penser en rond/Le Seuil, Paris, 2006.
4. Isabelle Stengers, *The Invention of Modern Science*, trans. D.W. Smith, University of Minnesota Press, Minneapolis, 2000, p. 88.
5. Philippe Pignarre and Isabelle Stengers, *La Sorcellerie capitaliste: Pratiques de désenchantement*, La Découverte, Paris, 2005.

Going into the mould

Materials and process in the architectural specification

Katie Lloyd Thomas

To know the true hylomorphic relation it is not enough to go into the workshop and work with the artisan: one must go into the mould itself to follow the operation of form-taking at different levels and scales of physical reality.

Gilbert Simondon¹

In the chapter 'Form and Matter' in *The Individual and its Physico-Biological Genesis*, Gilbert Simondon sets out a method for understanding form-taking in terms of a chain of processes, as opposed to the simple imposition of form on matter. To understand a technical operation such as the moulding of a brick in the terms of hylomorphism, he argues, is to have 'the knowledge of someone who stays outside the workshop and only considers what goes in and comes out'. To understand a technical operation in more adequate terms it is not enough to enter the workshop, 'one must go into the mould itself'. Simondon proceeds to rewrite the operation of moulding bricks, not in terms of form and matter, but as what he calls a 'clay/mould system'.² Through this redescription – this 'going into the mould' – he challenges the limitations of the hylomorphic schema and argues for alternative models of the technical operation.

Simondon's rethinking is particularly interesting in its detailed accounts of the clay 'at different levels and scales of physical reality'. He describes a range of processes from the clay's preparation in the brickworks to the dynamics of its colloidal structure. By going into the mould he shows that clay is no generic matter. Rather, it is a specific material prepared in a series of specific ways that make a particular kind of form-taking possible. His challenge to the hylomorphic schema may thus be understood to lie in the distinction between clay as 'matter' in general and clay as a specific material used in a specific context and practice.

It is this distinction between matter and materials that drives my appropriation of Simondon's method. I take it up in order to understand the ways in which the

practice of architecture treats and conceives building materials and the implications of these conceptualization. Rather than rewrite the technical operation myself, as Simondon does, I look at a variety of descriptions used by architects to specify the material aspects of building, and ask what kinds of conceptualizations of materials they suggest. My primary source is the architectural specification: a contractual document that describes in writing the materials and processes of building and is almost entirely neglected outside practical and technical literature.³ It yields a number of rather different conceptualizations – some clearly structured in hylomorphic terms, some in terms of processes and others not encompassed by Simondon's two models, such as the recipe or the performance specification. Because of their role as part of architectural documentation these conceptualizations are particularly interesting. They not only reveal something about the way materials are understood, they are also part of the mechanism through which buildings are produced.

The historical and contextual variation between specifications is one of the document's most endearing and revealing features. Typically, at least until the 1960s when the Royal Institute of British Architects (RIBA) began standardizing the specification, they were documents which accumulated within architectural practices, keeping, repeating and modifying clauses from specifications for previous buildings, hoarding clauses whose significance no one could remember or dared to omit. The specification for a concrete house for a private client might run to thirty typed pages, while for a concrete factory built at the same time the specification is a simple list of what to do typed on to three sheets.⁴ In the first edition of the journal *Specification*, published in 1898 to provide architects with exemplary clauses, the index of sections clearly reflects the trade-based nature of the contemporary practice of specifying. In the first edition of the standardized

version, the *National Building Specification*, published in 1973, these titles are substituted with abstract letters – building as alphabet – and the sections have been reconfigured in terms of objects and components.

Specification, Vol. 1, 1898

Excavator
Well-Sinker
Concretor
Bricklayer
Drainlayer
Terra Cotta Worker
Mason
Pavior
Carpenter
[etc.]

National Building Specification, 1973

A Preliminaries and general conditions
B Demolition Site clearance
C Excavation Filling
E Concreting Formwork Reinforcement
Concrete finishes
F Brick and block walling and paving
H Structural steel and timber Metalwork Joinery
Boarding Trims
J Mesh Laminating
L Foil, paper, plastics and felt sheet coverings and
embedded membranes
[etc.]

A study of the specification cannot avoid tracking these changes and their relationships to the context of architectural production; it avoids the idealism which Andrew Benjamin has observed in some material based accounts of architecture such as the tectonics of Kenneth Frampton.⁵ An account of materials through an analysis of the specification is almost inevitably materialist. In addition, the specification offers a necessarily mediated encounter with materials that recognizes them as productions in themselves. Thus, a study of materials as they appear in the specification does not strive for a direct aesthetic experience of them of the kind to be seen in the material-based phenomenology of Peter Zumthor, Stephen Holl or Juhaani Pallasmaa. We need to be wary of such approaches, suggests Nick Coetzer, which can ‘bewilder our senses and subdue our critical faculties’. A ‘material-based phenomenology’ he goes on, ‘is political in its *erasing* of any overt political traces’.⁶ Here the specification opens up a series of conceptual questions concerning the relationships of ‘matter’ and ‘materials’, but refuses to understand them as other than or simply prior to the conditions of architecture and building practice. Concepts of materials are understood as both contingent and productive.

Understanding materials as matter

It is in part through its alliance with geometry and form that architecture established itself as a profession that was separate from craft and construction.⁷ The other side of this separation was the relegation of materials to the practical underside of architecture, which leads to a tendency in both discourse and practice to conceptualize the form/materials relationship in the terms of the form/matter dyad. This slippage between matter and materials also appears in philosophical accounts of matter, as I will show. Within architecture it can suggest that building materials are mere substrate: inert, substitutable and prior to construction as matter. A hylomorphic understanding of form and materials can set up some very peculiar and problematic definitions of building materials.

The form/materials dyad clearly influences the arrangement of Table 2/3, one of four tables of categories in SfB, an indexing system used to organize information libraries in architectural practices. SfB was developed in Sweden in the 1950s and adapted for use in Swedish specifications with the aim of replacing the ‘outgrown’ trade-based arrangement of the specification with a logical, government-funded system.⁸ It was adopted in the UK in the 1960s, first

Table 2/3

Construction form/materials

Table 2 **Construction Form** is never used without Table 3 **Materials**, and for this reason both tables are combined in this section as table 2/3. Table 3 is given separately commencing page 81.

Construction Indexing Manual, RIBA, London, 1969

for library classification. It was later adapted to provide the structure and categories of the first standardized National Building Specification (NBS) in the UK. Table 2/3 demonstrates the influence of the hylomorphic schema on the description of materials, and at the same time rewrites the form/matter dyad in terms of materials, as if they are simply positive instances of matter (see over).

In particular, we see that Table 2/3 is in fact the combination of two tables, ‘form’ and ‘materials’.

- No. 0 the built environment, [‘the what’]
‘the final result of the construction process’
- No. 1 the different parts or elements of building, [‘the what’]
‘parts which form in combination the building types and spaces in table 0’

- No. 2/3 'construction forms and materials' ['the how']
 'construction forms and products (table 2) and materials (substances) (table 3) which form singly or in combination the elements in table 1'
 No. 4 'activities and requirements'
 'abstract concepts unlike the objects in Tables 0, 1, 2/3'⁹

Unlike the other three tables used in SfB, components of tables 2 and 3 can never be referred to independently. A term from both the horizontal axis 'construction form' and the vertical axis 'material' must always be used:

Table 2 *Construction Form* is never used without Table 3 *Materials*, and for this reason both tables are combined in this section as table 2/3.¹⁰

This results in two curiously abstract general categories in the table – lower case 'y' or 'Any and all materials' and upper case 'Y' or 'Products in general'. These appear at the end of each axis and must be used to index literature which is concerned with a material such as clay, but not with any one form of it, or with forms of construction such as bricks which encompass more than one material (e.g. clay, glass, concrete, etc.). Neither construction forms nor materials can be

referred to without the other. As Aristotle made clear, neither form nor matter is a substance in itself.

In its composite structure table 2/3 recalls Aristotle's formulation in Book Zeta of the *Metaphysics*:

All outputs of production can be split up, with this component and that component ... the one is matter and the other form.¹¹

Aristotle chooses the example of the bronze sphere to illustrate his discussion:

In speaking here of matter I have in mind, say, the bronze of a statue, while by shape-form I mean the geometry of the object's appearance and by the composite the statue itself as a whole entity.¹²

He seems to be aware that his particular choice of example lends itself to an understanding of form and matter as separate. He points out that, unlike the case of man who is always made of flesh and bones and cannot be imagined in any other matter, in the case of a sphere it is easy to separate out form and matter because the shape 'may be imposed on bronze, on stone and on wood'. We can imagine that each of these materials is interchangeable – and could be substituted in the argument by any other.¹³

Material	Construction form						
	Cast in situ	Bricks, blocks	Structural units	Sections, bars	Tubes, pipes	Wires, mesh	Quilts
In formed products	E	F	G	H	I	J	K
e Natural stone		Fe	Ge				
f Precast concrete		Ff	Gf	Hf	If		
g Clay		Fg	Gg		Ig		
h Metal			Gh	Hh	Ih	Jh	
i Wood		Fi	Gi	Hi			
j Natural fibre		Fj	Gj	Hj	Ij	Jj	Kj
m Mineral fibre					Im	Jm	Km
n Plastics		Fn	Gn	Hn	In	Jn	Kn
o Glass		Fo		Ho	Io		
In formless products							
p Loose fill							
q Cement, concrete		Eq					
r Gypsum							
s Bituminous materials							

In Table 2/3 the categories along each of the axes are placed next to each other as if they have the kind of equivalence Aristotle assumes. Along the top the ‘forms’ loosely reflect the traditional trade divisions of the specification – foundations, structure, walls and ceilings, finishes – a logic from practice that becomes inaccessible once it is abstracted into the elements here. But the categories down the side – ‘formed’ ‘formless’ and ‘agents’ – might inspire the kind of ‘wonderment’ Foucault has described in his encounter with Borges’s Chinese encyclopaedia of animals.¹⁴ The building rationale behind the three divisions is hard to ascertain even if their poetry is delightful.

Although Aristotle’s bronze sphere lends itself so easily to a composite definition, the bronze it is formed out of is no less just one instance of matter than the ‘materials’ running down the vertical axis of table 2/3. It is precisely because of its specific properties that bronze exemplifies matter so beautifully – it can be formed into any shape, melted down to be reformed, and once formed it remains stable. Despite Aristotle’s suggestion that they could be substitutes, neither wood nor stone is ‘matter-like’ in the way bronze is. Stone cannot be reshaped, and wood has a history as a living thing and is shot through with ‘implicit forms’. When

bronze stands in for generic matter it is its particular properties that lend Aristotle’s argument its force.

Specifying materials in a variety of clauses

Table 2/3 is riddled with gaps and anomalies that demonstrate the inadequacy of Aristotle’s composite structure for use in relation to building materials. The specification, on the other hand, yields a great variety of definitions of materials that might be seen as alternatives: the material as recipe or as species, for example. As Simondon noted in relation to the observer outside the workshop, who only sees what goes in what comes out, table 2/3 tends to confine its categories to object-based or static understandings of materials with very few exceptions.¹⁵ Most interestingly, the specification yields two alternatives that reflect a more dynamic understanding of materials: the performance specification and what I call the ‘process-based clause’, which will be the main focus here. In addition, the form of the classification – what is described about the material and what is omitted – changes between materials, and for a material like concrete, even between the different contexts of its use. In a sense, the form of the clause is *prepared* for what it will describe, or shaped towards

Foils, papers (except finishing papers)	Foldable sheets	Overlap sheets, tiles	Thick coatings	Rigid sheets	Rigid tiles	Flexible sheets tiles	Finishing papers, fabrics	Thin coatings	Components	Products in general
L	M	N	P	R	S	T	U	V	X	Y
		Ne		Re	Se				Xe	Ye
		Nf		Rf	Sf				Xf	Yf
		Ng		Rg	Sg				Xg	Yg
Lh	Mh	Nh		Rh	Sh				Xh	Yh
		Ni		Ri	Si		Ui		Xi	Yi
Lj				Rj	Sj	Tj	Uj		Xj	Yj
				Rm						Ym
Ln	Mn	Nn		Rn	Sn	Tn	Un		Xn	Yn
		No		Ro	So				Xo	Yo
										Yp
				Pq						Yq
				Pr			Vr			Yr
				Ps			Vs			Ys

it, in a similar way in which Simondon describes clay being prepared for the brick mould. So, for example, although the materials specified in the contemporary clauses for natural stone and reconstituted stone are each to be used as external claddings and might have a very similar visual appearance, they are described in rather different ways.

F21 NATURAL STONE ASHLAR WALLING/
DRESSINGS

To be read with Preliminaries/General conditions.

TYPES OF WALLING/ DRESSINGS

110 ASHLAR _____ .

Stone:

Name (traditional): _____ .

Petrological family: _____ .

Colour: _____ .

Origin: _____

Finish: _____ .

Supplier: _____ .

Quality: Free from vents, cracks, fissures, discolouration, or other defects adversely affecting strength, durability or appearance.

Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.

Mortar: As section Z21.

Mix: _____ .

Sand: _____ .

Other requirements: _____ .

Bond: _____ .

Joints: Flush.

Width: _____ mm.

Pointing: _____ .

Features: _____ . [...]

F22 CAST STONE ASHLAR WALLING/
DRESSINGS

To be read with Preliminaries/ General conditions.

TYPES OF WALLING/ DRESSINGS

110 CAST STONE _____ .

Cast Stone Units:

Manufacturer: _____ .

Product Reference: _____ .

Absorption: As clause _____ .

Compressive strength: To BS 1217.

Cube strength:

Average (minimum): _____ .

Single (minimum): Not less than _____ .

Finish: _____ .

Colour: _____ .

Mortar: As section Z21.

Mix: _____ .

Sand: _____ .

Bond: _____ .

Joints: Flush.

Width: _____ .

Pointing: _____ .

Other requirements: _____ .¹⁶

The clause for natural stone specifies its source. It is identified by geographic origin and its geological classification. The cast stone, however, which is produced rather than simply extracted, is identified by a manufacturer and reference.¹⁷ It is also defined in relation to its strength and absorption – in other words in terms of its behaviour or performance.

This variety is particularly striking in the case of concrete, which is used in so many ways in building – broken up into pieces as hardcore, mixed, poured into the ground, or into complex casts, laid as blocks and so on. For example, in the case of hardcore it is described in terms of its dimensions or gauge:

Make up to required levels under concrete beds and pavings with approved brick hardcore *broken to pass a 75 mm gauge*.¹⁸

When it is to be made up on site, concrete is defined as recipes of ingredients for specific mixes and also in terms of its consistency for handling or workability:

Mix A – one part cement to seven parts all-in aggregate *to pass a 38 mm sieve*

Mix B – one part cement to seven parts all-in aggregate *to pass a 19 mm sieve*

*The concrete shall be prepared in an approved mixer, or delivered to site ready mixed to BS 5328: 1981, with only enough water added to give a good workable mix.*¹⁹

The last clause, which refers to a British Standard, also makes it clear that concrete is subject to regulation and embedded in law.

Describing process

In Table 2/3 the first column ‘cast in situ’ contains only one reference, to ‘concrete, cement’. It was a special condition – referring to a *process* of fabrication among all the other *objects* along the top axis. Prior to their standardization, however, specifications are full of descriptions of the processes of building. Many pages are devoted to concrete fabrication and all kinds of details appear, from the washing out of buckets to the precise ways in which strata of paint are to be applied. These ‘process-based’ clauses are particularly interesting because they have been almost entirely eradicated from the contemporary specification since their peak usage in the 1960s and there seems to be something at stake in their exclusion.

For Simondon it is precisely the *processes* through which individuation occurs which are ‘veiled’ in the hylomorphic account of a technical operation such as the forming of a clay brick. Clearly, clay is used for its specific properties and is not any matter. As

Simondon explains, if we filled the mould with sand and opened it we would still have a pile of sand, not a brick. Moreover, particular processes must prepare the clay in order that its interaction with the brick mould is possible. These processes, such as crushing the clay with rollers and grinding it into smaller pieces, only work because the clay is not already soft and plastic, as it will be when it reaches the mould. Simondon concentrates on the microscopic structure and the networks of reactions taking place. These allow him to reconceive the mould as a limit condition to an energetic transformation, rather than the imposition of form on a passive clay, and to think of the clay in terms of its singularities and implicit forms – in the way we might imagine a material like wood has its own knots and grain. He takes seriously processes as things in their own right, which individuate by making relations between different orders:

The method would encourage, on the one hand, a refusal to construct the essence of a given reality by means of a *conceptual* relation between two imposed terms, and on the other, a consideration of any veritable relation as something existing in its own right.²⁰

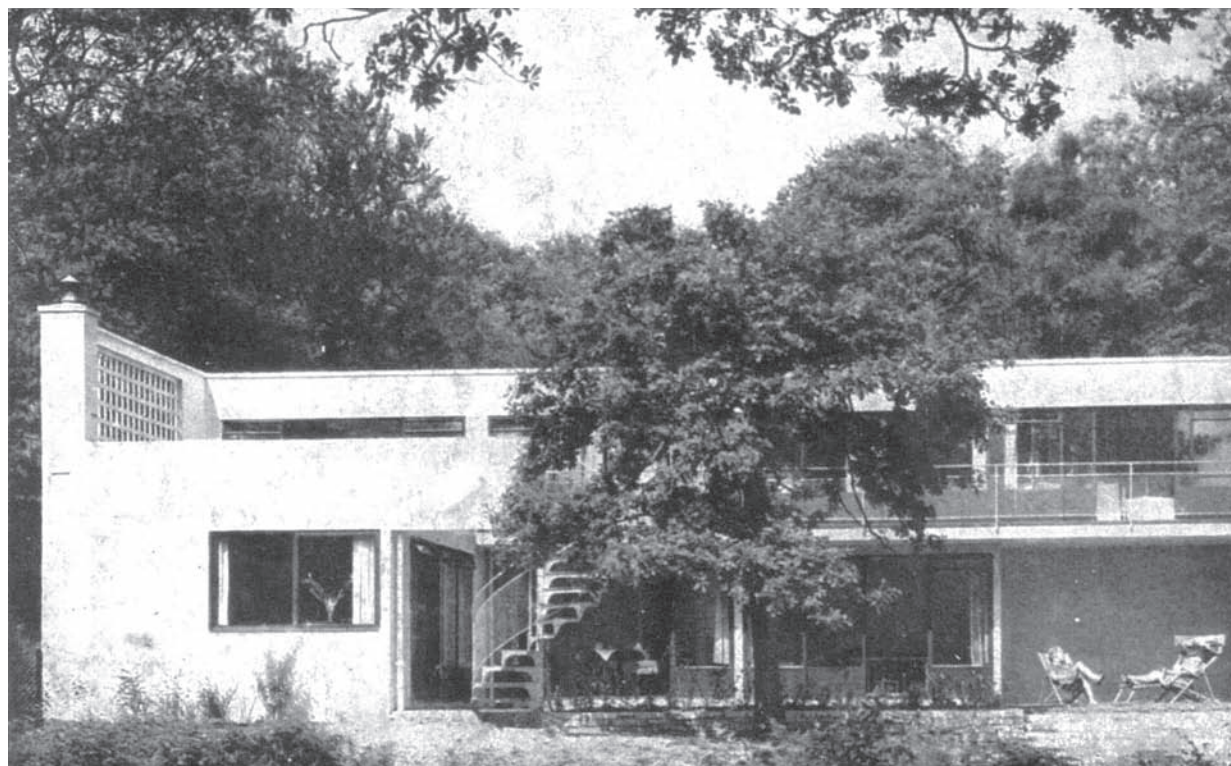
The process-based clause

Simondon's demonstration of the inadequacies of the form/matter model for an account of brick production is pertinent to another use of the mould: concrete fabrication – the special condition in Table 2/3. Concrete specifications (at least, pre-standardisation) reveal

another story – there the processes of form-taking are rendered in great, even loving, detail.

The clauses of the specification that describe concrete casting in rigid formwork reveal the minute details of the techniques that are used to ensure precisely that casting *appears* to take place in the terms of the hylomorphic schema. The two buildings I shall look at here are, in the rhetoric of architectural styles, supposed to represent rather different approaches to concrete casting: the smooth white concrete of modernism and the raw *béton brut* of brutalism. Alison Smithson, a leading architect of the brutalist movement, for example, said of modernist building that it was 'not built of real materials at all but some sort of processed material such as Kraft cheese: we turned back to wood and concrete, glass and steel, all the materials which you can really get hold of.'²¹ At the detail of process, however, both approaches seem equally concerned with making concrete in such a way that it *seems* to reproduce 'matter'.

The first specification is for a modernist house at Farnham Common designed by Val Harding with Tecton in 1934–35²² and built using reinforced concrete (below and over). The section for the Concretor is the longest, perhaps because it was still an unfamiliar technology – or perhaps because the architect was so enchanted with it. But a close reading reveals the degree of care involved in making sure that the cast walls conform as closely as possible to the perfect lines of the rigid formwork. For example, the formwork must not deform when the concrete is poured:



FRS, York, *The Modern House*, Architectural Press, 1946

FORMWORK

106. Form work must be erected true to line; be properly braced and of sufficient strength to carry the dead weight of the concrete with any constructional loads *without excessive deflection*.²³

And the external concrete walls were to be polished, 'rubbed down with a wood float *and sanded till perfectly smooth*' after casting:

EXTERNAL FINISH

111. The shuttering for the external surfaces of all walls, reveals, copings, soffits and fascias must be perfectly smooth. As soon as the shuttering is struck and while the concrete is still green the above mentioned surfaces must be rubbed down with a wood float *and sanded till perfectly smooth*. On no account must a cement grout be used.²⁴

What we see here are the details of those processes used to make concrete appear *as if* it is amorphous matter that can be formed perfectly into the orthogonal shapes of the architect's modernist concept.²⁵

	94. The cement shall be stored in such a manner that it will be efficiently protected from moisture and the consignments can be used up in the order in which they are received.
	95. No cement which has become damaged in the storage shall be used in the work, and all lumps must be removed.
AGGREGATE.	96. The aggregate shall be composed of hard stone or ballast, free from clay, dirt or other deleterious matter. It shall pass through a $\frac{3}{4}$ inch screen and be thoroughly graded from coarse to fine.
	97. The aggregate shall not be composed of flat or flaky materials.
	98. Coal residues, such as coke breeze and clinkers, shall not be used for reinforced concrete work unless specifically approved in writing by the Architects or Engineers.
	99. The aggregates to be used are presumed to be of a nature and quality necessary for the production of concrete which will give a crushing strength of not less than 3,000 lbs at the expiration of three months. When the concrete, made from such materials, is exposed to the weather or has to retain water, the materials shall be of such a nature that the concrete will resist the passage of water. All concrete materials supplied shall be subject to the approval of the Architects or Engineers.
WATER.	100. The water shall be fresh water, clean and free from organic impurities.
PROPORTIONS.	101. That portion of the aggregate which is retained on a $\frac{3}{4}$ inch screen shall be termed "coarse aggregate" and that portion which passes a $\frac{3}{4}$ inch screen shall be termed "fine aggregate".
	102. The 1 : 2 $\frac{1}{2}$: 5 concrete shall be composed of 1 part cement, 2 $\frac{1}{2}$ parts sand and 5 parts coarse aggregate.
	103. The 1 : 2 : 4 concrete shall be composed of 1 part cement, 2 parts sand and 4 parts coarse aggregate.
	104. The materials shall be measured in vessels or containers of a nature which make reasonably accurate measurements possible.
	105. The Contractor may, or shall if called upon, vary the proportion of fine to coarse aggregate with a view to obtaining the densest mix, provided the amount of cement per cubic yard of concrete in position is not reduced.
FORM WORK.	106. Form work must be erected true to line; be properly braced and of sufficient strength to carry the dead weight of the concrete with any constructional loads without excessive deflection.

13.

RIBA Archives, S&G/17/3

The specification for the Elfrida Rathbone School for the Educationally Subnormal (right) designed by John Bancroft for the LCC in 1961 and built 1963–64 describes how the marks of the timber shuttering were to be left in the exposed concrete walls of the raised assembly hall. While we see a very similar clause for building the formwork, it is stressed that the concrete *must not* be rubbed down in this case, or the timber tracery would be lost:

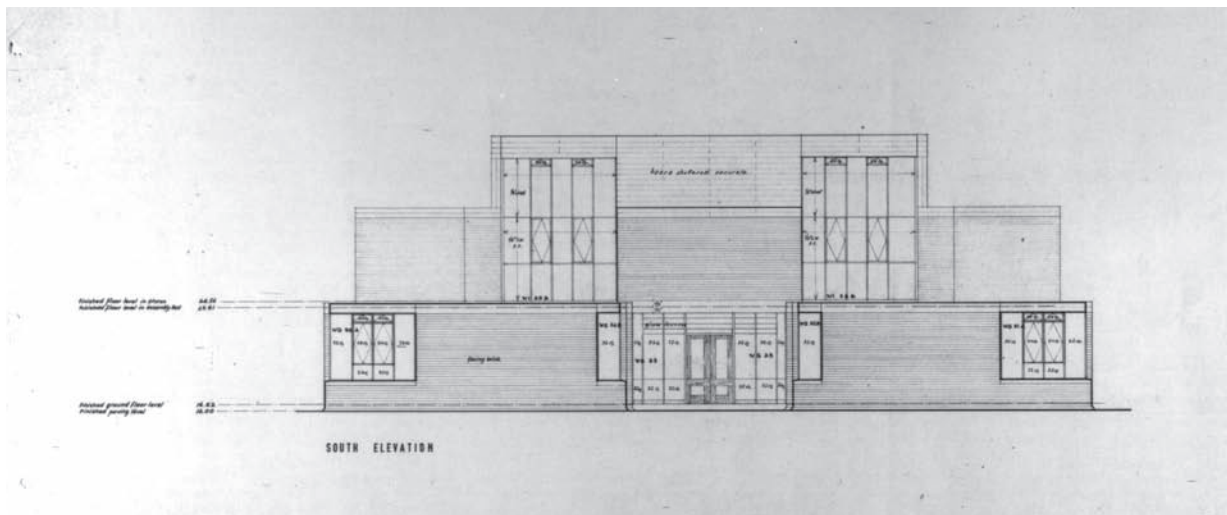
C14. Where concrete beams, slabs, etc. are shown on the drawings be a shuttered concrete finish, the Contractor's attention is drawn to the very high standard of accuracy, consistency and finish of concrete that will be required. *The greatest care will be called for in formwork*, mixing and placing of concrete, positioning of construction joints, removal of shuttering, etc. and the Contractor will be deemed to have allowed for this in his tender. *No rubbing down or making good will be allowed after removal of the shuttering to any of these surfaces. The resulting concrete surface is to be free of any honey-combing, cavities, pitting and any imperfections not the result of the texture of the concrete*.²⁶

Nor must it exhibit any irregularities. While this method of concrete casting is supposed to be more 'honest', because it registers an aspect of its fabrication, what is particularly striking is that the architect edits other parts of the process from the finished product. While he insists that the grain of the shuttering is inscribed into the finished wall, traces of the boltholes must disappear:

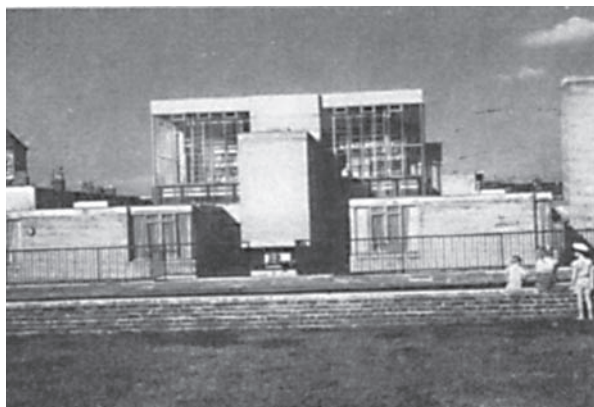
C14A FORMWORK AND MOULDS

... Formwork is to be erected true to line and to the profiles shown. Where a shuttered concreted finish is indicated *the formwork shall be so designed to produce the formwork patterns shown on the drawing and shall be of rough sawn, clean new timber with a pronounced grain all to the approval of the Architect... Boltholes will not be allowed in any finished surfaces*.²⁷

Thus the architect ensures that only the timber shuttering will determine the appearance of the concrete. Other aspects of fabrication are censored. At the level of these tiny details we see how the formwork must appear to impose form, both at the scale of the whole piece, and at the scale of its texture, where the grain of another material forms the surface of the concrete whose own variegations and implicit forms



RIBA Archive
RIBA Journal, April 1973



– swelling, sweating, the texture of the aggregate – are rendered invisible, and also how the concrete must appear to behave like matter.

Specifying in practice: from process to performance

During the 1960s the RIBA specifications panel began working towards the standardization of the specification that was finally published in 1973 as the National Building Specification, with a structure that was in part developed from the object-based categories of the SfB system.²⁸ According to one of the members of the team who developed the NBS an explicit aim was ‘to describe “work in place”, i.e. the finished result rather than the process of achieving it.’²⁹ The process-based clause has almost entirely disappeared from the NBS, and with it to a large extent the architect’s access to the processes of building. The specifiers I have spoken to report that these changes are leaving contractors in greater control of the selection of materials, and increasing the difficulty of specifying materials or ways of building that are outside industry norms. In fact, the current digitized NBS offers a drop-down menu of material choices that is extremely laborious to override. In addition the processes involved in building

materials – labour, transportation, extraction, production and so on – disappear from view.

To return to Simondon’s image, the disappearance of the process-based clause leaves the architect once more outside the workshop, in a position where the technical operation appears to take place according to the hylomorphic schema, and building materials can be understood in terms of matter. A first conclusion might be, then, that the kinds of clauses in use in the specification influence the ways materials are conceptualized; and the extent to which they mirror the hylomorphic schema or construct alternatives to it can also be seen to depend on developments in the broader contexts of the industry.

For Simondon ‘the forgetting of process’³⁰ is, as we have seen, the losing sight of the specific processes and contexts that set up the circumstances in which a material can take part in a technical operation. Thus, looking at a clay brick in the terms of the hylomorphic schema, we see only homogeneous matter and the imprint of form, not the ‘historical singularities’ through which the brick came into being:

The dominance alone of the techniques applied to materials rendered plastic by preparation can ensure to the hylomorphic schema an appearance

of explanatory universality, because this plasticity suspends the action of historical singularities provided through the material.³¹

On the one hand, hylomorphism and the forgetting of process are a particular way of understanding the world; on the other, Simondon seems also to suggest here that certain techniques of fabrication are able to reinforce the schema. A second conclusion might therefore be that, as we have seen in the two examples of concrete rendered matter-like through techniques of casting and finishing, the schema is physically reproduced and thus naturalized. If the apparent realization of the schema contributes to its conceptual dominance, then it is perhaps only at the level of process that the intricacies of the technical operation can be visible.

I want also to suggest a third more tentative conclusion. What is particularly interesting about the various kinds of definitions of materials in the specification is that they cannot easily be applied equally to all materials and all instances of the uses of materials. Even in the object-based categories of ‘construction forms’ in Table 2/3, a special column had to be made for concrete produced on site. If certain forms of definition suit certain kinds of materials, then we can see that their disappearance or dominance in the specification may also have productive effects on the kinds of materials used, and even on the development of new materials. Even timber, a favourite example for materialist philosophers who want to demonstrate the singularities of material,³² has by now been ‘rendered plastic by preparation’. The ‘matter-ization’ which might seem more natural to a material such as clay is clearly produced in a material such as MDF, which transforms the detritus of large-scale timber production into a material which is homogeneous, uniform and capable of being formed (not just cut) into any shape from sheets to cylinders. Materials like these can be easily described in the terms of abstracted matter, in the numerical and divisible terms of quantity which Marx associated with the specific materials used for money:

Only a material whose every sample possesses the same uniform quality can be an adequate form of appearance of value, that is a material embodiment of abstract and therefore equal human labour. On the other hand, since the difference between the magnitudes of value is purely quantitative, the money commodity must be capable of purely quantitative differentiation, it must therefore be divisible at will, and it must also be possible to assemble it again from its component parts. Gold and silver possess these properties by nature.³³

It may come as no surprise, then, to discover that the form of clause on the ascendancy in the architectural specification is the one that describes materials in precisely these terms. The performance clause, of which we saw some examples in the specification for cast stone, describes the behaviours of materials in numerical terms – as in this example of a recent specification for glass.

- H10 PATENT GLAZING
 371 HEAT CONSERVATION
 Average thermal transmittance (U-value) of patent glazing: _____
 391 SOLAR AND LIGHT CONTROL
 Glazing panes/units: Must have:
 Total solar energy transmission of normal incident solar radiation (maximum): _____ .
 Total light transmission (minimum): _____ .
 401 THERMAL SAFETY
 Glazing panes/units: Must have adequate resistance to thermal stress generated by orientation, shading, solar control and construction.
 411 ACOUSTIC PROPERTIES
 Sound transmittance: Minimum weighted sound reduction index (Rw) within 100 to 3150 Hz frequency range to BS 5821-3:
 _____ .
 Location: _____ .³⁴

If the ‘forgetting of process’ enables us to imagine clay as generic matter and to overlook the specific processes and preparations that allow it to take part in a particular interaction, the performance specification describes material without reference to *any* specific kind of material. As such, it is a particularly apt form of definition for homogeneous, matter-like materials and, in practice, allows a contractor to choose any material that fits the performance criteria. Yet despite this, the performance specification is no purely functional ‘description’; it develops out of specific material and has enormous implications and effects.

A peculiarity of Simondon’s account is that he limits his understanding of process and ‘historical singularities’ to the physical operations of form-taking and excludes the social, political and economic processes that also produce the technical operation and the way it is conceptualized. In examining the eradication of the process-based clause and the ascendancy of the performance-based clause we cannot ignore these processes. The clauses of the specification are a site where relationships between concepts of materials, the forces of production and the production of materials can be examined. Whether we stand outside the workshop or ‘go into the mould’ is determined by more than the kinds of concepts at our disposal.

Notes

- Thanks to Adrian Rifkin and Peter Osborne for advice and enthusiasm, and to the many specifiers who have discussed their practice with me, particularly Colin McGregor, Martin Mulchrone and Jim Randall.
1. Gilbert Simondon, *L'individu et sa Genèse Physico-Biologique*, Press Universitaires de France, Paris, 1964, p. 40.
 2. *Ibid.*, pp. 40–41.
 3. Katherine Shonfield's wonderful piece on the cavity wall is a rare exception. Katherine Shonfield, 'Why Does Your Flat Leak?', in *Walls Have Feelings*, Routledge, London, 2000.
 4. Mr Rosenberg, *Specification for work at No. 5, Fairhazel Gardens, N.W.6*, 1934–5, RIBA Archives, SaG/17/7.
 5. Andrew Benjamin, 'Plans to Matter: Towards a History of Material Possibility', in Katie Lloyd Thomas, ed., *Material Matters: Architecture and Material Practice*, Routledge, London, 2007.
 6. Nicholas Coetzer, 'Between Birds' Nests and Manor Houses: Edwardian Cape Town and the Political Nature of Building Materials', in Lloyd Thomas, ed., *Material Matters*, p. 191.
 7. For an excellent account of this separation, see particularly Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science*, MIT Press, Cambridge MA, 1983.
 8. See L.M. Giertz, *SfB And Its Development 1950–1980*, CIB/SfB International Bureau, Dublin, 1982, pp. 5–6.
 9. Table 2/3 and the definitions of each of the other tables are taken from the section openers in the *Construction Indexing Manual*, RIBA Publications, London, reprinted 1969. The distinction between 'the what' (building elements, such as car parks, assembly halls, or ceilings) and 'the how' (components of constructing that building and those parts) was another of SfB's aims and is discussed in Giertz, pp. 8–9, from where I have taken the 'what' and 'how' categories.
 10. *Construction Indexing Manual*, p. 63.
 11. Aristotle, *Metaphysics*, trans. H. Lawson-Tancred, Penguin, London, 1988, p. 194.
 12. *Ibid.*, p. 174.
 13. *Ibid.*, p. 207.
 14. 'In the wonderment of this taxonomy, the thing we apprehend in one great leap, the thing that ... is demonstrated as the exotic charm of another system of thought, is the limitation of our own, the stark impossibility of thinking *that*.' Michel Foucault, *The Order of Things* (1966), Tavistock Publications, London, 1974, p. xv.
 15. The first column, 'cast in situ' (which I will return to), concerns fabrication or 'process', and a number of columns contain a definition of what the material is to do – 'protective materials', 'fixing, jointing agents', 'structural units', or, in other words, how it is to perform.
 16. NBS, *National Building Specification: Standard Version (Update 38)*, RIBA Enterprises, London, 2004, F21, F22.
 17. John Gelder, NBS Content Development Manager, makes a distinction – which I have not followed – between *materials* which can be used in any way (such as natural stone) and *products* (such as cast stone) which are produced for an intended function in the building industry. Email correspondence with the author, 17 January 2005. For Marx 'raw materials' have already 'undergone some alterations by means of labour' in becoming commodities and the distinction in Gelder's terms is not a valid one. 'Hence,' Marx writes, 'we see that whether a use-value is to be regarded as raw material, as instrument of labour or as product is determined entirely by its specific function in the labour process, by the position it occupies there: as its position changes, so do its determining characteristics.' Karl Marx, *Capital*, Volume 1, trans. B. Fowkes, Penguin, London, 1990, p. 289.
 18. Jack Bowyer, *Practical Specification Writing*, Hutchinson, London, 1985, p. 55.
 19. *Ibid.*, p. 57.
 20. Gilbert Simondon, 'The Genesis of the Individual', trans. M. Cohen and S. Kwinter, in *Zone 6: Incorporations*, ed. S. Kwinter and J. Crary, Zone, New York, 1992, p. 312.
 21. Interview with Alison Smithson, *Zodiac* 4, 1959, p. 64, cited in Andrew Higgott, *Mediating Modernism: Architectural Cultures in Britain*, Routledge, London, 2007, p. 92.
 22. For details of this building, see Jeremy Gould, *Modern Houses in Britain 1919–1939*, Society of Architectural Historians of Great Britain, London, 1977, and *Architectural Review*, October 1935, pp. 123–6.
 23. Valentine Harding, *Specification of Works required to be done and materials to be used in connection with erection and completion of a House at Farnham Common, Near Slough, Bucks, for Valentine Harding, Esq, April 1934*, RIBA Archives SaG/17/3, p. 12.
 24. *Ibid.*, p. 14.
 25. There are two curved walls in the Harding house but they are constructed from blockwork – not concrete – and rendered with a thick plaster.
 26. *Ibid.*, p. 31.
 27. *Specification for the Works at the Elfrida Rathbone School for the Educationally Subnormal*, 1961, RIBA Archives LCC/AD/1, p. 13. The school, in South London, was designed in 1961 and built in 1963/4. It was designed by John Bancroft at the LCC, who went on to design the better known Pimlico School. For more details, see John Bancroft, 'Health, Power and Pleasure', *RIBA Journal*, April 1973, pp. 192–3.
 28. My narrative of the standardization of the NBS has been traced in part from journal articles and correspondence with Colin McGregor, who has worked on the NBS since its preparation, but in the main from the collection of papers from various committees held by the RIBA archive; RIBA/STECH.
 29. Colin McGregor, email to the author, 6 March 2006.
 30. Alberto Toscano cites this phrase from Isabelle Combes's commentary on Simondon's work in *The Theatre of Production: Philosophy and Individuation between Kant and Deleuze*, Palgrave Macmillan, London, 2006, p. 142.
 31. Simondon, *L'individu*, p. 59.
 32. See, in particular, 'Meaning is Force', Brian Massumi's wonderful account of a woodworker making a table in which he recasts the technical operation in terms of 'an encounter between lines of force'. Brian Massumi, *A User's Guide to Capitalism and Schizophrenia*, MIT Press, Cambridge MA, 1992, pp. 10–21. Simondon also discusses wood, pointing out that it is treated as homogeneous when it is cut 'abstractly' by mechanical saw 'according to a geometric plan', but also as having 'implicit forms' – its grain, undulations, knots and so on – when it is split with a wedge and follows the fissure. Simondon, *L'individu*, p. 57.
 33. Marx, *Capital*, Volume 1, p. 184.
 34. *National Building Specification*, H10.

Clouds of architecture

Mark Dorrian

According to the newspapers, the recent unveiling of Frank Gehry's design for the Louis Vuitton Foundation for Creation – to be built in the Jardin d'Acclimatation in the Bois de Boulogne – left observers struggling for a suitable metaphor. However, as the *Guardian* reported it, the architect himself seemed in no doubt: “It's a cloud of glass – magical, ephemeral, all transparent,” [Gehry] said. It was, he added, “not stodgy.”¹

Stodginess, certainly, is something that the appeal to clouds might well be hoped to ward off. Of all the flow-motifs available to oppose the heaviness of congealed and earth-bound stodge, the slow and complex three-dimensional circulation, drift and dispersion of the nebular seems the most promising. Moreover, not only does the cloud seem opposed to all material loading, equally it appears to resist being weighted down and tethered by signification. As, symptomatically, the *Guardian*'s report concluded: ‘Gehry added that one of his main aims was to attract youngsters. He said: ‘I hope they will look at the building and say, “what is that?”’²

While there is a long association of divine and fantastic architectures with cloud, from the heavenly city, to fairytale giants' castles reached by beanstalks, to Swift's flying island of Laputa buoyed upon the magnetic field of the giant lodestone at its core, it is only recently that we have had a situation in which the cloud has shifted from being a fabulous support for the building to a trope for the architectural project itself. Clouds of architecture have been accumulating, and the allusion has become increasingly visible as a sort of postmodern counterpart to the high modern metaphoric series of organism, crystal, machine, and so on. My intention here is to explore this architectural aspiration for the cloud, to try to make some suggestions about how we might understand it, and to try to describe the work that the cloud motif might be said to do for architecture and architects.

From one point of view it is unsurprising that the cloud is an area of interest for practices that see themselves as aiming to transgress architecture's disci-

plinary constitution, opening architecture onto what is taken to be excessive to it, or mounting an assault upon it. At one point in his book *A Theory of /Cloud/* – to which I'll return – Hubert Damisch characterizes cloud as “matter” aspiring to “form”, thereby registering its infinite provisionality and imminence.³ But equally the cloud might be thought of as ‘matter *after* form’, the characteristic ‘thing’ that accompanies destruction and demolition, the dispersion and suspension of particles that follows convulsions of matter and that is historically and iconographically fixed in photographs such as those of the dynamiting of the Pruitt-Igoe housing in St Louis in 1972, or the attack on the World Trade Center. Curiously it was two buildings by the same architect, Minoru Yamasaki, that supplied the material for these two most iconic examples of the destructuring of form into cloud. At the same time, the Pruitt-Igoe demolition was famously promoted – by, for example, Charles Jencks – as the death rattle of modernism itself, thereby staging that particular cloud as the registration of not just the collapse of a specific architectural project but of an entire ideology.⁴

Lightness and pneumatology

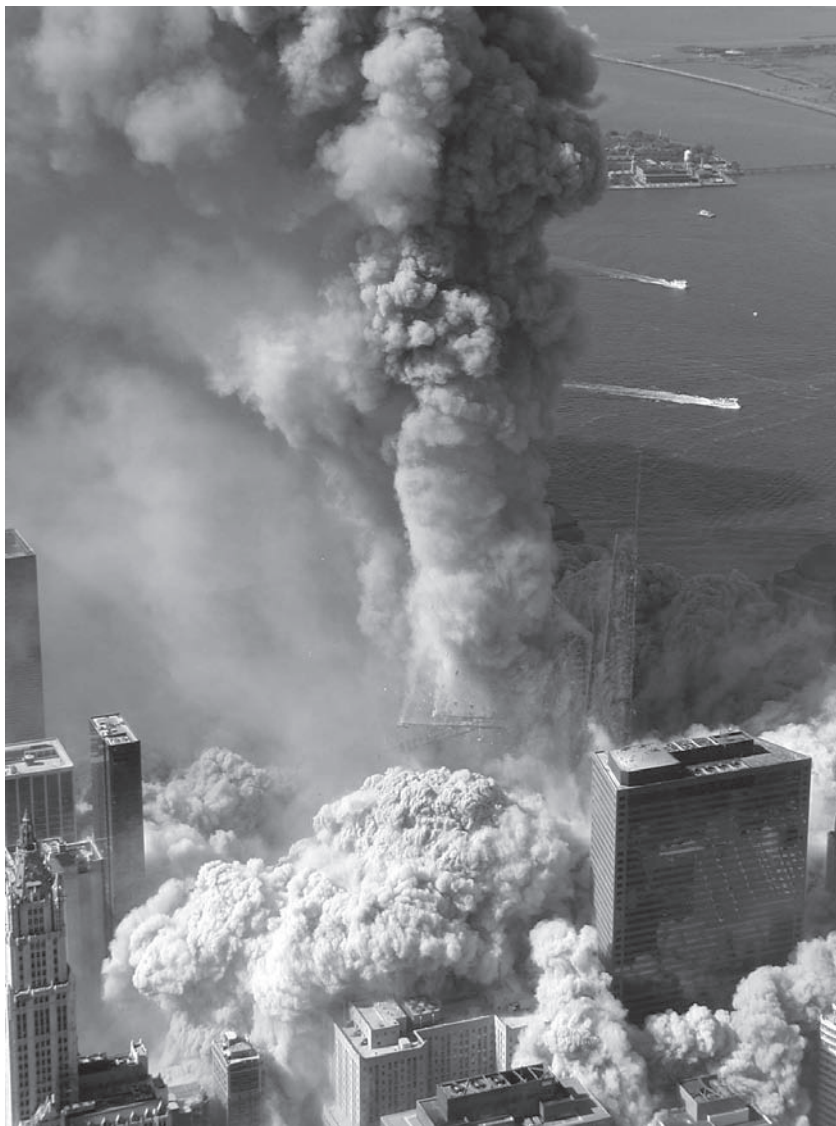
In 1995 Coop Himmelb(l)au, an Austrian-based architectural practice, produced a competition project for a United Nations building in Geneva, under the title *Cloud #9*. In a breathless text written fifteen years earlier, this group – whose affiliation with the sky, and indeed the clouds, was declared in their name (Himmelblau meaning ‘sky blue’ and, with the ‘l’ bracketed off, ‘sky building’) – concluded ‘Architecture must burn’. This text accompanied their *Blazing Wing* installation in the courtyard of the Technical University in Graz, whose heat, it is reported, smashed the windows in the surrounding historic facades.⁵ However, the cloud of which they dreamed in 1995 did not consist of the smoke of architecture's combustion: instead it was, they wrote, ‘a soft, fluctuating enigma – a building that does not want to be a building any more’. Declaring cloud to be ‘an idea without an appropriate concept’,

they insisted that ‘at the end of the twentieth century ... the idea of cloud acquires a new significance.’ Cloud is ‘a differentiated system rather than an object’, which as ‘a product of a complex tissue of influences in which it constantly recreates itself ... is entirely without identity.’⁶ Whatever the gap we might feel exists between this and the actual building proposal, what is being rhetorically conjured here is something infinitely responsive and in transformation, something, that is, that is always on the point of becoming something else. The following year Coop Himmelb(l)au extended the allusion to the city itself, comparing the digitally networked city to a ‘field of clouds’ in constant flux in patterns of complex interaction. ‘The vocabulary of urban planning’, they wrote, ‘should be placed in an architectural antique shop and replaced with phantasms still to be defined, which fluctuate and flicker like television screens after broadcast.’⁷

At the end of his essay ‘Haze: On Nebular Modernism’, Steven Connor extends a discussion on the visual registration of mist in the direction of an account of

the atmosphere as a medium traversed and saturated with invisible radiation, communication and interferences.⁸ And there is something of the sense of this electromagnetic cloud in Coop Himmelb(l)au’s new description of public space as a ‘semi-conductor’.⁹ Yet, at the same time, one is struck by the resplendent luminous, translucent (and auratic) character of these proposals for architectural clouds. Compare Gehry’s statement that ‘I wanted to create something that every time you approach, it shows a different character depending on the light and the time of day. I wanted to emulate everything this word “transparence” means’, with Coop Himmelb(l)au’s description of their Geneva project: ‘The cloud envelope becomes a glass-like net structure that loosely defines a semi-public space. The transparency of this shell makes it possible to look at people moving about through the layers of light and colour.’¹⁰ It is almost as if, by some trick of history, the destination of Paul Scheerbart’s *Glasarchitektur* has turned out in fact to be the cloud.

However, we could also draw a very different historical line to architecture’s contemporary clouds, one that would pass through the 1960s’ and 1970s’ preoccupation with pneumatic structures, those structures structured by air. The current prevalence of bouncy castles can obscure the political past of this technology, whose architectural uptake occurred in a context of radical commitments to the mobile, the temporary, the nomadic, the anti-authoritarian and the event. We can look again at Coop Himmelb(l)au here, who produced a number of pneumatic projects in the wake of the German engineer Frei Otto and, more locally, the Austrian architect Hans Hollein, who had ‘shifted his mobile one-man-office into a transparent inflatable – a “pneu” – for a time, to extraordinary effect in the media.’¹¹ In 1968 Coop Himmelb(l)au produced their pneumatic Villa Rosa, a cocoon-like structure that might be characterized as an expanded essay in atmospherics, the inhabitant being enveloped doubly by the



pressurized inflatable and an environment of sensory stimuli released by technical apparatus located in small spherical compartments. This led, in turn, on to their Cloud (Wolke) I and II projects of 1968–72.

In their commentary on the Villa Rosa, Coop Himmelb(l)au wrote: ‘Since the erection of the first totem pole the goal has been dematerialization. The dream has always been release from the force of gravity.’¹² If the pneumatic structure could be understood as a building made of air, with a minimal material support – a building of ‘almost nothing’ – then by the same token it was minimally borne upon by gravity, which is to say, minimally hitched to the earth, that great sump of material and material history (‘everything we loved and by which we have lived’, as Malevich said).¹³ Here we can recognize the proximity of the cloud to a modern thematic of lightness and detachment from the ground. Sources as diverse as Heinrich Wöflin’s *Prologomena to a Psychology of Architecture* and Georges Bataille’s entry on *Formless* for the *Critical Dictionary* suggest an elevational economy whereby the movement upwards is associated with the sublimation of base matter into vital form – reprehensibly so for Bataille – in contradistinction to the lateral, descendental and gravity-directed seep of the former. Bataille’s famous argument posits ‘formless’ as a declassifying term that serves to depress the status of things, and his references are to squashed spiders, earthworms and gobs of spittle.¹⁴ Yet at the same time we would have to admit that the cloud presents us with a formless thing that ascends in all senses of the word.

In his commentary on the frescoes painted in the earlier sixteenth century by Correggio in the cupolas of San Giovanni Evangelista and the Cathedral in Parma, Hubert Damisch, borrowing a phrase from Gaston Bachelard, describes these images enabled by cloud as ‘operators of elevation’, while at the same time noting that the cloud theme ‘contradicts the very idea of outline and delineation and through its relative insubstantiality constitutes a negation of the solidity, permanence and identity that define *shape*’.¹⁵ We have the paradigmatic example of this last point by way of Damisch’s classic analysis of the demonstration of perspective reportedly carried out by Filippo Brunelleschi. Onto a small panel, Brunelleschi painted a perspectival rendering of the baptistery in Florence, making a hole in the board at the vanishing point towards which the parallels converged. Holding the back of the painting to his face, and looking through the hole, he used a mirror held in front of him to sight the image, thereby producing an optical structure

that articulated the homology between the eye of the observer and the vanishing point. However, on the painting Brunelleschi crucially did not render the sky, but instead provided a silvered surface upon which the real sky was reflected, before being again reflected in the hand-held mirror. Damisch argues that cloud is thus presented as something excessive to the perspectival system, something that escapes the jurisdiction of perspective and forms its constitutive ‘outside’. Of cloud he writes:

this unmastered, unmasterable background element ... had to be *shown* but could not be except by the use of a mirror – that is, paradoxically, by resorting to a *di-monstratio*. Thus the cloud mirror functioned as an index (narrowly construed) of a discontinuity between the order of that susceptible to representation by the means of *perspectiva artificialis*, and another element which, admitting of no term and no limit, seems to escape capture, demanding to be presented ‘in its natural form’.¹⁶

Nebular atmospherics and euphorics

Now it seems to me that there are legitimate connections to be drawn between this transcendent lightness that cloud offers and certain reflections on architectural drawing, which bring the latter within the ambit of our concerns with contemporary clouds of architecture. I am struck, for example, by the terms in which John Hejduk described his drawings for his Lancaster/Hanover Masque, produced between 1979 and 1982. The community of scripted ‘objects’ and ‘subjects’ that this work describes are organized in relation to a central, voided square across which the Church House and Death House face the Court House and Prison House. Hejduk proposed that the drawings he did for these were, ‘I believe, the first X-ray drawings ... The drawings are apparitions.’ He continues:

During the revealing of a thought the pencil in my hand was almost without weight. The lead of the pencil hardly touched the surface of the paper; a thought captured before total concretion. The drawing of the Court House ... may at first appear to be the vaguest, yet it is most complete. It encompasses the whole of a dematerialised thought.¹⁷

Here the material ineffability of the drawing, precisely the lightness of the material of the pencil upon the paper – a lightness that, again, makes it almost, but not quite, nothing – is correlated with thought itself, which finds itself transported and registered on the paper before, as Hejduk puts it, ‘total concretion’. Here we are close to the cloud once more and specifically to its spectral equivocality and resistance to being definitively located or contained within representational



forms, insofar as the precondition for its appearance turns out to be its simultaneous (virtual) absence – in this case the lightness of a drawing produced by a pencil that ‘hardly touched the surface of the paper’. Thus too Hejduk’s reference to the X-ray. For if photography has been claimed to be a spectralizing technology,¹⁸ how much more so is its offspring the X-ray, which works by lightening and absenting matter, dissolving solid fleshiness into cloud or ‘a spectral haze or plasma’.¹⁹

It may be happenstance that Hejduk – in his pedagogical role as Professor of Architecture at (and, from 1975, Dean of) the School of Architecture at the Cooper Union in New York – was a teacher and colleague of three other architects to whom we could refer at this point. The first, Daniel Libeskind, can be passed over quickly, simply noting his comment that ‘What I tried to do with the problem of architecture ... was to disengage it from its position on earth ... to send it to its stellar source’,²⁰ along with the ‘cloud prop’ of his competition-winning City Edge project for Berlin in 1987. The other architects, Elizabeth Diller and Ricardo Scofidio, who practice together as Diller + Scofidio (and latterly as Diller, Scofidio+Renfro), here require a little more attention as they are the producers of the most literal and celebrated of contemporary architectural clouds. I’m referring of course to their Blur building, an exhibition pavilion constructed for Swiss Expo 2002 on Lake Neuchâtel, beside the town of Yverdon-les-Bains, in Switzerland. Originating

with an invitation to work collaboratively on a competition project for Swiss Expo 2001, Diller + Scofidio first worked – and were entrusted with what was called ‘immaterial design’ – as part of a team called Extasia, on what was conceived as a new media landscape. The overarching theme of the Expo was to be ‘Swissness’, and Extasia’s ‘assigned theme’ was ‘sensuality and sexuality’.²¹ At first, it seems, the project was imagined as a void that would be made in the lake itself, and be called the ‘Waterhole Restaurant’.

In the event the Expo was deferred for a year, and Diller + Scofidio’s pavilion emerged as a separate project. Various described as ‘pure atmosphere’ and ‘the making of nothing’ – the title of a book documenting the work²² – the project was specifically envisioned as an *anti-spectacle*, a refusal of the demand for visual clarity and the scintillating display of commodities normally associated with exhibitionary pavilions. The building would take the form of a cloud hovering over the lake, a ‘fog mass’,²³ a piece of architecture made, according to the architects, out of nothing but the ‘site itself: water’.²⁴ One of the project descriptions put it like this:

Upon entering the fog mass, visual and acoustic references are erased, leaving only an optical ‘white out’ and ‘white noise’ of pulsing nozzles. Contrary to immersive environments that strive for high-definition visual fidelity with ever-greater technical virtuosity, Blur is decidedly low-definition: there is nothing to see but our dependence on vision itself.²⁵

Now it seems possible to claim this as part of a more general equation that links humidity and visual definition. As Paul Carter has pointed out, a precondition of legibility tends to be that things are dried out, so that – to take an example – ink’s temporary flow occurs upon an arid surface that guarantees the future shape of the dried character. To expose a document to humidity is to place in hazard its stability won through dryness, by exposing it to the warp and wrack of its material substrate. Under the encouragement of the humid, whose very emblem could be the cloud, things lose their linearity, contour and shape: they seep, blot and blur. As Paul Carter puts it:

the humid ... is what causes lines to spread, to get back in touch with the ‘interiority’ of the world. The humid usefully resists the drive toward ‘legibility’, producing instead a class of marks where writing and drawing discover their common ground. As matter writing back, the humid is the site of movement traces normally overlooked.²⁶

The architects’ own descriptions of the project consistently characterize Blur through claims of what it excludes, rather than what it incorporates, the claims culminating in the statement that it is the ‘making of nothing’. Described as a ‘massless and elastic medium in which time is suspended and orientation is lost’²⁷ (no mass, no time, no direction), and again as ‘spaceless, formless, featureless, depthless, scaleless, massless, surfaceless, and dimensionless’,²⁸ one is encouraged to suspect that cloud approximates the propertyless ‘thing’ which Peter Eisenman and Jacques Derrida sought during their ill-fated collaboration on the design of a garden related to Derrida’s commentary on the Platonic chora, for the Parc de la Villette in Paris²⁹ – especially when one recalls the momentary flickering and dissolution of aleomorphic forms that have historically been glimpsed in clouds, whose art historical aspects have been studied by Ernst Gombrich, James Elkins and others.³⁰

It is tempting, then, to see Blur as representing an overcoming of ‘construction’ by a non-hylomorphic ‘atmospherics’. In a richly suggestive essay on the architecture of atmosphere, Mark Wigley has written that atmosphere ‘is precisely that which escapes analysis. ... Atmosphere may be the core of architecture but it is a core that cannot simply be addressed or controlled.’³¹ There is much to this, and yet one of the things that is striking about Blur is the huge technological sophistication and the hyper-hylomorphic control of material upon which the vapour cloud is predicated, and indeed how effectively it – as a melding of the meanings of atmosphere as gaseous envelope and atmosphere

as experiential ambience – was orchestrated. ‘We were determined to defy nature’, commented Ricardo Scofidio. Blur ‘was like a magic trick. A great effect that took a lot of artifice.’³²

The hidden support of the project was a steel tensegrity structure anchored into the lake bed, which was armed with 31,500 nozzles through which water, pumped from the lake and filtered, was fed at high pressure and vaporized. During the design process, some large-scale fog tests were carried out, and considerable sophistication and ingenuity had to be deployed in fine-tuning the technique to produce the desired effect (irregular nozzle concentrations, for example). To maintain the cloud within defined limits – to stop it blowing away, dissolving, and so on – the whole water delivery system and assemblage was controlled via a ‘smart weather’ system that monitored the broader environmental condition (temperature, humidity, wind speed and direction, etc.) and regulated the rate of feed to the nozzles accordingly. This pumping of stuff into a zone could be described, I suppose, as a technology of ‘inflation’ used – paradoxically – in the absence of any building envelope. And, at the same time, this technology of inflation was producing what we could call a sort of ‘air-conditioning’. Such a point, it seems to me, opens Blur on to a different kind of cultural history than that within which it is usually situated and suggests another, perhaps more critical, way of thinking about the project.

At the invitation of the architects, Hubert Damisch himself visited the project, and subsequently wrote a commentary on it. In this he suggested that Blur had ‘something to do with the idea of an inhabitable place, a place where it would be good to breathe, and to breathe differently, by inhaling a different air.’ Blur had, he said, a ‘kind of “pneumatic” beauty’ (where *pneuma* is both breath and spirit).³³ There is a euphoric aspect to Damisch’s discourse here, and I want to offer for comparison an earlier architectural project which is also euphoric, about an inhabitable place and breathing, and which will return us very directly to the experiments with pneumatic structures at which we glanced before. The project I have in mind is Reyner Banham and François Dallegret’s ‘Environment Bubble’ from their 1965 article ‘A Home is Not a House’, published in *Art in America*.³⁴ What is interesting here in terms of the comparison with Blur is that, analogously, the ‘stuff’ of the site – air – is drawn in, filtered, and then pumped out by the internal air-conditioning system with the resultant internal pressure then inflating the dome. It is as if the project develops an internal environmental cloud

which takes the form precisely of air-conditioning and which is consolidated and restrained by virtue of the skin, which, in the Diller+Scofidio project, disappears to leave a visible environmentally conditioned zone which is locationally stabilized not just by the steel structure with its array of nozzles, but by the computer monitoring system too.

Environmental commodification

Damisch's euphoric response to *Blur* was by no means unique, and in this regard it is interesting to note shifts in the architects' own accounts as the project developed. In 2000, they presented it in terms of an integrated media installation entitled *Blur/Babble*, in which visitors would be equipped with so-called 'braincoats', electronically equipped raincoats, enabling fragments of conversation to be detached, jumbled, resequenced and relayed to visitors, thus supersensitizing, as they put it, hearing and 'producing an architecture of atmosphere in which the spectacular is traded for the oracular'.³⁵ The *Babble* media installation was in the end shelved due to loss of sponsorship, but the paranoid sense of being tracked by the building – an explicit aim of the project at this point – is very different in flavour to the description we find when the completed project was published in the architectural journal *Lotus*. Here, the visitor's ascent to the 'Angel Deck' at the summit of the structure is likened to 'piercing a cloud layer while in flight to the blue sky'.³⁶

The euphoric response might, then, make us suspect that we are indeed rather closer to the spectacle here than previously suggested. As Damisch noted, *Blur* did not fit into the tradition of expository pavilions displaying the objects of mercantile production. Yet it certainly still sold something, for located within it was a 'water bar' stocked with bottled waters from around the world. Which is to say – I think without stretching things too far – that what was being sold was an idea of *purity*. Damisch seems to say as much when he comments that, at the bar, 'one could take the waters once more, this time as mineral water, still or sparkling, everything playing on the juncture of the two elements of water and air with nothing earthy muddying the waters'.³⁷

There is no doubt that *Blur* was a remarkable, and properly architectural, achievement: certainly one of the most thoughtful and thought-provoking projects realized in recent times. It provided a witty and critical commentary on expository architecture and, more widely, visual desire. Presenting itself as an anti-spectacle, at the same time it conformed to the spectacular demand of the exhibition: to be,

in short, show-stopping. And what could be more jaw-droppingly extraordinary than the anchoring of a 'real, live' cloud just above the lake, like a mass hallucination or a little piece of heaven brought down to earth. The computer simulations that Diller+Scofidio produced indicate that their nebular vision participated in the same kind of iridescent, diaphanous imaginary as that of Coop Himmelb(l)au and Gehry.³⁸ These are magical, transcendent and rather untroubling clouds. Despite my comments on dust clouds at the start, it seems that architects are not so much interested in historicizing their clouds, and certainly not clouds that are part of the modern history of desolation – whether Ruskin's 'storm cloud of the nineteenth-century',³⁹ the mushroom cloud of the atom bomb, or others.

As such, it may be that for some *Blur*'s achievement is, in fact, the pioneering of a new kind of environmental commodification – a new development in the socio-political history of air conditioning – which takes the form of a localized air conditioning of environmentally manipulated zones, no longer encapsulated within building envelopes, secured against a generally degrading environment. As the planetary environment atrophies, this argument would run, so capital will seek to reconstitute it in localized and socially exclusive zones, and an ideology of purity would be part and parcel of this. In this regard, it might be suggested that *Blur* has some surprising filiations with, for example, some of the buildings produced for another exhibition: Expo '92 in Seville. There localized cooling effects were produced by tower constructions that used micronizers to spray a fine water mist. Similarly, Nicholas Grimshaw's British pavilion used evaporative techniques, such as a water wall that produced a mist, to cool visitors. This may be – like bottled water – an admirable technology that addresses a problem: but it is a problem in which the social can no longer be intelligibly detached from the natural, and it does it in a localized, restricted and even distorted way.

And, in the end, what do clouds do for architects? They allow architects, it seems, to have a foot in two very different places at the same time: to rhetorically present works as anti-essentialist, de-ontologized, provisional, shifting and dynamic, while simultaneously enjoying a wonderful weightlessness and a transcendental purity. As a 'designer' of clouds one can, rather magically, be a visionary without the burden, and attendant vulnerability, of having to delineate a vision. As Frank Gehry said of his commission to build a cloud in Paris, it is 'heavenly'.⁴⁰

Notes

1. Kim Willsher, 'Is It a Cloud? Is it a Cocoon? Gehry's Paris Museum Unveiled', *Guardian*, 3 October 2006, p. 15.
2. *Ibid.*, p. 15.
3. Hubert Damisch, *A Theory of /Cloud/: Toward a History of Painting*, Stanford University Press, Stanford, 2002, p. 35.
4. 'Modern architecture died in St Louis, Missouri on July 15, 1972 at 3.32 pm (or thereabouts), when the infamous Pruitt-Igoe scheme, or rather several of its slab blocks, were given the final coup de grâce by dynamite.' Charles Jencks, *The Language of Post-Modern Architecture*, Academy Editions, London, 1987, p. 9.
5. Frank Werner, *Covering + Exposing: The Architecture of Coop Himmelb(l)au*, Birkhäuser, Basel, Berlin and Boston, 2000.
6. *Ibid.*, pp. 67–8.
7. *Ibid.*, p. 21.
8. Steven Connor, 'Haze: On Nebular Modernism', a paper given at 'Modernism and Beyond: Interdisciplinary Seminar in Art Theory and Literary Theory', Trinity College, Oxford, 12 May 2006, pp. 12–16. Available at www.bbk.ac.uk/english/skc/haze/haze.pdf.
9. Werner, *Covering + Exposing*, p. 21.
10. Willsher, 'Is it a cloud?', p. 15; Werner, *Covering + Exposing*, p. 68.
11. Werner, *Covering + Exposing*, p. 27.
12. *Ibid.*, p. 28.
13. Kasimir Malevich, *The Non-Objective World: The Manifesto of Suprematism*, Dover Publications, Mineola and New York, 2003, p. 68.
14. Heinrich Wölfflin's 'Prologomena to a Psychology of Architecture', in Harry Francis Mallgrave and Eleftherios Ikononou, eds, *Empathy, Form and Space: Problems in German Aesthetics, 1873–1893*, Getty Center for the History of Art and the Humanities, Santa Monica, 1994, pp. 149–90; Georges Bataille, 'Formless' in *Atlas Arkhive Three: Encyclopaedia Acephalica*, Atlas Press, London, 1995, pp. 51–2.
15. Damisch, *A Theory of /Cloud/*, pp. 21, 15.
16. Hubert Damisch, *The Origin of Perspective*, MIT Press, Cambridge, MA and London, 1994, p. 94.
17. John Hejduk, *The Lancaster/Hanover Masque*, Text 8, Architecture Association and Canadian Centre for Architecture, London, 1992, p. 13.
18. 'I then experience a micro-version of death (of parenthesis): I am truly becoming a specter.' Roland Barthes, *Camera Lucida*, Vintage, London, 1993, p. 14. See also Jacques Derrida, 'The Deaths of Roland Barthes', in Hugh J. Silverman, ed., *Philosophy and Non-Philosophy Since Merleau-Ponty*, Routledge, London and New York, 1988, pp. 259–96.
19. Connor, 'Haze', p. 12.
20. Daniel Libeskind, 'The Pilgrimage of Absolute Architecture (A Conversational Explanation)', in *Countersign*, Academy Editions, London, 1991, p. 42.
21. Charles Renfro, 'Blur Building', *A+U* 428 (2006), pp. 62–73, 67.
22. Diller+Scofidio, *Blur: The Making of Nothing*, Harry N. Abrams, New York, 2002.
23. Diller+Scofidio, 'Blur Building, Expo 2002, Yverdon-les-bains, Suisse', *Lotus International* 125 (Liquid Architecture) (2005), pp. 76–81, 78.
24. Renfro, 'Blur Building', p. 67.
25. Diller+Scofidio, *Lotus International*, p. 78. Presumably, it is this 'low definition' effect that Anthony Gormley sought to recreate with his much-publicised installation at the Hayward Gallery (May–September 2007), in which the cloud reappears inside a glass box, open to visitors.
26. From a work in progress. I am grateful to Paul Carter for his permission to quote this.
27. Diller+Scofidio, 'Blur: Swiss EXPO 2002 Diller +Scofidio, Ear Studio, MIT Media Lab', *Assemblage* 41, 2000, p. 25.
28. Diller+Scofidio, *Lotus International*, p. 78.
29. See Jacques Derrida and Peter Eisenman, *Chora L Works*, Monacelli Press, New York, 1997.
30. Ernst Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation*, Phaidon, London, 1977; James Elkins, *Why Are Our Pictures Puzzles? On the Modern Origins of Pictorial Complexity*, Routledge, New York and London, 1999.
31. Mark Wigley, 'The Architecture of Atmosphere', *Daidalos* 68, 1998, pp. 18–27, 27.
32. Patricia C. Phillips, 'A Parallax Practice: A Conversation with Elizabeth Diller and Ricardo Scofidio', *Art Journal*, 22 September 2004.
33. Hubert Damisch, 'Blotting Out Architecture? A Fable in Seven Parts', *Log: Observations on Architecture and the Contemporary City* 1, Fall 2003, pp. 9–26, 19, 26.
34. Reyner Banham and François Dallegret, 'A Home in Not a House', *Art in America* 53, 1965, pp. 70–79.
35. Diller+Scofidio, *Assemblage*, p. 25.
36. Diller+Scofidio, *Lotus International*, p. 78.
37. Damisch, 'Blotting Out Architecture?', p. 19.
38. Diller+Scofidio, *Blur: The Making of Nothing*, pp. 48–9.
39. See Raymond Fitch, *The Poison Sky: Myth and Apocalypse in Ruskin*, Ohio University Press, Athens OH, 1982.
40. Willsher, 'Is It a Cloud?', p. 15.

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The inorganic open

Nanotechnology and physical being

Nathan Brown

But what is an object?

Bernard Stiegler, *Technics and Time*

What is the status of the object in contemporary philosophy? How is the question of the object sutured to particular determinations of the concept of 'life' – a concept that, according to Giorgio Agamben, 'must constitute the subject of the coming philosophy?'¹ And how does the binding of the question of the object to the concept of life determine, in turn, the manner in which we negotiate the question of how modalities of being-in-the-world are connected to forms of material existence?

Such questions are not only in the air; they have crystallized, in less philosophically inflected forms, into the discipline of material culture studies, and more than a few good answers to them have been gathered by Bill Brown into an influential special issue of *Critical Inquiry* entitled *Things*.² In *Science Studies*, Bruno Latour has been leading a non-modern mission to 'rescue the non-humans', and Graham Harman, in the name of a new 'object-oriented philosophy', has urged contemporary thinkers to 'begin funneling arms and humanitarian aid toward some sort of guerrilla realism – a fresh insurgency on behalf of objects themselves'.³

Taking up the question of the object, the concept of life, and the problem of being-in-the-world, I direct these towards recent developments in nanoscale materials research and fabrication. These developments have raised the stakes of our opening questions, challenging philosophy to revise and to rearticulate the basic categories into which it has distributed discrepant modalities of material being. The new capacities of material *address* enabled by nanotechnology – the capability to image, to manipulate and to supervise the self-organization of matter at molecular and sub-molecular scale levels – threaten these categories in a number of ways. From the efforts of nanobiologists to

build 'molecular motors' by enlisting and expropriating the self-organizing capacities of DNA *outside* the biological enclosure of the cell, to the fabrication of DNA-wrapped carbon nanotubes that operate as sensors *inside* living cells, to 'bottom up' research and development programmes promising to 'assemble artificial cells from scratch using nonliving organic and inorganic materials', the hybrid, nonorganic entities that nanotechnology is *just about* to render operative thoroughly unsettle, displace and reassemble the articulations by which we attempt to differentiate living beings from 'merely' physical matter.⁴ As Geoffrey Ozin and André Arsenault note in a recently published textbook on nanochemistry, 'simple, elegant and robust attributes of self-assembly are now being combined with powerful methods of inorganic and solid-state chemistry to create materials with unprecedented structures, compositions and morphologies.' The capacity to manipulate and to characterize matter below the scale threshold at which its properties are determined by its molar composition has made it 'feasible to organize and connect organic, inorganic and polymeric chemical components with well-defined functions into integrated electronic, photonic, mechanical, analytical and chemical systems'.⁵

Such pronouncements are now routine among nanotechnologists and those who follow the development of the field. But while there is no question that nanotechnology has already produced material structures with unprecedented physico-chemical constitutions and genuinely novel properties, its proponents and apostles have had greater success in flaunting the conceptual entanglements with which it confronts philosophical and scientific taxonomies than in disentangling and precisely delineating the lines of demarcation along which it challenges ontological categories. In what follows, I unwind one such thread: the category of phenomenological 'access' as constitutive of living being. Tracking this thread through several recent

challenges to the famous theses of Heidegger's 1929/30 seminar regarding the being of stone, animal and man – and then winding it through the questions of sense and sensation posed by the so-called 'smart materials' engineered by nanotechnology – I follow this line of demarcation towards a concept of 'physical being' that would recognize another sense of what Heidegger calls 'world'. Could we articulate a concept that would thread such a line of demarcation right through the self-difference that the object has always been denied by philosophy? And would the articulation of such a concept make it possible to suture the rift between object and world which that denial has imposed – to sew together the very threshold which the non-living being of the object opens onto world?

Non-living without world (the stone)

A stone cannot behave in this way.

Martin Heidegger, *The Fundamental Concepts of Metaphysics*

Of the three theses elaborated by Heidegger in the 1929/30 seminar – according to which 'the stone (material object) is worldless; the animal is poor in world; man is world-forming'⁶ – it is perhaps the determination of the animal's modality of being that has provoked the most curiosity and the most insistent criticism among Heidegger's commentators. To mention only a few recent examples, the animal's poverty in world has been the primary subject of Akira Lippit's book, *Electric Animal*, of Jacques Derrida's final seminar at UC Irvine on 'The Beast and the Sovereign', and of Giorgio Agamben's *The Open*.⁷ The subtitle of Agamben's book, *Man and Animal*, is representative of the manner in which this attention to the animal – or more accurately to the 'simultaneous division and articulation of the animal and the human'⁸ – has often come at the expense of critical reflection upon the ontological status of the non-living being: the worldlessness of the stone.

As was the case in *Homo Sacer*,⁹ it is the articulation of *life* with which Agamben's analysis of 'the anthropological machine' is primarily concerned in *The Open*. The anthropological machine of Western science and philosophy, Agamben argues, produces a state of exception between man and animal, a zone of indeterminacy in which there 'is neither an animal life nor a human life, but only a life that is separated and excluded from itself – only a *bare life*' (TO 38). As might be expected given this focus upon the *biopolitical*, when Agamben enters into the engagement with Heidegger's 1929/30 seminar that will dominate that

latter half of *The Open*, he grants the first term of Heidegger's three theses, the stone, only one sentence: 'since the stone (the nonliving being) – insofar as it lacks any possible access to what surrounds it – gets quickly set aside, Heidegger can begin his inquiry with the middle thesis, immediately taking on the problem of what it means to say "poverty in world"' (TO 51). Quickly set aside by Heidegger, the stone, or the 'physical being' of the material object, is set aside even more rapidly by Agamben, whose analysis will not refer to the triadic structure of Heidegger's theses again. At what would seem like an opportune moment for an analytic intervention into the *frame* of Heidegger's thinking, a moment at which to raise one or two questions about the precise status of 'the nonliving', or to interrogate the concept of 'access' that determines Heidegger's denial of world to inorganic entities, Agamben leaves such concerns aside, casually following Heidegger in relegating such beings to worldlessness.

Heidegger's triple thesis is determined by a double distinction: a first distinction between the stone and the animal, and a second between animal and man. The first, which determines the stone as 'worldless' and excludes it from the sphere of 'life', is conditional upon the capability or incapability of beings for phenomenological 'access'. The stone exemplifies what Heidegger calls 'physical being' (FCM 192), a modality of being which is negatively determined as non-living, without access to an environment, and therefore without world. The stone is immobile and senseless: 'it lies upon the earth but it does not touch it', it 'crops up here or there, amongst and amidst a host of other things, but always in such a way that everything present around it remains essentially *inaccessible* to the stone itself'. If 'world', writes Heidegger, denotes 'those beings which are in each case accessible and may be dealt with, accessible in such a way that dealing with such beings is possible or necessary for the kind of being pertaining to a particular being', then the stone is worldless in so far as it does not have such access. It is 'essentially *without access* to those beings amongst which it is in its own way'. Worldlessness 'is constitutive of the stone in the sense that the stone *cannot even be deprived* of something like world', and it is precisely the fact of the stone's having no access that 'makes possible its specific kind of being, i.e., the realm of being of physical and material nature and the laws governing it' (FCM 196–7).

The animal's way of being, on the other hand, which Heidegger calls 'life', is '*not without access* to what is around it and about it, to that amongst which it appears

as a living being'. In so far as it has access to beings, the animal has world, and it 'stands on the side of man' rather than on the side of the stone (*FCM* 198–9). But the animal is 'poor in world' – as Agamben discusses at length in chapter 12 of *The Open* – in so far as its mode of access is that of captivation by its ring of disinhibitors. Heidegger writes that

Beings are not manifest to the behaviour of the animal in its captivation, they are not disclosed to it and for that very reason are *not closed off* from it either. Captivation stands outside this possibility ... to say that captivation is the essence of animality means: *The animal as such does not stand within a manifestness of beings. Neither its so-called environment nor the animal itself are manifest as beings.* (*FCM* 248)

While the stone is 'simply present at hand amongst other things', the animal 'finds itself suspended, as it were, between itself and its environment, even though neither the one nor the other is experienced as being' (*FCM* 198, 248).

The final eighty pages of Heidegger's seminar are devoted to an analysis of this 'as': a mode of comportment towards beings that is constitutive of 'world-forming' as the essential capability of the Dasein in man. The second distinction of the triple thesis in *The Fundamental Concepts* ultimately depends upon the concept of *projection* as the basis of the as-structure. As 'the fundamental structure of world-formation', projection is that which primordially opens access to being *as* being, and therefore opens the ontological difference. Projection, that *leaping ahead of itself* of Dasein even as it falls back into its thrown facticity, is the irruption of the 'between' of the ontological difference, and the 'as' designates the structural moment – the relational separation – of that originally irruptive between. Man is world-forming in so far as 'projection raises us away into and thus unveils the dimension of the possible', and this opening of the possible binds us to the actual *as* a project of formation (*FCM* 362, 364–5).

These two distinctions grounding Heidegger's triple thesis – the distinction of man from animal on the basis of projection, and the distinction of the stone from the animal or the plant on the basis of its not-having-access – are taken up and challenged, in turn, by Bernard Stiegler in *Technics and Time* and Jean-Luc Nancy in *The Sense of the World*.¹⁰ Agamben's analysis of the anthropological machine concentrates on the logical aporia of the genesis of language as that which falls into the irremediable fracture between man and animal. Stiegler carries out an excavation of this

fracture, cataloguing its mineral deposits. For Stiegler, what we find in this fracture is the stone. Working from theories of technological vitalism developed by Simondon and Leroi-Gourhan, Stiegler elaborates an account of the rift between animal and man as the site of a genetic drift whereby cortical evolution is codetermined by a process of *technical* evolution, a 'double emergence of cortex and flint'. For Stiegler, it is *this* problematic – the paradox of 'the technical inventing the human' and 'the human inventing the technical' – that precedes the logical aporia of the genesis of language, along with any possible distinction between man and animal. While Heidegger's triple thesis mediates the difference between stone and man through their respective difference from the animal, and while Agamben elides the stone altogether by focusing exclusively on 'man and animal', Stiegler confronts man directly with the inorganic matter that *enables* his evolution. 'Corticalization', he writes, 'is effected in stone' (*TT* 155, 137, 134).

Although Stiegler's analysis of Heideggerian ontology is devoted primarily to the analytic of Dasein in *Being and Time*, the consequences of that analysis for the distinctions deployed in the 1929/30 seminar are clear. Projection is effected by the temporalizing torque generated by that 'leaping ahead of oneself' constitutive of *anticipation* and that 'falling back into everydayness' conditioned by Dasein's thrownness within a context of factual existence.¹¹ According to Stiegler's analysis, both anticipation and the constitution of facticity depend upon a technical exteriorization of memory that founds historicity and opens futurity. Thus, *technics makes* projection possible, and the world-formation constitutive of Dasein in fact has its groundless ground in 'nonorganic organizations of matter' (*TT* 17). Projection *is* the structural coupling of man and material thing that Stiegler calls 'a 'mirror proto-stage' in the course of which the differentiation of the cortex is determined by the tool just as much as that of the tool by the cortex: a mirror effect whereby one, looking at itself in the other, 'is both deformed and formed in the process'. In other words, world formation is an irreducibly double process, a 'double plasticity' by which the inorganic object and the human are *informed* of and by the other. In *Technics and Time*, the essence of man falls into an opening *within* the fracture between animal and man: the de-fault of origin between cortex and flint. The question posed by this analysis to the ontological schema of Heidegger's 1929/30 seminar is: 'what plasticity of gray matter corresponds to the flake of mineral matter?' (*TT* 158, 142, 135).

For our purposes here, however, there are two problems with Stiegler's account of the 'invention of the human.' The first is that his writing occasionally imports anthropomorphic language into descriptions of processes of genetic drift. The cortex and the tool are involved in a 'mirror proto-stage ... whereby one look[s] at itself in the other [*l'un se regardant dans l'autre*]'.

Such a visual metaphor begs the question of 'access' grounding Heidegger's distinction between life and non-living being. The second problem is that, for Stiegler, the stone is only included in the event of world-formation in so far as it functions as a 'technical object' – an 'inorganic organized being' as opposed to the evidently unorganized 'inorganic beings of the physical sciences'. Beginning his study with a critique of the Lamarkian distribution of physical bodies into two classes – 'the non-living, inanimate, inert' and the organic being – Stiegler elaborates the ontology of technical objects as 'a third genre of "being"'. Technical objects, Stiegler argues, 'have their own dynamic when compared with that of either physical or biological beings, a dynamic, moreover, that cannot be reduced to the "aggregate" or "product" of these beings'. 'There is a historicity to the technical object', he writes, 'that makes its descriptions as a mere hunk of inert matter impossible.' Thus, for all of Stiegler's attention to the agency of stone in the event of projective temporalization, the non-living being only has access to world or contributes to world-formation in so far as it ceases to function as a 'mere hunk of inert matter' by becoming structurally coupled with life, and this constitutes a 'becoming-organic' (TT 17, 1, 17, 71). In *Technics and Time*, the ontology of 'merely' inert being – introduced on page 1 and recurred to only in contradistinction to the dynamism of the technical object – is ultimately left aside in a manner similar to Agamben's abandonment of the stone.

It is precisely this question of whether or not such a 'merely' inorganic being has any sort of 'access' to world – outside of any *necessary* relation to life – that Jean-Luc Nancy takes up in a chapter titled 'Touching' in *The Sense of the World*. Nancy is one of the few thinkers to challenge Heidegger's determination of 'physical being' directly, quoting the 1929/30 seminar at length:

The stone is without world. The stone is lying on the path, for example. We can say that the stone is exerting a certain pressure upon the surface of the earth. It is 'touching' the earth. But what we call 'touching' here is not a form of touching at all in the stronger sense of the word. It is not at all like *that* relationship which the lizard has to the stone on which it lies basking in the sun. And the touch-

ing implied in both cases is above all not the same as *that* touch which we experience when we rest our hand upon the head of another human being ... Because in its being a stone it has no possible access to anything else around it, anything that it might attain or possess as such. (SW 59)

Nancy's questions for Heidegger are as follows: 'Why is access determined here *a priori* as the identification and appropriation of the other thing?'; 'Why could the world not also *a priori* consist in being-among, being-between, and being-against? In remoteness and contact without "access?" Or on the threshold of access' (SW 59–60). It is this 'threshold' of access that Nancy identifies with the taking-place of 'sense'. Heidegger fails to situate the object at this threshold, Nancy argues, because he 'apparently fails to weigh precisely the weight of the stone that rolls or surges forth onto the earth, the weight of the *contact* of the stone with the other surface, and through it with the world as the network of all surfaces. He misses the surface in general' (SW 61). For Nancy, the surface designates the interface of the 'toward-itself' and the 'in itself' – an interface that *is* the world where sense takes place. 'The *différance* of the toward-itself, in accordance with which sense opens, is inscribed *along the edge* of the "in itself".' The world of sense, or the sense of the world, consists in 'matter forming itself, form making itself firm', and if the stone does not 'have' access, it is not therefore without world. Rather, on the outside of predication, *it is world that without*. World-forming takes place along the surface of that exteriority where 'all bodies, each outside the others, make up the inorganic body of sense' (SW 62–3).

Stiegler's intervention into the determination of Heidegger's ontological categories is to fold non-living being directly into man's essence as Dasein by demonstrating the dependency of projection upon the inorganic materials that enable exteriorization. Nancy challenges the worldlessness of the stone by describing the contact of material surfaces as that which forms world by forming the distributed being of sense. These interventions matter in so far as they situate non-living being *within* the formation of world that Heidegger accords only to Dasein, while situating world *outside* the predication of access that Heidegger reserves only for 'life'.

For Agamben, 'Western politics is, in its origin, biopolitics', but in *The Open* the site of the biopolitical is determined only as the conflict 'between the animality and the humanity of man' that constitutes 'the decisive political conflict in our culture' (TO 80). Stiegler and Nancy help us register the degree to which this conflict

itself depends upon the exclusion of a third term: the physical being of inorganic matter – an exclusion that founds the category of the biological.

Threshold (physical being)

Every limit concept is always the limit between two concepts.

Giorgio Agamben, *Homo Sacer*

As I have already suggested, the necessity, today, of including non-living being within the order of the biopolitical – and of opening biopolitics to its outside – is made particularly pressing by the research and development programme of nanotechnology, which seeks to fabricate nonorganic entities bearing those capacities for environmental stimulus and behavioural response that Heidegger ascribes to life, ‘the kind of being that pertains to animals and plants’ (*FCM* 191).

In order to ‘exemplify the general structure of the environment proper to all animals’, Agamben refers to the behaviour of a tick described by Heidegger’s primary reference on animal behaviour, Jacob van Uexküll. As Agamben notes, the behaviour of the blind and deaf tick is entirely regulated by a very minimal array of sensory data, or ‘carriers of significance’: the sensitivity of its skin to light, the odour of butyric acid emitted by mammals, the temperature of 37 degrees celsius corresponding to that of mammalian blood, and the tactile properties of its prey’s skin. The lifeworld of the tick described by van Uexküll consists entirely in the absorption of these sensory triggers, by which it locates and consumes the nourishment that it requires to reproduce before dying.¹²

It is precisely this sort of relation to an environment – the captivation of an entity by sensory disinhibitors – that scientists are attempting to engineer into polymers, bio-synthetic materials, and nano-scale sensors and actuators that are ‘not without access to their environment’.¹³ The procedure of nanoscience and technology is often to study structures and processes of organic life – such as viral architecture, bacterial self-replication, molecular self-assembly, and biological stimulus/response systems – in order to replicate those structures and processes in material contexts that are not confined by the cellular organization or the chemical requisites of the organism.¹⁴ It is crucial to note that this research and development programme relies upon precisely the decoupling of a ‘mode of being’ from any *essential* determination by physico-chemical structure – precisely the decoupling for which Heidegger argues in his analysis of world. Nanotechnology studies the physio-chemistry of life

in order to replicate the *phenomenon* of living being in ‘non-living’ matter.

Minoru Taya, for example, director of the Center for Intelligent Materials and Systems at the University of Washington, characterizes biological systems as ‘ideal adaptive structures with smart sensing capabilities’. ‘The knowledge gained from studying biological mechanisms’, he notes, ‘are key input for designing adaptive structures and intelligent materials.’ Among other things, Taya studies the principles of touch and light sensing in plants for their applicability to trigger, modify and control actuation mechanisms in intelligent materials, and he investigates the potential of artificial, polymer gel-based actuators as an alternative to biological, filament-based muscles.¹⁵ But while Taya’s research involves micro- and macro-scale materials, one application with the potential to link those larger-scale levels with nanoscale technology are the ‘nano skins’ designed by Pulickel Ajayan’s research team at Rensselaer Polytechnic Institute.

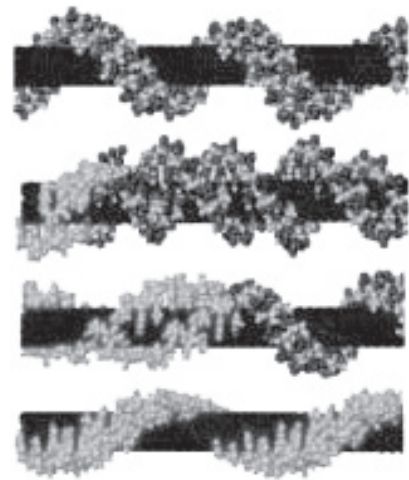


Courtesy of Rensselaer/Yung Joon Jung

Nano-skins are flexible hybrid composite materials consisting of a polymer substrate embedded with organized arrays of carbon nanotubes – cylindrical tubes of hexagonally organized carbon atoms more than 10,000 times smaller than the diameter of a human hair. Since the composite membranes operate as field emitters, they are being developed as a template for flexible electronic devices. And because the nanotube arrays maintain their high conductivity and electrical sensitivity when embedded in the polymer, they could be used as adhesive structures, pressure sensors or gas detectors.¹⁶ They also represent a promising step towards the sort of bio-mimetic sensors described by Taya, in so far as carbon nanotubes have the capacity to convert mechanical signals into electrical signals – one of the key functions of epidermal cells in plant and animal stimulus/response systems. As Ajayan has demonstrated with a research team at the University of Akron, nanotube arrays embedded in polymers can be used to mimic the action of microscopic sensory hairs on epidermal surfaces, which in the actuation

system of the Venus flytrap, for example, serve to carry mechanical stimuli to a receptor cell which then converts those stimuli into an electrical signal, propagating ion flow through neighbouring cells and activating the plant's motile action.¹⁷ This bio-mimetic capacity of nanoskins is particularly notable when considered alongside the work of MIT engineers on macro-scale solid compounds that expand and contract through ion flow. Starting with compounds commonly found in lithium-ion rechargeable batteries, the MIT research team led by Yet-Ming Chiang and Steven Hall has developed prototypes of electrochemically actuated 'morphing materials' that offer 'a synthetic counterpart to the nastic actuation mechanism in plants'.¹⁸

The capacity of nanoscale materials to operate as mechanical sensors and electrochemical signals – and the potential of coupling of such sensors to actuation mechanisms – is also demonstrated by the DNA-wrapped carbon nanotubes engineered by Michael Strano's research team at the University of Illinois at Urbana–Champaign. The sensors designed by Strano's team consist of a strand of DNA wrapped around a single-walled carbon nanotube 'in much the same fashion as a telephone cord wraps around a pencil'.¹⁹ Exposed to the ions of certain atoms, negative charges along the strand of DNA are neutralized, altering its shape and reducing its surface area. This shift perturbs the electronic structure of the carbon nanotube, altering its emission energy – a process that is reversed when the DNA is no longer exposed to such ions.



Courtesy of University of Illinois at Urbana–Champaign/Heller

Strano's team reports that 'the nanotube surface acts as the sensor by detecting the shape change of the DNA as it responds to the presence of target ions', and this response can be measured, enabling

the detection of low concentrations of mercury ions in mammalian cells and tissues.²⁰ The project of researchers like Deborah Estrin, Founding Director of the Center for Embedded Networked Sensing at UCLA, is to integrate such nanoscale devices into 'massively distributed collections of smart sensors and actuators embedded in the physical world'. Such networks would not only operate both in and outside the bodies of

that world's 'living inhabitants'; they would also have to function as 'self-configuring systems that adapt to unpredictable environments where pre-configuration and manual intervention are precluded'.²¹

It is not at all my intention to argue here that the entities fabricated by nanotechnology, nor the distributed networks into which they may eventually be embedded, are 'alive', nor that the category of 'life' should be expanded to include them. Nor is it incumbent upon my argument to demonstrate that such entities share 'the kind of being that pertains to animals and plants'. My argument, rather, is that *if* the 'way of being' called 'life' is to be determined as 'not without access to what is around it and about it' (*FCM* 198), and *if* that way of being is to be delimited by the material object's 'not having access', then this determination and this delimitation are thrown into crisis by the entities that nanotechnology is in the process of fabricating.

Consider the threshold at which we are situated from the 'other side' of the limit concept – *access* – that is articulated by Heidegger as the limit between two other concepts, living and non-living being. If nanotechnology indicates a vector along which the material object attains access to its environment, Agamben relates a story about van Uexküll's tick that indicates a counter vector, along which the animal is effectively denied access to its world, deprived of any sensory stimuli in a modality of being similar to that of Heidegger's stone – while nonetheless remaining 'alive'. Agamben relays van Uexküll's brief reference to a certain tick that, in a laboratory in Rostock, 'was kept alive for eighteen years without nourishment, that is, in a condition of absolute isolation from its environment'. 'How is it possible', Agamben asks, 'for a living being that consists entirely in its relationship with the environment to survive in absolute deprivation of that environment' (*TO* 47). 'Perhaps', he conjectures, 'the tick in the Rostock laboratory guards the mystery of the "simply living being", which neither Uexküll nor Heidegger was prepared to confront' (*TO* 70). In other words, the isolated tick becomes Agamben's figure for 'bare life', the threshold state with which, as he argues in *Homo Sacer*, the biopolitical body of the West is now completely identified. In calling for a 'completely new politics', Agamben argues that 'this biopolitical body that is bare life must itself ... be transformed into the site for the constitution and installation of a form of life that is wholly exhausted in bare life and a *bios* that is only its own *zoē*.' 'Today', he writes, '*bios* lies in *zoē* exactly as essence, in the Heideggerian definition of Dasein, lies (*liegt*) in existence' (*HS* 188).

But in specifying that the tick can survive in its state of deprivation ‘without, however, either ceasing to be an animal or becoming human’ (*TO* 70), Agamben himself perhaps fails to confront the consequences of Heidegger’s ontological schema for the condition of this biopolitical body, since the condition of ‘not-having-access’ would have to specify, precisely, the becoming-stone of the animal. As a non-living being, ‘the stone’, writes Heidegger, ‘cannot be dead because it is never alive’ (*FCM* 179). But the tick becomes, paradoxically, a stone that *remains* alive. It attains the state of non-living being, deprived of any and all *access* to its environment, yet nonetheless retains the capacity to die. The tick does indeed occupy the zone of indistinction where we find ‘neither an animal life nor a human life, but only a life that is separated and excluded from itself’ (*TO* 38). But the tick occupies this zone of bare life in the modality of non-living being. In fact, this utterly paradoxical being escapes any of the categories of stone, animal or man designated by Heidegger. In the becoming-animal or becoming-plant of the ‘material objects’ engineered by nanotechnology, and in the becoming-stone of the animal exemplified by the isolation of the tick in the Rostock Laboratory, Heidegger’s triple thesis undergoes an implosion on the *outside* of the binary distinction between man and animal that Agamben deconstructs. And this outside is, of course, also the inside of that distinction, in so far as it is the ground upon which the *zoē* common to man and animal, and to all living beings, can be delimited in the first place.

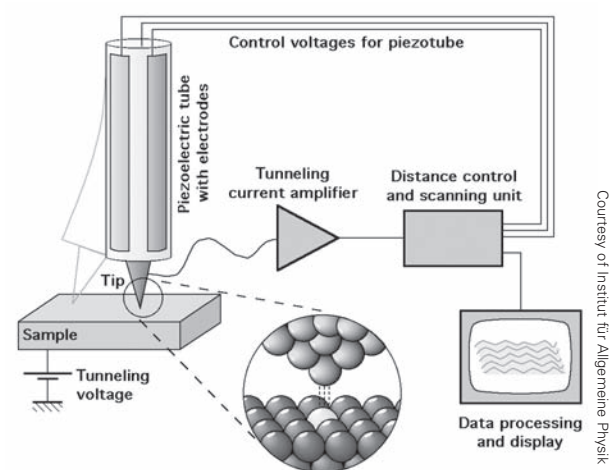
‘Every limit concept is always the limit between two concepts’, we read in *Homo Sacer* (11). But what if, sometimes, a limit concept like *haplōs* being, or *the open*, were not the limit ‘between’ two concepts, but rather a limit traversing (at least) three, such as ‘stone’/‘animal’/‘man’? Or in Agamben’s terms: to include non-living being within the order of the biopolitical while thinking the site of biopolitical struggle beyond the frame of biological existence would be to expose bare life to its outside by thinking ‘physical being’ as a limit concept that includes *zoē* and *bios* as and along with ‘material things’. How can we think physical *being* not as that being-without-access that Heidegger assigns to the stone, but rather as a threshold condition of ‘all bodies, each outside the others’ (Nancy, *SW* 63)? And how are we to articulate and position such a concept as conditioned by the incipient nanotechnological programme of ‘designing a new material world’?²²

If the global distribution and integration of multi-scale sensor/actuator systems envisioned by the Center

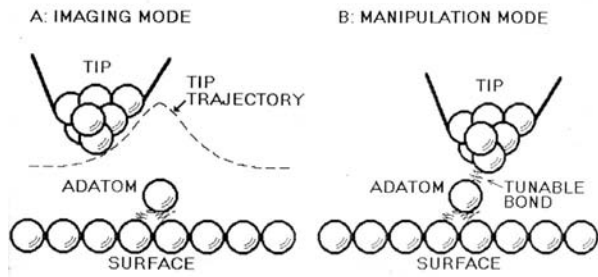
for Embedded Networked Sensing brings us to the limit at which the entire physical world is ‘not without access’ to itself, it may be one of the earliest enabling technologies of nanoscale research and fabrication, the Scanning Tunneling Microscope (STM), that most elegantly demonstrates the singular case of *sense* – the limit case of ‘being-toward’. Moreover, it situates this limit precisely at an interface which Stiegler leaves unthought: not only that between ‘man’ and ‘technical object’ but *also* that between the technical object and the ‘mere hunk of inert matter’.

The STM is capable of producing images of single atoms through a ‘tactile’ interface (since single atoms are too small to refract light). The basis for its operation is the quantum mechanical phenomenon of electron tunnelling, whereby an electron ‘jumps’ between two proximate atoms. When a tiny conducting needle, narrowing to a single atom at its tip, is brought into proximity with a conducting or semi-conducting surface, electrons ‘tunnel’ between the atomic tip and the atoms of the sample. A current can be established at this interface by applying voltage between the tip and the sample, and since the magnitude of that current is minutely sensitive to the distance between the two conductors, it can be used to establish a feedback loop that will adjust the position of the tip in accordance with the atomic topography of the sample. Mounted on a piezoelectric transducer that adjusts its height with finite control, the tip is scanned across a surface, rising or falling in accordance with the atomic terrain it encounters. As it moves, the position of the tip is measured and converted into a digitally mediated visual map of the sample’s atomic structure. The STM can also operate in a positioning mode, whereby single atoms can be manipulated by the tip with exact precision.²³

In the case of the STM, our ‘access’ to any information whatsoever about this particular environment is conditional upon the being-toward of two atoms and

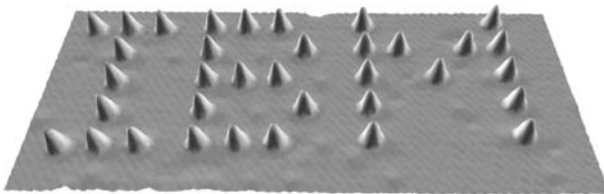


Courtesy of Institut für Allgemeine Physik



upon the being-between of the electrons exchanged through a network of surfaces. It is conditional upon the being-with of the interface. But in the first atomic positioning experiment in 1989, this profound evocation of ‘the threshold of access’ was used to inscribe the sign and seal of a multi-national corporation whose international business machines were instrumental to the administration of the biopolitical horrors analysed by Agamben in *Remnants of Auschwitz*.²⁴

If the thirty-five xenon atoms used to spell I-B-M,²⁵ quivering at the threshold of sense, are the *non-living* harbingers of the ‘unprecedented biopolitical catastrophe’ of which Agamben warns in the final sentence of *Homo Sacer*, then what we require is a suturing of ontology to politics that would include their physical being as at once otherwise than living, otherwise than without access, and otherwise than ‘merely’ inert matter.



World without, non-living (nothing-otherthan-object)

It is only in turning to stone that the threshold presences at all.

Martin Heidegger, ‘Language’

How can *physical being* be situated as a limit concept traversing at least three concepts – those demarcated by Heidegger as stone, animal and man? And how could the limit of *physical being* be thought as the open?

Even if world formation remains the exclusive privilege of ‘the *Da-sein* in man’ throughout his oeuvre, there are nonetheless indications in Heidegger’s later work that are conducive to the construction of such a concept. Nanotechnology has become perhaps the most insistent technocultural signifier of what Heidegger, in ‘The Age of the World Picture’, calls ‘the incalculable’:

the simultaneous appearance of ‘the gigantic’ and of a ‘tendency toward the increasingly small’ which signifies the limit of modern technology’s ‘autonomous transformation of praxis’. The incalculable, Heidegger writes, is ‘that which, withdrawn from representation, is nevertheless manifest in whatever is, pointing to Being, which remains concealed’. If, however, the incalculable is the withdrawn index of Being itself – its ‘invisible shadow’ – it nevertheless remains the case that, within Heidegger’s thinking, that which it indexes can only be accessed in its concealment by man, ‘the shepherd of Being’. According to Heidegger, ‘man will know, i.e., carefully safeguard into its truth, that which is incalculable, only in creative questioning and shaping out of the power of genuine reflection.’²⁶

But one should remain alert to a significant tension inherent to the manner in which ‘the power’ of such ‘genuine reflection’ is figured in Heidegger’s writing. In fact, the modality of man’s being through which he is opened to world has less to do with questioning than with being-in-question, less to do with shaping than with being-shaped, and less to do with the power of genuine reflection than with a powerless exposure to exteriority. The rhetoric in which the world-forming capacity of man is described suggests that it involves a veritable becoming-object. If the stone is that which ‘crops up here or there, amongst and amidst a host of other things’, passively given over to the contingencies material existence, then man only attains access to world in so far as he approaches the threshold of this modality of being:

That which is does not come into being at all through the fact that man first looks upon it, in the sense of a representing that has the character of subjective perception. Rather, man is the one who is looked upon by that which is; he is the one who is – in company with itself – gathered toward presencing, by that which opens itself. To be beheld by what is, to be included and maintained within its openness and in that way to be borne along by it, to be driven about by its oppositions and marked by its discord – that is the essence of man in the great age of the Greeks.²⁷

The being spoken of here is neither an organism behaving in response to its ‘own’ environment, nor a reflective subject. It is an entity that is looked upon by that which is, borne along, driven about, and marked by discord. Heidegger says of the stone: ‘if we throw it in the meadow then it will lie wherever it falls. We can cast it into a ditch filled with water. It sinks and ends up lying on the bottom’ (*FCM* 197). Although the utterly callous ‘comportment’ of this scenario

is all too obvious, it is nevertheless this aggressive activity of subject that man must exchange for the passivity of the object before he will be gathered into the open. Agamben tells us that ‘precisely because the world has been opened for man only by means of the suspension and capture of animal life, being is always already traversed by the nothing; the *Lichtung* is always already *Nichtung*’ (TO 80). But here, at the very pivot of Heidegger’s thinking of Being, it is not the suspension and capture of animal ‘life’ that opens world. Rather, world opens through the suspension and capture of ‘man’ by physical being.

Even if this is a strategically tendentious reading of this passage in Heidegger (since man ‘is the one’ through whom this suspension occurs), we can nonetheless recognize that ‘the essence of man’ and the opening of world is situated here *at* the threshold of physical being – the same threshold at which we found Agamben’s tick, and at which, from the other side of ‘access’, Nancy situates the stone. And it is *within* this threshold that we encounter those ‘incalculable’ entities engineered by nanotechnology. *Through* this threshold, any entity whatever is exposed as other than itself, precisely in so far as it is nothing other than itself. The name that we will momentarily assign to this chiasmic threshold – at which an object is opened to world through its openness to other entities, and at which world is opened to any living entity in so far as it approaches the condition of the object – is *nothing-otherthan-object*.

Within the broadly Heideggerian frame in which we have been working, the question of physical being, qua being, is the question of how any entity whatever is traversed by the nothing. Nothing, for Heidegger, is that ‘concealed essence of Being’ towards which the invisible shadow of the incalculable points. In the penultimate appendix to ‘The Age of the World Picture’, Heidegger inscribes the following famous sentences:

But Nothing as that Nothing which pertains to the having-of-being is the keenest opponent of mere negating. Nothing is never nothing; it is just as little a something, in the sense of an object [*Gegenstand*]; it is Being itself, whose truth will be given over to man when he has overcome himself as subject, and that means when he no longer represents that which is as object [*Objekt*].

We should take a moment to work through the obvious inadequacy of the English term ‘object’ to the distribution of Heidegger’s German terminology in these formulations. Nothing is never something, ‘in the sense of *Gegenstand*’, and the truth of Being

itself will be given over to man ‘when he no longer represents that which is as *Objekt*’. While ‘something’ is given as the sense of *Gegenstand*, it is ‘that which is’ that is represented by the subject as *Objekt*. One might formulate the relation between these two senses of ‘object’ as follows: it is only in so far as it is *represented* as *Objekt* that ‘that which is’, for a subject, becomes *Gegenstand*; or, it is only in so far as Nothing is represented by a subject as an object that it appears to be something, which it *is not*. It is crucial to note here that it is not so much its ontological status that divides ‘that which is’ from the category of *Objekt*. Rather, it is the *representation* of ‘that which is’ as *Objekt* that divides the subject from the truth of Being by converting it into *Gegenstand* – an object for a subject.²⁸

We can begin to follow the consequences of this logic towards a concept of physical being in its openness to world. Nothing is never *Gegenstand*, or that which man *represents* as *Objekt*, so Being itself will only be identified with Nothing as that which is other than ‘something’ or *Objekt-for-a-subject*. But in so far as it is ‘never nothing’, Nothing, or Being itself, is nothing other than *Objekt*, subtracted from its representation as such by a subject. Attempting to convey this complex conceptual nexus in English, one could therefore formulate the paradoxical relation of Being itself to the object in itself (*Objekt in sich*) as follows: that which is nothing other than object is Nothing, that which is other than ‘object’. The concept that includes this irreducible duplicity – this immanent otherness of that which is never nothing and yet not something – could thus be named *nothing-otherthan-object*. This concept excludes *Gegenstand* from its referential field, and it therefore does not involve any *representation* by a subject of that which is as *Objekt*. Returning to the consequences of Heidegger’s thinking of man in his essence as ‘the one who is looked upon by that which is’, we might then say that man overcomes him/herself as subject – ceases to *represent* that which is as object – precisely in so far as he/she becomes *nothing-otherthan-object*.

Thought as *nothing-otherthan-object*, the open transpires neither through the boundless life of the animal celebrated by Rilke’s Eighth Duino Elegy, nor through man’s ‘power of genuine reflection’, but rather through a projectivism proper to physical being, thought here as a category traversing stone, animal and man. That cognate of the open, Nothing – or Being itself – is nothing other than the otherness of objects to each other, and nothing other than the otherness of objects to identity. Such a conceptualization of physical being,

qua being, affirms Heidegger's thinking of Being as the opening of world, but it thinks the distribution of the opening of the ontological difference equally among all entities, such that any entity whatever, and every entity at once, is 'the shepherd of being'. Within a Heideggerian frame, nothing-other-than-object thus operates as the limit concept we have been seeking. It specifies a threshold condition common to non-living, living and human being, and therefore passing between and through three categories as we find them in Heidegger: 'stone', 'animal' and 'man'. It specifies the suturing of any entity whatever to 'Being itself' as the threshold upon which it is open to world through its exposure to an outside. Such a concept does not imply that there is 'no difference' between discrepant types of entities. Rather, it affirms the difference in the modality of being of every entity, while recognizing differentiation itself as that 'essence' of physical being that is indifferent to any particular qualification of being-there.

Let me close by situating this concept, nothing-other-than-object, more precisely in relation to Agamben's thinking of the biopolitical, of which this essay has been persistently critical. In *Homo Sacer*, Agamben calls for a suturing of ontology to politics that would think the 'space of exception in which a purely bare life, entirely controlled by man and his technology, appears for the first time' (HS 164). 'Biopower's supreme ambition', Agamben writes in *Remnants of Auschwitz*, 'is to produce, in a human body, the absolute separation of the living being and the speaking being, *zoē* and *bios*, the inhuman and the human – survival.' It is this 'essentially mobile threshold that, like the borders of geopolitics, moves according to the progress of scientific and political technologies'²⁹ that biopolitics attempts to track and to specify. But because in Agamben's discourse this mobile threshold is *never* situated precisely between living and non-living being, but only between variant concepts of life, or between life and death, it cannot specify the site at which power's 'supreme ambition' operates in the case of nanotechnology.

It has been my argument that nanotechnology forces us to confront a threshold at which non-living being is not-without-access, nor without world, and I have also argued that the projective opening of world through 'the *Da-sein* in man' itself occurs at the threshold of physical being. Nothing-other-than-object has been posited as a concept adequate to this sort of mobile threshold – one that does not only pass between life and death or man and animal, but that passes through and between the physical being proper to all entities in

their being-there. Such a concept should not, however, be taken merely as a celebratory deconstruction of the Heideggerian schema stone/animal/man, or of Agamben's framing of biopolitics. It is intended, rather, as a constructive manoeuvre – positioned at once within and yet refractory to Heidegger's discourse on technology – towards a sombre reckoning with those contemporary operations of corporate technoscience that aspire to the absolute domination not only of bare life but of physical being: as nanotech enthusiast K. Eric Drexler puts it, to 'nearly complete control of the structure of matter'.³⁰

An ethics and a politics capable of engaging this technoscientific horizon of the twenty-first century will have to think not only the biopolitical body of the West, but also the non-living sense of the world, or world without, non-living. The threshold of *haplōs* being at which that which appears is sutured to that which is – the very opening of world which power occludes and over which it attempts to exert control – cannot simply be conceived of as *zoē*, but has to be thought through physical being. For if physical being is what has always been excluded from the opening of world then this exclusion amounts to the closure of world and the failure of any effort to link politics with ontology. And if the first imperative of any ethics or politics is to think that which it excludes as the limit to which it must be addressed, the concept *nothing-other-than-object* is posited here as a first step towards such a thinking. But it is only a first step, in so far as it challenges us to extrapolate from this aporetic limit within Heidegger's thought – and its contemporary redeployments – another approach to the inorganic open altogether.³¹

Notes

1. Giorgio Agamben, 'Absolute Immanence', in *Potentialities*, trans. Daniel Heller-Roazen, Stanford University Press, Stanford, 1999, p. 238.
2. *Critical Inquiry*, vol. 28, no. 1, Autumn 2001. The essays in Brown's special issue, along with some additional material, have been gathered into a book: Bill Brown, ed., *Things*, University of Chicago Press, Chicago, 2004.
3. See Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies*, Harvard University Press, Cambridge MA, 1999, and 'Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern', *Critical Inquiry*, vol. 30, no. 2, Winter 2004, pp. 225–48; Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects*, Open Court, Chicago, 2002, p. 216, and *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things*, Open Court, Chicago, 2005. Latour's important article on matters of concern – and its eventual inclusion in Bill Brown's volume *Things* – provides an opportunity to address my decision in

- this article to focus upon the term ‘object’ rather than ‘thing’. This decision is particularly crucial given the extensive engagement with Heidegger that my conceptualization of the object involves. As Latour notes, ‘all [Heidegger’s] writing aims to make as sharp a distinction as possible between, on the one hand, objects, *Gegenstand*, and, on the other, the celebrated *Thing*.’ ‘What would happen’, Latour asks, ‘if we tried to talk about the object of science and technology, the *Gegenstand*, as if it had the rich and complicated qualities of the celebrated *Thing*?’ (233). Suggesting that we consider all objects with the same ‘enthusiasm, engagement, and complexity’ that Heidegger reserves for his primary exemplar of *das Ding*, the jug, Latour argues that ‘Heidegger’s mistake is not to have treated the jug too well, but to have traced a dichotomy between *Gegenstand* and *Thing* that was justified by nothing except the crassest of prejudices’ (234). But despite his desire to erase this dichotomy, Latour’s rhetoric nonetheless preserves it by suggesting that while certain very complex objects (like dolomite, or Einstein’s Patent Bureau electric coordination of clocks in Bern) demand treatment as Things, or gatherings, or matters of concern, other evidently less complex objects (a standard ‘banal rock’ [234]) are reducible to matters of fact. ‘Things that gather cannot be thrown at you like objects’, he writes. They are ‘highly complex, historically situated, richly diverse matters of concern’ (237). To my mind, this rhetorical decision leaves the English term ‘object’ unrecuperated, suggesting (like Heidegger) that only those objects which are sufficiently complex to be considered Things are worthy of philosophical attention. Thus, throughout this article, the term ‘object’ will be applied indifferently to ‘banal rocks’ and to the ‘complex’ objects fabricated by nanotechnology. The Heideggerian rumination on *das Ding* will be left aside entirely, since the issue here will be the recuperation of the self-difference and openness to world of any object whatever. The concept ‘nothing-otherthan-object’ that is developed in the final section of this article emerges rather out of Heidegger’s differential usage of the two German terms *Gegenstand* and *Objekt*, whose discrepant denotation is elided by the English term ‘object’. Nothing-otherthan-object constitutes an attempt to mark the physical being, qua being, of the object, in a manner that acknowledges the impossibility of ‘representing’, as a subject, that which is *Objekt*. See note 28, below.
4. Nadrian C. Seeman, ‘Nanotechnology and the Double Helix’, *Scientific American*, vol. 290, no. 6, 2004, pp. 65–75; Daniel A. Heller et al., ‘Optical Detection of DNA Conformational Polymorphism on Single-Walled Carbon Nanotubes’, *Science*, vol. 311, no. 5760, 2006, pp. 508–11; Steen Rasmussen et al., ‘Transitions from Nonliving to Living Matter’, *Science*, vol. 303, no. 5660, 2004, p. 936. See also Bernard Yurke et al., ‘A DNA-Fuelled Molecular Machine Made of DNA’, *Nature* 406, August 2000, pp. 605–8; and Andrew Turberfield, ‘DNA as Engineering Material’, *Physics World*, vol. 16, no. 3, March 2003, pp. 43–6. Carbon nanotubes are cylindrical tubes of hexagonally organized carbon atoms more than ten thousand times smaller than the diameter of a human hair. They can be ‘grown’ through induced self-organization in a laboratory. On the speculative performance of the ‘already unfolding’ future in what he calls ‘nanorhetoric’, see Colin Milburn, *Nanovision*, forthcoming from Duke University Press.
 5. Geoffrey A. Ozin and André C. Arsenault, *Nanochemistry: A Chemical Approach to Nanomaterials*, Royal Society of Chemistry, Cambridge, 2005, p. 32.
 6. Martin Heidegger, *The Fundamental Concepts of Metaphysics: World, Finitude, Solitude*, trans. William McNeill and Nicholas Walker, Indiana University Press, Bloomington, 1995, p. 177. Cited hereafter in text as *FCM*.
 7. Akira Lippit, *Electric Animal: Toward a Rhetoric of Wildlife*, University of Minnesota Press, Minneapolis, 2000; Giorgio Agamben, *The Open: Man and Animal*, trans. Kevin Attell, Stanford University Press, Stanford, 2004). Derrida’s seminar on ‘The Beast and the Sovereign’ took place at the University of California at Irvine, 2002–04. The seminar is as yet unpublished.
 8. Agamben, *The Open*, p. 92. Cited hereafter in text as *TO*.
 9. Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen, Stanford University Press, Stanford, 1998. Cited hereafter in text as *HS*.
 10. Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins, Stanford University Press, Stanford, 1998. Cited hereafter in text as *TT*. Jean-Luc Nancy, *The Sense of the World*, trans. Jeffrey S. Librett, University of Minnesota Press, Minneapolis, 1997. Cited hereafter in text as *SW*.
 11. Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson, HarperCollins, San Francisco, 1962. On anticipation, see paragraphs 61 and 62. On falling and thrownness, see paragraph 38.
 12. Van Uexküll’s description of the tick’s *Umwelt* is quoted by Agamben in *The Open*, p. 46.
 13. Sarah Tomlin defines such so-called ‘smart materials’ in a manner that precisely evokes Heidegger’s determination of living being as ‘not without access’ to an environment by which it is bound in captivation: ‘To qualify as truly “smart”, a material has to sense changes in its environment and respond to them in an appropriate way. It must also do this reliably, over and over again.’ See ‘Getting to Grips with Smart Materials’, *Nature: Materials Update*, April 2002, www.nature.com/materials/news/news/020404/portal/m020404-4.html (accessed 15 May 2006).
 14. On the rhetoric of ‘postbiological life’ and of the ‘post-vital’ that accompanies nanotechnology’s disintegration of the organism, see Colin Milburn, ‘Nano/Splatter: Disintegrating the Postbiological Body’, *New Literary History* 36, 2005, pp. 283–311.
 15. Minoru Taya, ‘Bio-inspired Design of Intelligent Materials’, *Smart Structures and Materials 2003: Electroactive Polymer Actuators and Devices*, July 2003, pp. 54–65.
 16. Yung Joon Jung et al., ‘Aligned Carbon Nanotube-Polymer Hybrid Architectures for Diverse Flexible Electronic Applications’ *Nano Letters*, vol. 6, no. 3, 2006, pp. 413–18.
 17. Taya, ‘Bio-Inspired Design’, pp. 54–5.
 18. Yukinori Koyama et al., ‘Harnessing the Actuation Potential of Solid-State Intercalation Compounds’, *Advanced Functional Materials* 16, 2006, p. 498. The authors note that such materials ‘could enable generalized, large-scale structural actuation, future applications of which could include shape-morphing hulls and wings for air and water vehicles, robotics, and other ‘smart’ or adaptive structures’ (492).

19. University of Illinois at Urbana-Champaign, 'DNA-wrapped Carbon Nanotubes Serve as Sensors in Living Cells', *Science Daily*, 27 January 2006, www.sciencedaily.com/releases/2006/01/060126195041.htm (accessed 20 May 2006).
20. Daniel A. Heller et al., 'Optical Detection of DNA Conformational Polymorphism on Single-Walled Carbon Nanotubes', *Science*, vol. 311, no. 5760, 2006, p. 510.
21. See the Center for Embedded Network Sensing homepage at http://research.cens.ucla.edu/portal/page?_pageid=59,43783&_dad=portal&_schema=PORTAL.
22. Gregory B. Olson, 'Designing a New Material World', *Science*, vol. 288, no. 5468, May 2000, pp. 993–8.
23. One of the clearest descriptions of the STM and its applications is provided by Charles Lieber in 'Scanning Tunneling Microscopy', *Chemical & Engineering News*, April 1994, pp. 28–43. On atomic positioning, see Don Eigler, 'From the Bottom Up: Building Things with Atoms', in Gregory Timp, ed., *Nanotechnology*, Springer Verlag, New York, 1999, pp. 425–35.
24. See Edwin Black, *IBM and the Holocaust*, Three Rivers, New York, 2002.
25. On the fabrication of the atomic IBM logo, see D.M. Eigler and E.K. Schweizer, 'Positioning Single Atoms with a Scanning Tunneling Microscope', *Nature* 344, 1990, pp. 524–6.
26. Martin Heidegger, 'The Age of the World Picture', in *The Question Concerning Technology*, trans. William Lovin, Harper & Row, New York, 1977, pp. 135, 116, 154, 135–6; 'The Turning' in *ibid.*, p. 42.
27. *Ibid.*, p. 131.
28. Such a reading of the relation between the concepts *Gegenstand* and *Objekt* corresponds with Dominique Pradelle's assessment of their Kantian distribution, such that *Gegenstand* signifies the phenomenal object of appearance and *Objekt* signifies the noumenal thing-in-itself. My reading of Heidegger's formulations intends to be rigorously, if perhaps counter-intuitively, true to this conceptual distribution: if it is *Objekt* that signifies the thing-in-itself, it is the *representation* of the thing-in-itself as *Objekt* that converts it into an object for a subject, or *Gegenstand*. See 'Gegenstand/Objekt', trans. David Macey, from *Vocabulaire Européen des Philosophies: Dictionnaire des Intraduisibles*, ed. Barbara Cassin, in *Radical Philosophy* 139, September/October 2006, pp. 21–31.
29. Giorgio Agamben, *Remnants of Auschwitz: The Witness and the Archive*, trans. Daniel Heller-Roazen, Zone, New York, 1999, pp. 155–6.
30. K. Eric Drexler, 'Machines of Inner Space', in *Nanotechnology Research and Perspectives: Papers from the First Foresight Conference on Nanotechnology*, ed. B.C. Crandall and James Lewis, MIT Press, Cambridge MA, 1992, p. 326.
31. This article is drawn from the first chapter of a dissertation project entitled 'The Materials: Technoscience and Poetry at the Limits of Fabrication', which attempts to construct the conditions of such an approach.

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REVIEWS

Post-genomic interventions

Eugene Thacker, *Global Genome: Biotechnology, Politics, and Culture*, MIT Press, Cambridge MA, 2006. 464 pp., £25.95 hb., £12.95 pb., 0 2622 0155 0 hb., 0 2627 0116 2 pb.

Rishab Aiyer Ghosh, ed., *Code: Collaborative Ownership and the Digital Economy*, MIT Press, Cambridge MA, 2005. 384 pp., £24.95 hb., £12.95 pb., 0 2620 7260 2 hb., 0 2625 7236 2 pb.

Millenarian thought in its contemporary capitalist or technovisionary strains suffers no shortage of epochal events locking in grand designs of new orders, whose power to render the merely familiar or the almost forgotten entirely irrelevant appears more concrete than the actuality in which we, historically and futurably, live. The key to the locks, of course, is that a complex process becomes subjective only as shattering event. Two such events anchor a massive amount of recent critical scholarship on affect, technics and ethics. First, the events of 9/11, promoted from a stream of policing challenges faced by neoliberal economies and now familiar as the call for 'global war on terror'. Regardless of its timelines for Iraq, a 'policing' war's future duration cannot be demarcated, because its policy basis ensures it lasts until policy can no longer determine actual events – a contradiction in terms to begin with. A second, simultaneously eschatological and annunciatory event was the completion of the human genome sequence in 2003. While the 'post-genomic' age had already been noted critically in the mid-1990s, this announcement was its inaugural ball, at least for the carbon-based.

For Arendt, writing in the 1960s, the present had become a narrowed, Kafkaesque staging ground delimited by the duelling fencers of past and future time, but today nothing seems to possess more historical inevitability than the power of the new to compress the present into an infinitesimally thin membrane, or veil, whose surface is protracted under the puncturing pressure of what comes next. Stretched thin, the present declines to the moment of the new's arrival. Every shivering human moment becomes epochal. The complexity of this can be configured spatially, corporally, or temporally – but only as disjuncture.

A usually overlooked effect of this power of disjunction has to do with one direction opened up by these strange transpositions of historicity, eventuality and futurity that instantaneity-as-epochality requires. The present becomes a future history: we live a contingent past tense of the posteriority we project as approaching, a projection we extend more concretely via speculative

means (of capital, of media, of science, of politics, of expression). The opposite direction of temporal disjuncture inscribed by the epochal imagination has long been entirely modern and conventional. In this mode, mining history itself becomes essential, but not to the present which time compresses *as* history. Instead, history, and all we consign to it, including ourselves and our power to change the present, becomes a reservoir of material upon which the labours of speculation draw. Designing the future by excavating ever deeper or broader historical trenches with ever more diamantine drill bits is the requisite labour, especially for studies of technoculture attempting interventions in futural design. Drilling down while holding a forward gaze is a difficult enough posture to hold; the real trick, though, is honing the bit.

Eugene Thacker's *Global Genome* critiques contemporary information technology, genomic science and political sovereignty by bringing Marx's account of species being to bear on Foucault's understanding of biopower. We learn in his introduction that the project incubated over a period of ten years, but he makes less of the fact that his earlier monograph, *Biomedica* (2004), a more narrowly framed study of contemporary bio- and info-technology along Deleuzian lines, appeared while this larger study was under way. In *Biomedica*, Thacker outlined a 'bio-ethics', a critical and productive ethics of genomic medicine that might intervene against the tendencies of bioethics since the 1970s to legitimate the commercial overdetermination of identity, personhood and corporeality in the new life sciences, where production has intensified via high-throughput diagnostic techniques such as the Affymetrix DNA chip. But in spite of Thacker's skills in illuminating core problematics within industrial genomics and information processing paradigms, and in spite of his attempt to clarify Deleuzian ethics with systems theories from Varela or Luhmann, I couldn't entirely see how Thacker's 'bio-ethics' differed from conventional 'bioethics'.

Now, in *Global Genome*, Thacker vastly expands his historical frame of reference and yet concentrates more

closely on accounting for corporeality and labour in his description of biology's transformation, via information sciences, into technology as such. The book is divided into three parts, 'Encoding/Production', 'Recoding/Distribution', and 'Decoding/Consumption'; each section represents a resolution in the contemporary vocabulary of bioinformatic process of Marx's understanding of production, distribution and consumption. The book's organization also suggests that the explicit insertion of 'recoding' between the received conceptual pair of 'encoding/decoding' emblemizes an epochal difference between informatic capital and bioinformatic capital, a difference which Thacker argues the global life sciences industries best encapsulate.

Part one introduces the claim that 'genomics is globalization', and Thacker presents his argument that genetic sciences are *the* hegemonic agent of global technoscientific capitalism. Part two presents the central intervention of his critique of material labour and biopower. Thacker argues that the bi-directional recoding processes now operative between cybernetics and genomics calls for a new account of biotechnology's massive production of excess 'biovalue' (a term drawn from Catherine Waldby): a productive power he adduces as 'biolabour'. The section concludes, however, with a discussion of biowar and bioterror as 'bioinfowar' which, while responding in some ways to post-9/11 concerns, steers the book around the immediately following third section, and towards its concluding chapter. That third section turns to the consumer-oriented products of biolabouring production (such as regenerative tissue), and Thacker reads this regime's cultural symptoms through science fiction films such as *28 Days Later* or the *X-Men* serials.

Throughout, Thacker develops Marx's treatment of the machinic organicity of technologized labour with reference to Foucault's description of biopower as the point at which the biological life of a population enters into the state's calculation of sovereignty. Mediating these two major critical frames are Canguilhem's historical treatment of the normal and the pathological, and Bataille's accounts of capitalist economy as the production of excess. Where Italian autonomists like Lazzarato and Negri have famously attempted, since the 1970s, to articulate the specificities of knowledge work as an 'immaterial' form of labour, Thacker describes the very different labouring masses emerging from the genomic sciences' production of 'living dead' biolabour: regenerative tissue, DNA chips, experimental organisms or cloned beings. Biolabour, he argues, is totally transparent to the processes of global genomics, and entirely mediated by them. His description of the

'total mediation' of biolabour explains why Deleuzean ethics plays almost no role in this book. Yet it is here that an attempt at an ethics might become all the more compelling.

In fact, much of the material presented in the last third of *Global Genome* is simply a less detailed version of material presented in the second section of the book. These recapitulations – another tract defining Foucauldian biopower, another summary of Lazzarato's immaterial labour – wouldn't jar quite as much if they led to new plateaus in the argument, but they tend not to. The repetitions come at the considerable cost of any ethical questions going largely untreated. Perhaps these are obscured by the need to machine another critical innovation that would keep up with the new epoch. And when Thacker reads regenerative medicine through films like the *X-Men* series, we meet the text's weaker links; as insightful as Thacker is with genomics and materialist theory, he's not a media scholar. By the time *Global Genome* closes with a homage to the 'bioart' of the Critical Art Ensemble, the material still fascinates, but the discussion seems all but exhausted. Thacker has little to add to contemporary discussions of CAE, Stelarc or the other art and bioscience projects he mentions. That he does so little with aesthetic interventions into efforts to locate 'the gay gene' is also a let-down – that's material with which a more queerly informed theoretical effort could do much.

The more significant problem for *The Global Genome*, though, is its universalizing of genomic bioinformatics as *the* globally hegemonic agent (indicated, for example, in a slightly suspicious chart presenting two historical eras of 'industrialism' and 'post-industrialism' followed by a third, organized under a different conceptual category, 'biotech industry!'). Contemporaries in Thacker's field produce contrary results. Reading Thacker's *Global Genome* alongside Raushik Sunder Rajan's *Biocapital*, also published last year, is, for example, illuminating: both studies effect a return to Marx, work through questions of materiality and labour power by way of Foucauldian biopolitics, and entertain Bataille's theory of expenditure on the path towards disambiguating a post-genomic future. Yet *Biocapital* clarifies to a much greater degree (and in a considerably shorter book) the ways that small genomics-oriented discovery firms interoperate with much larger pharmaceuticals corporations; variations in the economies of genomics between India and the USA; different tendencies for capital in each location to overdetermine the processes, projects and products of the varying sectors of production; and even the

deskilled milieu of graphic designers working in the educational sector of the bioinformatic industry.

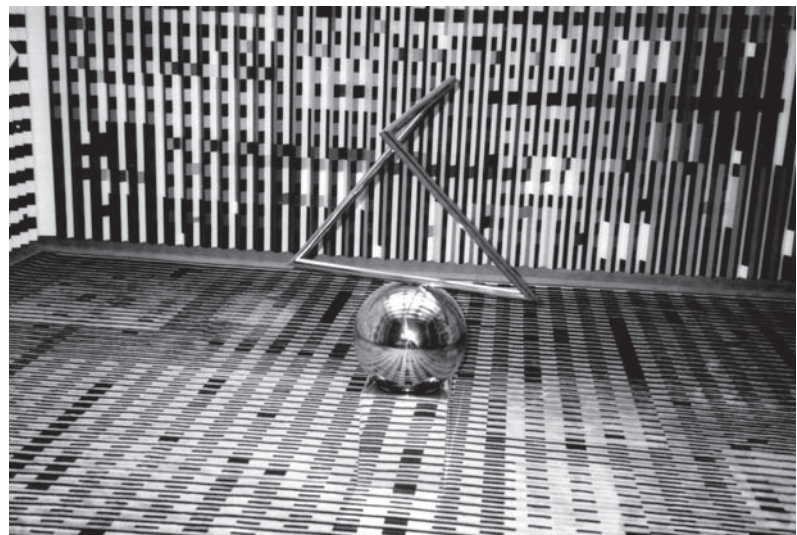
For Sunder Rajan, asymmetries in the global production processes of biocapital means that Indians are more likely to experience the products of post-genomic life sciences as test subjects, while Americans are more likely to experience these as consumers. That is a striking ethical disjuncture, although one in keeping with other studies of biopiracy or global tissue economies, and provides a stronger prompt for consideration of 'biocapital's' importance. *Global Genome* develops similarly sophisticated questions about the implications of 'biolabour', but it might be hard for Thacker's less careful readers to care about the resistance a regenerated bladder might offer to global capital. On the other hand, while both Sunder Rajan and Thacker note that DNA chips have implications for the human subjection to biopower and the biopolitical control of national food security, there are surely many Super-Fund sites where DNA chips might also help gauge the toxicity humans have created for both ourselves and our carbon-based brethren. A more general and more faceted view of 'somatic ethics' within biocapital is still required.

Code: Collaborative Ownership and the Digital Economy is another MIT publication offering well-honed critical tools for technocultural studies. *Code* also addresses, for example, questions of biopiracy in the new life sciences (in an essay by Cori Hayden), but instead of characterizing epochal shifts effected by a singular agent (the global genome or biocapital), it takes on ongoing, uneven, and unfinished transformations associated with digital network production and IP law, pointing to undervalued or misunderstood practices of creation and distribution, profiling broadly historical patterns typifying privatization of intellectual and expressive property, and thinking through the potentials of open source strategies or new legal frameworks for collaborative work. Appropriately for this transdisciplinary collection of work, *Code* 'feeds off controversies', as Latour might put it, not to approximate an impossible object of critique, as both Thacker and Sunder Rajan succeed in doing in different ways.

Opening the first section, two complementary essays from cultural anthropologists Marilyn Strathern and James Leach make clear that distinct cultural and technical milieus for visual or acoustic expression,

such as those of Papua New Guinea, differ radically in organizing collaboration, creativity and ownership. Reading the two, we see concretely that not all understandings of 'authorship' modulate primarily between individual and corporate registers, as the dominant Euro-American models of filtering public expression have tended to do. Fred Myers follows, pointing out specific ways that global IP regimes work against both Aboriginal expression in its own terms, and their territorial situatedness. If Strathern's and Leach's contributions make explicit that contemporary rights management schemes are inadequate to the extant developmental paradigms of many locales, Myers extends their comments by observing that conflicts between Euro-American and indigenous regimes of expression are often exacerbated, rather than resolved, by trade agreements on IP.

Where Strathern, Leach or Myers emphasize the differences of indigenous production, and, indeed, suggest that we benefit by appropriating not the works or processes of indigenous peoples but lessons from the modes of network production they demonstrate, other contributors suggest that any such transpositional manoeuvring requires an analytics of complicity. Anthony Seeger interrogates his own complicity in bringing the Brazilian Indian 'Savannah Deer Song' into the public domain; Boatema Boaten considers



the complicity of Ghanaian lawyers who can only protect Ghanaian 'folkloric' knowledges by condemning Ghanaian cultural production to a static register of value that is always inferior to that of Western technoscience. The need arises, then, for a historical inquiry into what constitutes Western 'open science' and how digital production may be transforming it. Paul David obliges, revisiting modernizing Europe's Scientific Revolution to suggest that contemporary systems of technoscientific knowledge production among universities

and their assorted clients and publics are not radically dissimilar from patronage systems in the seventeenth and eighteenth centuries' 'Age of Academies'. If David downplays the centuries-long transformation of instrumental technics into systemic technologies and the meanings of that shift, he does work against the singularizing commentaries on digital epochality chiming with every uptick in the NASDAQ index.

This succession of essays in the first section reveals what is both fruitful and frustrating about the volume as a whole. Throughout, essays are carefully ordered so that questions raised by one contributor are taken up by another. Where a historical treatment is prompted, one appears – but on a different topic, and with a different orientation and object. The problem isn't, then, that *Code* forces together essays that don't fit; it's that the discursive creases which arise in reading them tend to be smoothed over rather than made to stand out – with questions raised, hesitations expressed, other possibilities indicated – as we move from one essay to the next.

At the same time, although *Code*'s broad coverage and 'open source' style helps undo many of the damaging mischaracterizations which limit peoples' and publics' abilities to conceive, demand and exercise expression across technics and instrumentalities, some gaps needed filling. First, the volume's multiple disciplines and presentational styles would benefit from a glossary of terms, concepts and relevant legal constructs and events in order to fill out motivations and contexts. Second, there's no reason why today's media industries can't be studied in the ways that Ghana or Papua New Guinea are; readers would benefit from an engagement with the conflicted, contradictory and contingent movements of major copyright holders or network providers. Third, a treatment of aesthetics, collaboration and digital networks is sorely missed here. Fourth, materialities of 'hardware' are largely taken for granted. And fifth, some study of digital sharers would realistically fill out the alternately idealized or voluntarist attribution of digital collaboration as a flowering graft of 'altruistic economies' onto the gnarled old trunk of global technocapital.

Lacking these, the cumulative effect of reading *Code* is that by the time we get to open source pioneer Richard Stallman's provocative iconoclasm (in a transcribed conversation) – defending peoples' and publics' abilities to determine how, how much, and when to allow encroachments on expression, a stance which, Stallman's respondent points out, is historically vague, and probably idealistic – the volume seems torn between two rather typical organizational tasks: the

difficulties of identifying resources for collaboration versus those of managing them. In that gap, there is no rigorous critical deconstruction of collaboration or use as expression, other than the presentation by Stallman, which begs critical, theoretical and historical questions but provides little in the way of forward movement. The result is that the volume's critical orientation wavers uncomfortably between cultural anthropology's need to supply resistance to advances in transnational cybernetic media, and policy gestures seeking to modify neoliberal legal frameworks to ensure that some simulacrum of a public sphere still exists after the forces of privatizing technological innovation redefine peoples and publics as consumers of the new markets which media industries retroactively plan to have waiting for them – *after* people have already established these topographies through their own patterns of use. Apparently the future comes first, after all. Implicitly, and all too predictably, the temporality of that emerging marketized consumption of our own active labour is coded as 'future tribal'.

Code provides a useful overview of the problematic of collaboration in globalizing digital contexts, but partly misses its mark both in terms of timeliness and in terms of applicability – perhaps because the open-source model inspiring much of the contents does not extend to the actual volume itself. I'd like to see *Code* retooled, via some modified version of an open-source model: informed by just the kinds of discussion this volume provides, more explicitly teasing out tensions between contributors, respectfully tethering these tensions to a larger critique of technics and milieu which sustains engagements with biocapital, bringing together the productivities of peer production with the productivities of peer review. But *Code*, alas, is only one of a great number of publications appealing to the digital newness of what turns out to be a very long *durée* of technological transitions. It's easy for such publications to miss fully developing their own analyses by not implementing their own presentation according to the conditions, critiques and milieus they address. The latency between academic research and publication and inevitable gaps in coverage are only two problems which open-source publishing might ameliorate. The questions of authority and authorship, creativity and ownership, sovereignty and rights, and local, national and global publics that *Code* addresses would benefit with a shift from a 'print anthology' to a hybrid, free and open-access 'print-online project'. Perhaps the MIT Press will consider distributing *Code* 2.0.

James Tobias

Absolute naturalism

Iain Hamilton Grant, *Philosophies of Nature after Schelling*, Continuum, London and New York, 2006. xi + 232 pp., £65.00 hb., 0 8264 7902 2.

Although prospective readers may be surprised to discover that this book has relatively little to say about the history of post-Schellingian philosophy of nature, such concerns quickly dissolve when it becomes apparent how much more intriguing and ambitious the book's actual content is than its title might indicate. *Philosophies of Nature after Schelling* is indeed a work of painstaking historical scholarship, but its expository dimension primarily functions as an aid to its prescriptive one. Grant's interpretive thesis is that 'Schellingianism' is 'nature-philosophy'. Furthermore, he claims that revisiting it is a contemporary necessity given (1) nature-philosophy's critical relationship to Kantian epistemology, and (2) the latter's continuing circumscription of the conceptual possibilities legitimate available to present-day philosophy. Supplementing historical perspicacity with an eye to the future, Grant reconstructs nature-philosophy as an indispensable corrective to what he sees as the currently dominant philosophical paradigm: an ethically or politically motivated 'antiphysics' that can only prioritize the practical by segregating it from the physical. Most importantly, Grant argues, the stark divisions of labour between philosophy and science that such 'practicisms' implicitly or explicitly advocate inevitably end up curtailing thought's speculative prowess by denying philosophy's bolder aspirations. Consequently, the book's overarching injunction concerns 'philosophy becoming capable once again of metaphysics' – but with the caveat that the latter 'cannot be pursued in isolation from physics'. (Grant often uses the term 'physics' in the sense of *physicalism*, which conveys something more general than a specific branch of natural science and its methodologies.)

Essential to the success of this transformation of philosophy's capabilities and self-conception, then, is a reassessment of those historical moments in which the relations between physics and metaphysics were most definitively shaped. Grant locates the prototype of such situations in the transition from Platonism – provocatively recast as a 'one-world physics' encompassing matter and the Ideas – to Aristotelianism – depicted as the primary instigator of the physics–metaphysics disjunction. More specifically, Plato and Aristotle are shown to be divided by the differing conceptions of matter that determine their differing conceptions of nature. At issue here is the question of *somatism*, of

whether or not materiality is reducible to corporeality. For Grant, somatic theories of matter, such as those adopted by Aristotle and Kant, rarely fail to reveal their complicity with the practicist agenda. This is because somatism always provides an alibi for the excision of nature from philosophy. For example, the restriction of matter to body entails that nature be conceived of as an *aggregate* of bodies, and given that this aggregate will inevitably require a non-corporeal substrate in which those bodies must inhere, the more fundamental term of this relation *has to be non-physical* since materiality extends no further than body. With principles like this, an estrangement of physics from metaphysics follows as a matter of course: materiality is relegated to the sciences while philosophy distinguishes itself as the 'deeper' discourse.

In short, somatic theories of matter can grow no larger than a 'physics of *all things*', to which Grant opposes the Platonic 'physics of *the all*'. Grant contends that Plato's anti-somatism, echoed in Schelling's 'materiality is not yet corporeality', conceives of matter as 'power', which allows the fundamentality of physicality to be maintained since material bodies (as well as Ideas and everything else) genetically emerge from potentiated, self-organizing matter. The continuity that this genetic physicalism establishes between the organic and the inorganic vitiates another practicist tactic: the vitalist isolation of organic life from inorganic matter. However, Grant's management of this issue illustrates the extent to which one facet of his overall position remains unclear. He criticizes vitalism as 'antiphysics' in so far as it centralizes life in order to safeguard ethical and political programmes from the anti-practicist effects of a genuine engagement with nature; yet the Platonic 'world-soul' and Schellingian 'nature as pure productivity' (both principles of 'self-generating motion') which he defends would hardly satisfy a staunch anti-vitalist. Thus Grant – like Schelling – may not succumb to the vitalism he decries, but the position he adopts ends up complicating the issue by generating uncertainty as to whether he is simply espousing a different kind of vitalism or actually illuminating theoretical options irreducible to vitalism or mechanism.

The dynamized absolute which Grant extensively and compellingly explicates is, in fact, what he calls 'nature as subject', a term which does *not* indicate

similarities with more familiar conceptions of human or divine subjectivity but is instead a way of conceptualizing nature's *unconditional autonomy*. Crucially, this autonomy entails an absolute and irrecoverable excess of human thought and perception (as the time-scales involved in natural geneses make clear), and so Schellingianism at its best is powerfully presented as an anti-anthropocentric metaphysical realism which affirms nature's full independence of any cognitive relation to it. At other times, though, Grant seems to oscillate between construing ideation as a regionalized natural phenomenon and as Platonic Ideas universalized as *ousia*. The latter results in Schellingianism sometimes appearing as a less interesting objective idealism. While this equivocation obviously has its roots in Platonic idealism's incompatibility with Schelling's version of transcendental idealism (which also entails an inconsistency in Schelling's intellectual trajectory), the emergence of objective idealism in Grant's project is indicative of the importance of a problem which any absolutization of nature must confront. To wit, this brilliant 'nature as subject' thesis exhibits the viability of an absolute that is *wholly real* (mainly because it is wholly *material*), but it seems as though, once many philosophical naturalists begin to explain 'natural-ity', idealism and/or vitalism invariably resurface (e.g. Bergson, Whitehead, Deleuze). Nevertheless, this is not to say that Grant lacks the resources to overcome this obstacle and 'purify' his naturalism; on the contrary, he proves the opposite to be the case.

If Grant does not elaborate on these questions it is probably because he is not that concerned with them in the long run. What he does care about are the philosophical benefits that a dynamized nature allows him to enjoy. In particular, the latter is allegedly capable of explaining physicality *and* ideality through the ascending levels of matter's self-construction, while all the variants of 'antiphysics' and its accomplices (practicism, organicism, somatism, subjective idealism, etc.) betray an inadequacy in the elimination of nature which is their condition of possibility. With this idea, one of the most significant premisses of Grant's arguments comes to light. Throughout the book Platonic physics and Schellingian nature-philosophy are advanced as standard-setters for a test by which the *extensity* of philosophical systems should be measured. The operative assumption seems to be that a philosophy which can encompass what another is incapable of handling thereby demonstrates its superiority with respect to the other. This is why Grant finds the Platonic–Schellingian model preferable to all 'antiphysics': the latter makes metaphysics, which is precisely

this maximized extensity, impossible. Accordingly, the disqualification of practicism would merely be the impartially generated consequence of a fidelity to extensity rather than an ideologically motivated dismissal.

Two problems arise here. The first concerns the question of Grant's success in completing his own objective. While he argues quite convincingly that a genuine engagement with nature makes any philosophical privileging of the practical impossible, he also seems to suggest that the Platonic–Schellingian model's encompassing of ideation is pre-emptory with respect to whatever practicism could petition in order to secure this privileging. However, Grant appears a long way from being either willing or able to explain a political situation or an aesthetic phenomenon in physicalist terms (although he does discuss the naturalistic basis of human freedom). And if he thinks that such domains are illusory or not worth attention, then he risks inviting the charge of being almost as 'eliminative' with regard to them as he claims practicism is with regard to the physical domain. (I say 'almost', because a genetic physicalism surely has a better chance of explaining any kind of human activity than an ethical or political philosophy does of explaining natural phenomena.) So, while the idea



Courtesy of Richard Paul

of a test of extensity is by no means a worthless one, given the desirability of increased explanatory power, its consistent application sets an extraordinarily – and, some would say, unrealistically – high standard.

The second problem is more obvious but even more crucial, since it goes straight to the heart of the critique of metaphysics which Grant wants to overcome. That is, even if this maximized extensity is conceptually envisageable, in what way is it cognitively realizable? What are the epistemological conditions of claims

made about such an immense field of objects? One cannot help but be struck by Grant's expressed lack of concern for such questions, as the absolute priority of ontology over epistemology seems to be the book's working presupposition rather than a demonstrated conclusion. This is a serious obstruction to Grant's proposed rehabilitation of metaphysics, and until it is removed he will always be open to the charge that he has yet to engage fully with his most powerful opponent on the latter's own terms (despite the meticulousness with which he exposes fatal flaws in Kant's attempts at a philosophy of nature). Interestingly, this is one point where Grant and Schelling certainly diverge, as the *System of Transcendental Idealism's* explicitly stated epistemological agenda makes clear. Grant's omission of this only underscores his disdain for epistemology, something which is all the more inexcusable given that



Courtesy of Richard Paul

Schelling may have provided the resources required for defending ontological naturalism on epistemological grounds in that text. In this regard, Grant misses a significant opportunity to strengthen greatly his overall position.

Yet even if an ontology with no epistemological scruples is suspect, an epistemology which tries to excuse itself from clarifying the ontological status of its components should not go uninterrogated either. This is one reason why Grant's treatment of the *System* deserves special mention. In a remarkable tour de force of textual exegesis and conceptual synthesis, Grant situates Schelling's transcendental philosophy *within* the nature-philosophy. The resultant structure of Schellingianism determines the ontological constitution of the transcendental to be physical by rendering self-consciousness immanent to a nature upon which it depends, with which it is continuous (but not commensurate), and in which it is merely local. Therefore, bearing in mind matter's inherent tendency to self-organization – the auto-productive capacity of 'nature as subject' – it follows that the internality of

transcendental subjectivity is only the externality of inorganic matter at a 'higher potency'. Hence the title of what may be the most stimulating chapter, 'What thinks in me is what is outside me.'

Most impressive, though, is the thoroughness and consistency with which this naturalization of ideality is carried out, providing a lucid account of thought's reflexive capacity as inherently resistant to idealistic totalization. Grant shows how Schelling achieves this through the *System's* unwavering commitment to the unceasing productivity of ideation and its temporality, which determines the dimensionality of thought to be an irreversible uni-directionality. This means that any idea, regardless of its *ideatum*, is always new, and therefore the pure productivity that is ideation (and nature) is *always recapitulated* but *never recuperated* with every product of thought:

To turn, as it were, from the product and form a concept of the producing does not complete the intuition, but renders the producing a product itself produced by another producing, thus leaving an 'irreducible remainder' of forces that cannot be resolved into the product.

Nevertheless, this supposedly enables thought to cognize its own immanent activity without appearing to transcend that activity, because the object of this (and every) cognition is a product, while the cognition itself is a producing which can itself become a product.

Furthermore, Grant's identification of the asymmetrical relation between Schelling's nature-philosophy and his transcendental philosophy (a reflection of the productivity-product asymmetry) allows him to demolish Hegel's interpretation of Schelling's 'system' in the *Difference* essay. This is a significant polemic, because it is Hegel's presentation of the 'two sciences' of Schelling's philosophy as 'relative totalities' in symmetric opposition (rather than two intersecting trajectories) which enables him to set the stage for his later sublation of such antitheses in his completed system. The implication is that the portrait of Schelling which the *Difference* essay praises eventually becomes a straw man in Hegel's self-congratulatory reading of the development of German Idealism. Grant attributes this mischaracterization to Hegel's employment of his own conception of identity as latent in opposition, while Schellingian identity (natural productivity) is actually recapitulated in the proliferation of differences (products), a process afforded by the infinite bifurcations in matter's self-construction.

With respect to the book's interpretive thesis, Grant builds a strong case against the conventional view

which depicts the nature-philosophy as no more than an ephemeral episode (roughly 1797–1800) in Schelling's fifty-year career. Instead, he argues that the recognition of its persistence throughout Schelling's oeuvre is the only way to grasp the latter's internal coherence. Thus the expository incompleteness and hyper-periodization characteristic of previous commentaries' presentations of Schelling are merely symptoms of a reluctance to accept the nature-philosophy's fundamental status. Accordingly, the majority of Grant's engagement with rival secondary literature focuses on its evaluations of the nature-philosophy's significance (e.g. whether it is depicted as an autonomous ontological enterprise or a mere extension of transcendentalism). But although such a strategy is necessary given the objective, it is not sufficient on its own. By passing on a chance to criticize non-naturalistic interpretations of Schelling such as those of Slavoj Žižek, Peter Dews and Jason Wirth, Grant also misses the opportunity to explain the apparently non-naturalistic elements of Schelling's thought upon which those interpretations seize. For example, Grant's contention that the *Philosophical Inquiries into the Nature of Human Freedom* and the *Ages of the World* operate on a naturalistic (and, specifically, *geological*) basis is compellingly defended, as is the assertion of continuity between earlier works

and these texts via the latter's 'abyss of forces' being the cosmological antecedent to the former's 'pure productivity'. But what Grant does not address are the clearly visible theological strains of these two texts, concerned as they are with the conditions of the possibility of a personal god. Furthermore, Schelling's later philosophies of mythology and revelation, usually considered to be even more theologically motivated, receive much less attention. To be fair, the mere presence of these elements in Schelling's work is certainly not fatal for Grant's reconstruction, but their absence from his exposition does render it incomplete. A more effective approach would have sought to demonstrate their ultimate amenability to Grant's project, or would have exposed their illegitimacy in Schelling's by way of an internal critique.

Nevertheless, *Philosophies of Nature after Schelling* sets a new standard for Schelling scholarship. More than this, it is an important work of philosophy in its own right, for all its problems. The book closes with the words: 'Schelling is not a forerunner of anything, but a precursor of philosophical solutions, or "experiments in dynamic physics", yet to come.' There is reason to hope that Grant will keep the promise implicit in this declaration.

Dustin McWherter

Only what acts thinks

Alberto Toscano, *The Theatre of Production: Philosophy and Individuation between Kant and Deleuze*, Palgrave Macmillan, London, 2006. xiii + 249 pp., £45.00 hb., 1 4039 9780 2.

Works such as this, along with the renewed interest in speculative metaphysicians like Whitehead and Bergson, have begun to redefine the project of contemporary metaphysics, on the basis of four claims of particular importance. First, there can be no aprioristic exclusions from its ambit: metaphysics proves itself in its extensity, and any restrictions thereupon can only disqualify it *as* metaphysics. Second, and derivatively, the engagement with nature is essential: metaphysics is not *other than* physics, but rather the *phusis* of the All, the nature of nature; accordingly, metaphysics without nature is *a priori* inadequate. Third, if the principle is the atom of metaphysics, a field theory must supplant it. Finally, the post-metaphysical settlement into which both the main traditions in philosophy slumped at the end of the last century must be countered, and its post-Kantian development reoriented.

In these terms, *Theatre of Production* proposes nothing less than a confounding of Aristotle's denial

that there could be a 'science of the individual' by impugning Kant's restriction of judging natural purposes to a regulative use of speculative reason, and pursuing instead a metaphysics based not on given existents, but on ontogenesis. Toscano's metaphysical recommendations echo developments in the philosophy of biology that seek to refocus the problems of molecular biology around ontogeny rather than phylogeny (e.g. Lenny Moss, *What Genes Can't Do*, 2003) so as to focus on individual's ability to evolve rather than on supposed trans-generationally subsistent entities. Just as this Platonism of molecular biology denies the historicity of the laws of nature, so Aristotelian substances deny the individuation of productivity. Already three principles of a metaphysics of ontogenesis emerge. First, ontology cannot be pursued as a science of being qua being without failing in regard to determination (the elimination of the science of the individual entails an ontology without entities). Second, failures

of determination equally arise from the relegation of speculation to the domain of analogy (the determination of the domains of reason, not of being) as from any commitment to the Absolute. Third, avoiding the Heideggerian verdict that it is sufficient to hypostatize ontological difference, *Theatre of Production*'s central hypothesis is that determination is satisfied only through the immanent productivity of a *consequently* particular individuality. To this Toscano tentatively gives the name of a 'superior nominalism'.

The problem at the base of this book is this: how to understand the 'operations of individuation without the inaugural presupposition that these operations may be captured by a point-like idea or principle'? The proposed solution is 'to persevere in the thinking of the unity of being and concept ... from the standpoint of individual difference'. Only by attending to the operations of individuation *as* operations, that is, do we generate an adequate typology of the operations not of being as such, but of *this* becoming, *this* productivity. Accordingly, alloying a concept of 'recursive evolution' taken from the philosophy of computation with an individuating account of Parmenidean unity, the book proposes an ontology based on the recursion of generic operations in thought and being. Since operation recurs upon operation, the assumption of a product other than the productivity of operations constitutes a transcendental illusion, falsely withdrawn from productivity to stand over and against it.

The problem this entails is the following: is this a universal or a particular science of the individual? If there are grounds for asserting the particularity of the science of the particular, they derive from the determination to avoid abstraction from the immanent context – the theatre – of productivity. Despite this 'transcendental materialist' critique of the separation of product and productivity, there remains a confessed 'biophilosophical', albeit anti-organicist, focus. In part, this is to maintain the advantages of an immanence of ontogenesis in being, experience and consciousness; the risk, however, is a nature divided by a biophilosophical imperative. That is, as Toscano urges against Cassirer, if one ontic kind is acknowledged as primary for the metaphysics of ontogenesis, then the critical strictures against a transcendence of product over productivity are vitiated. Whether physicalistically grounded on a materialism regarding the occasions of consciousness, strategically on the location of the problem, or ethico-politically in the essential 'dramatiz[ation of] the process of individuation', biophilosophy leaves nature riven not between the organic and the inorganic but – inquiring as to 'what is living and what is dead

in biophilosophy' – between those regions of being wherein the formal and the abstract *consciously* arise, and those where they do not. The immanence of abstraction to conscious production – an apperception governed by individuation rather than unity – thus restricts 'the unity of being and concept'. The problem becomes how the two inhere in a singular nature, just as it was for Kant: is it only where nature attains a 'highest' individuation that it *acts*? Toscano's solution is that the *abstract problem* of thought and being is posed as an 'original duality' that is only 'concretely resolved'. Finally, however, it is 'thought itself' that 'must... construct both the problematic fields of individuation and their solutions'. Thus the question 'what is the place of thinking?' is answered through a further question, 'who acts in the theatre of production?', and being becomes the exclusive *passion* of thinking. Here, then, the second of the problems a metaphysics must satisfy comes into focus in so far as it confronts the fourth: even allowing the proposed 'materialization of intention', a riven nature is the primary legacy of post-Kantian metaphysics.

Although the insistence on the movements of thought and the immanent determination of concrete particularity cannot but recall Hegel, it is the 'enduring legacy of Kantianism' that for Toscano forms the matrix of engagement here. Countering Badiou's premissing of metaphysics' future on the rejection of the critical philosophy, five elements of this legacy stand out with particular clarity. These are: (1) the problems of *immanence*, reoriented around matrices of production rather than the legitimacy of critique; (2) the powerful Marxian echo of a corresponding reorientation of *critique* around the problem of production; (3) ontology's locus as acts or 'operations' of production (*esse sequitur operare*); (4) *experience*, taking up the baton from Deleuze's 'superior empiricism', as the guarantor of the immanence of thought-as-operation; and (5) in consequence, the guiding question of a critical philosophy of the operations of productivity as 'who acts?'

It is in the last of these that the particularity of Toscano's determination of the problem comes into focus. Announcing early on its concern with biophilosophy, *Theatre of Production* proposes that an operationalist ontology devolve from operating *onta*, from living beings. This specification is certainly not conducted under the rubric of *Lebensphilosophie*, as the critical engagement with current revisionist Nietzscheans demonstrates. The problem is instead pursued through the problems of causation philosophically bequeathed by Kant's finally 'as if'

organicism, alongside the scientific ‘solutions’ that so many unequivocally locate in the theory of autopoiesis (here refreshingly critiqued). If this does provide a solution, Toscano correctly points out, it does so only phenomenologically, and ignores the ontological dimensions of the problem, making no advance whatever on the condition that the philosophy of nature was left in by Kant. Be this as it may, we thus have an initial answer to the question posed above: this is a particularist ‘science of the individual’. The grounds of this particularity are not incidental or ontically contingent but transcendental, however, in that an operationalist ontology cannot consistently be held to act on non-operational beings without conceding its regionality with respect to Being; this is why a ‘transcendental materialism’ is compelled to conceive matter as either activity or operation.

Accordingly, the book’s forensics of Kant’s philosophy is itself critical, imposing productivist ‘strains’ on the ‘enduring legacy’. Specifically, an operationalist Parmenideanism imposes an identity of knowing and *acting*, making ‘being’ transitive, and entailing the transfer of ontology from atomistic questions of being to operational fields of becoming. From this it follows first that production is *material* rather than reducibly cognitive (paraphrasing an early thesis in the book, ‘genesis is larger than epistemology’); and second that matter is not entity but operation. It is as attempted satisfactions of these operationalist strains that Toscano conducts some extraordinarily lucid analyses of the contributions of Whitehead’s philosophy of organism (the difficulty of which task cannot but provoke sympathy among readers of *Process and Reality*) and Peirce’s evolutive cosmology.

Pursuing, then, a materialist philosophy of production by transcendental means yields a multiply *strained* Kantianism: critique remains, but is oriented around production; the transcendental ceases to be simply an epistemogenic method, and is materialized (‘transcendental materialism’), and the dualism for which Kant was notorious among the immediate post-Kantians is abolished not along the lines of an identity of thought and being, but as an asymmetrical identity of operativity and cognition: asymmetrical because operativity is the generated *prius* of cognition, so that identity becomes a dynamic concept measuring the strains in immanence. The question is: how far is Kant thus strained? Kant’s own manufacturing ethos of cognition – ‘he who would know the world must first manufacture it’ – is apparent in the never-completed *Transition between Metaphysics and Physics*, as the *Opus postumum* would have

been called. And it was Fichte who ‘operationalized’ Kantianism, viewing himself as its legitimate successor, under the primacy of the practical. For Fichte, too, ontology became a field of determination by a thinking secondary to acting. While not suggesting Toscano’s outlined metaphysics is identical to Fichte’s, there are parallels: Fichte too would not extend the operations of determination beyond those immanent to complex biological phenomena; the primacy of activity is not considered by Fichte as reducibly an ethical, but rather an ontological project, similarly pursued by transcendental means; but whereas Fichte pursued this through Idealism, Toscano here launches a transcendental materialism.

The problematic element can be demonstrated by something the notorious Stirling wrote in his *Secret of Hegel*: ‘The electricity was a product – a product of your energy, of your operation, of your process, of your experiment.’ First, then, Idealism is equally capable of a genetic ontology premised on production. Second, the electrical operativity of nature extends beyond the immanence of cognition and action, unless the former can recapture its *prius* in reflection. The question *how far* operativity extends (as far as the immanent genesis of electricity?) may either be taken to settle the limits of immanence, or to demonstrate the requirement that a materialism extend beyond them (this of course is why we have here to do with a transcendental rather than a ‘crude’ materialism). On this scale, to settle with the former trajectory is to settle with the Fichtean solution, making it a matter of indifference whether the resulting programme is called ‘idealist’ or ‘materialist’. Ultimately, it is the restrictive use of Parmenidean identity – only what acts thinks – that differentiates them. The Idealist inheritance offers this alternative: nature becomes the *prius* determinant of all, including abstract operations, exacerbating the asymmetry of thought and operativity at the cost of immanence.

Merely to problematize these issues in this work is, however, something to be celebrated, not only in that it confirms that, for all philosophy’s recent posturing, metaphysics requires engagement with the still unsettled bequest of Kant’s philosophy of nature in the third *Critique*; but also for the sheer exuberant joy of the reaffirmed powers of thinking. In its spartan lucidity and the complexity of its engagements, in the problems that it re-energizes, this is a model work of post-anxious metaphysics, which contributes greatly to the re-emergence of speculative metaphysics after an age of austerity.

Iain Hamilton Grant

Ha, bloody ha

David Cunningham and Nigel Mapp, eds, *Adorno and Literature*, Continuum, London and New York, 2006. xii + 203 pp., £60.00 hb., 0 8264 8752 1.

A slightly shop-soiled anecdote often repeated to students at the start of term by cheerfully optimistic lecturers in philosophy departments relates that one of Dr Johnson's acquaintances once said to him, presumably in a pretty complacent tone, 'I too have tried in my time to be a philosopher, but, I don't know how, cheerfulness was always breaking in.' At present, as the example of Slavoj Žižek might indicate, cheerfulness frequently interrupts and even shapes the practice of philosophy, at least in the public sphere, and in doing so it doesn't necessarily compromise its intellectual reputation, its claims to be philosophical. Indeed, postmodernism – the formal or stylistic qualities of which Žižek adeptly, if rather riskily, mimics in pursuing his critique of its ideological content – has made philosophical playfulness, if not cheerfulness exactly, appear almost imperative: 'Enjoy!' In this climate, the playful pleasure to be derived from reading philosophy, particularly in populist formats, sometimes seems almost compulsory, like the engagement with popular culture from which it is generally indissociable. *Harry Potter and Philosophy: If Aristotle Ran Hogwarts* is the dispiriting title in one publisher's series on 'Popular Culture and Philosophy'. In *RP* 109 Ben Watson rightly complained that books like *The Simpsons and Philosophy*, a collection published under the same imprint, smacked ultimately of 'academic condescension', in spite of its self-conscious attempts 'to mak[e] the fiercest philosophical systems sound friendly, even humorous'.

Adorno, who mercifully doesn't make it into the index of either of these volumes, once stated, acidly enough, that in the conditions of the culture industry 'fun is a medicinal bath'. 'Applied philosophy', as it is called in the publishers' catalogues, slightly more rigorous but no less therapeutic than this kind of fun, is instead perhaps a recreational trip to the gym. Cheerfulness does not often break in on Adorno. He is a philosopher for whom all laughter is effectively a form of *Schadenfreude*, an expression of relief that one has momentarily escaped humiliation or persecution, and therefore an admission that one is complicit with the forces of oppression. 'There is laughter because there is nothing to laugh at', he concludes in *Dialectic of Enlightenment*, in a sentence that, because it so readily confirms his self-satisfied caricature of the professional

philosopher, might have delighted Dr Johnson's friend. The same could be said of cheerfulness, which from this perspective, the quietly apocalyptic standpoint of someone for whom 'the fully enlightened earth radiates disaster triumphant', is the purely reflexive response of the cheerless that Adorno typified as 'jovial denial'. Cheerfulness, derived from the Latin *cara*, meaning countenance, stiffens for Adorno into the cracked grin of a mask, like the ones that encase the faces of Beckett's comic characters as they confront the unspeakable horrors of contemporary history. Reading Adorno, then, one recalls Beckett's Belacqua, who set out to count all the smiles he could find in Dante. In a conference report in *RP* 124, Esther Leslie referred to a talk entitled 'Oh It's Not That Bad: Adorno and Laughter'. Apparently it is.

In 'the epoch of postmodernism', Fredric Jameson remarked a quarter of a century ago, 'the question about poetry after Auschwitz has been replaced with that of whether you could bear to read Adorno and Horkheimer next to the pool.' Thankfully, the thirteen contributors to *Adorno and Literature* do not appear to have taken their copies of the *Notes to Literature* to the poolside. There is nothing facile or fashionably playful about their efforts to demonstrate Adorno's importance to the theory and practice of contemporary literary criticism; not least because all of them reaffirm his commitment to the historical task of ascertaining the truth-content of artworks. As the book's editors emphasize in its Introduction, literary works contain a 'truth' that, according to Adorno, is in the end resistant to the process of autonomization, because as literary works they are 'historically constituted and transformable', especially in so far as their individual aspects are inseparable from the collective or social aspects of language. Each literary work, as Cunningham and Mapp point out, therefore 'stand[s] constitutively in need of philosophical interpretation or criticism'. And the intellectual and political responsibility assumed by the critic is in consequence of grave importance, since in excavating the artwork's truth-content he or she must seek to release both its critical and its utopian potential. 'Such an emphatic notion of "truth"', the editors speculate, 'is perhaps inadmissible to the hegemonic forms of literary criticism and theory today – to a deconstructive emphasis on radical "undecidability", or to a cultural studies committed to the "demystification" of all truth claims through limitless discursivization.'

This elegant and finely argued collection of essays, which sends the reader back to the *Notes to Literature*, in particular, with a sharpened appetite, thus

takes Adorno's responsibilities as a critic seriously, although it is respectful rather than pious in tone. Here Adorno is neither unthinkingly appropriated to a post-structuralist position that dismisses all totalizing thought nor thoughtlessly attacked for maintaining his critical distance from the commodified forms of capitalist mass culture. In a series of scrupulous readings of Adorno's reflections on literature, which have been noticeably neglected in the recent reconsideration of his thought among anglophone scholars, they communicate the sophistication of his criticism and its own critical and utopian potential for literary studies, at a time when the hegemonic status of postmodernist thought appears to be collapsing.

The book is divided into three sections. The first, on 'Philosophy, Aesthetics and Literature', constructs some of the theoretical foundations of the volume by situating literature in relation to Adorno's aesthetic theory more generally. It opens with a piece by Stewart Martin, who offers a useful philosophical genealogy of the 'modern system of the arts', before arguing convincingly that 'Adorno's conception of philosophy is conceived very self-consciously in terms of its linguistic form', and that 'its relation to language and literature is fundamental to his conception of art'. Martin Ryle and Kate Soper then explore some of the pedagogical implications of Adorno's critical example, in a chapter on 'Literary Value' that – in spite of a disappointingly truncated practical exercise in interpreting Kazuo Ishiguro's most recent fiction 'with, and against, Adorno' – helpfully, and imaginatively, identifies his attitudes to elite and mass culture as an important resource in the task of 'hold[ing] out against the practice, so general in contemporary academic literary-cultural studies, of treating the work of literary art as one more instance of discourse in general'.

The remaining chapters in the opening section pursue the book's underlying interest in using Adorno to reclaim the truth-content of art, in both its cognitive and non-cognitive senses. Andrew Bowie, focusing on the relations of music and literature that Adorno highlighted in the title *Notes to Literature*, uses him against the post-structuralist position to assert that 'art's importance lies in its extending the demand for "truth" beyond what can be known, in the sense of being classified by concepts, towards other relationships to people and things.' And Eva Geulen, after diagnosing the political reasons for the 'attack on genre' that prevailed in the twentieth century, suggestively argues for the critical-utopian value of the concept as explored in *Aesthetic Theory*, on the

grounds that 'genres figure as an emblem, however weak, not just of unity, in some abstract sense, but of a concrete community.' Geulen's article contains a detailed account of Adorno's reflections on lyric poetry, a form that receives extensive, highly productive commentary from all of the contributors to the book's second, central section on 'Poetry and Poetics'. There, Howard Caygill explores Adorno's understanding of the dialectical qualities of lyric poetry, a type of utterance that, he argues, lies between the subjective and objective aspects of language and also constitutes a 'meeting point of sound and image'. In so doing he demonstrates, intriguingly, that Adorno's proposition that to write lyric poetry after Auschwitz is barbaric haunts 'his readings of lyric poetry prior to Auschwitz'. Simon Jarvis, who conducts a phenomenally attentive close reading of the musical form of 'Resolution and Independence', uses Wordsworth's concept of 'philosophic song' to think about whether it is possible 'not to put thinking into verse, but to think *in* verse'. Robert Kaufman, in a rich essay on 'Musicality, Conceptuality, Critical Agency', similarly rereads a poem by Wordsworth, among others, in order to assess the relationship of the lyric form to capitalist modernity: 'How,' he asks, 'spontaneously yet rigorously, and with the utmost concision, to make thought sing and to make song think?' And at the end of this section Iain Macdonald revisits the Adorno–Heidegger debate ('a debate that never took place'), examining Paul Celan as a kind of missing link between these antagonists, and provocatively claiming that the poet helps us to understand the ways in which they 'converge on the question of how possibility relates to actuality by showing us how language can reach the possible in the real deployment of words around suppressed possibilities'.

The final section of *Adorno and Literature*, entitled 'Modernity, Drama and the Novel', could scarcely be as tightly organized as the section on poetics, a section that evokes a sense of sustained intellectual dialogue that is all too rare in essay collections of this kind. Paul Fleming's chapter reconstructs another polemical debate that never took place, this time between Adorno and the brilliant conservative critic Max Kommerell, through their asymmetrical but nonetheless parallel readings of *Faust* in terms of the idea of forgetting. In his chapter, Timothy Hall recapitulates a debate that *did* take place, and that has taken place on many occasions since the 1930s, the one between Adorno and Georg Lukács, but interestingly argues that, thanks in part to the disproportionate influence of the collection *Aesthetics and Politics*, the relation-

ship of these pre-eminent Marxist aestheticians has been misconstrued. For both men, according to Hall, and in spite of the contrast between the characteristic literary canons that each of them constructed, 'the critical potential of the artwork derives from respecting the work's claim to autonomy rather than attempting to dissolve it', so that in effect their respective assessments of the novel form in particular comprise the torn halves of a consistent aesthetic. Nigel Mapp then renegotiates Adorno's interpretation of *Endgame* in a chapter on the logic of disenchantment which neatly explains the tangled dialectic of meaning and meaninglessness dramatized by Beckett. The final contributions to the collection, by Timothy Bewes and David Cunningham, use Adorno to address problems in the contemporary novel. The former interrogates the notion of 'lateness' in relation to V.S. Naipaul's *The Enigma of Arrival*, in an essay that has the effect of complicating, if not fatally undermining, Edward Said's rather limited ideas on so-called 'late style'; ideas interrupted of course by his death. And the latter, concluding the volume in an ambitious article that questions whether the European novel can still be described as 'a *present force*', looks back at the fiction of W.G. Sebald in order to summarize the 'double bind of the modern artwork', which is compelled both to register the contemporary crisis of prose fiction and to 'rely upon such a category for [its] own historical intelligibility'.

In the face of post-structuralist attempts to render Adorno more playful, perhaps even more cheerful, often through emphasizing forms of 'undecidability', these essays communicate a commitment to Adorno's sense of the heavy intellectual and political responsibilities of the critic. Their enthusiasm is for his contribution to this form of literary criticism and its rigours. This enthusiasm implies a certain political optimism that is not inappropriate. Adorno might not have been the most cheerful of philosophers, for obvious historical and biographical reasons, but he nonetheless insisted on art's 'lightheartedness', although he used the formulation in a characteristically precise and counter-intuitive sense: 'What is lighthearted in art is, if you like, the opposite of what one might assume it to be: not its content but its demeanour, the abstract fact that it is art at all, that it opens out over the reality to whose violence it bears witness at the same time.' It is in this sense, then, that it is true to say that art, if not philosophy, is innately cheerful for Adorno. Its constitutive countenance is itself a joyful refusal of capitalism.

Matthew Beaumont

Hegel rules

Eva Geulen, *The End of Art: Readings in a Rumor after Hegel*, trans. James McFarland, Stanford University Press, Stanford CA, 2006.

This book delineates a few notable attempts to try and overturn or reshape the 'end of art' as an authentic historical event in Hegel's wake. It aims to provide a 'reconstruction of certain decisive stations in this figure of thought' and of its 'potential rehabilitation', in Nietzsche, Benjamin, Adorno and Heidegger (as well as in Hölderlin, the non-opted-for Romantic alternative). The questions this entails are, Geulen states, considered 'as *questions of form*', as 'prologomena toward a phenomenology of the end of art as rumor'. Even for such thinkers themselves (all within the German tradition), she argues, it is not always obvious to what degree they come, in the end, to play by Hegel's own rules. As Paul de Man once suggested, perhaps 'most of us are Hegelians and quite orthodox ones at that'. If Geulen's approach is certainly subtle, and shows a keen eye (or ear, since it is 'rumour' that is at issue) for this game, which she plays on Hegel's behalf, the rest of the book is then bound to play by this rule.

The strategy pursued by Geulen is to brand each of the readers of Hegel she has chosen (whose 'canonical status' is, however, somewhat apologetically described as 'merely an arbitrary sign') with a certain epithet that is said to be a defining characteristic of their philosophy of art as a whole. Thus Nietzsche is presented as being in a 'retrograde motion', Benjamin in the midst of 'counterplay', Adorno lost in 'afterthought', and Heidegger as working out 'the same end and the other beginning' of his thinking. If these labels (which the reader adopts in advance) are unpacked just a little, we find behind them different versions of dialectics and/or antithetical modes of philosophical persuasion which, each in its own way, attempt to move beyond the original place (of the Hegelian form found at their core) but in the end return only to reveal the mechanism that first makes them work. For instance, Benjamin's 'model' is shown to be sustained by a dialectics of (allegorical) presentation which simultaneously disowns tradition as an ideological ruse but also effectively re-founds its own formal unity in the end by (counter-)playing off that 'tradition'. In contrast to this, but by virtue of a similar mechanism, the 'world-opening' theses of Heideggerian being are qualified by a discourse of preservation that forever betrays their ontological immediacy ('the same end') by returning them to sheer form ('the other beginning').

Now, obviously one might think it a huge disfavour to thinkers drafted by Geulen onto Hegel's team to dismiss them as having little more to offer than certain styles of cheerleading for the master. Yet this is not really Geulen's concern; she is rather more occupied with her own argument. And it is quickly evident that much of her argumentative weight falls, in particular, on a specific 'discovery' in Hegel and, subsequently, the transposition of that 'discovery' in(to) later generations. This find is the overdetermination of the end of symbolic art in the ideality of classical art. As she puts it: 'This is the realm of symbolic protoart, which not only provides classical art with the necessary material for its labor of transformative sublation, but also supplies the conditions through which the identification of form and meaning advances to a transhermeneutic ideal.' Inasmuch as the realm of symbolic protoart is 'a time' and 'a place' where 'questions of interpretation and its possibility are historically and systematically at home', it irredeemably breaks the clean, elevated category of classical art and brings it closer to whoever experiences it.

If we consider the consequences of this discovery for the experience of art in Hegelian terms, it means that instead of simply being freely whisked away somewhere else (beyond the mere 'this' into something greater), the event would be manifested in present aesthetic actuality and activate the subject on the spot in a totally different way. This would also happen in the case of classical art, so undermining Hegel's categorical valorization of it. 'Great art' could be an art of *any* age if defined in line with these rules. And, perceptively enough, Geulen does argue that Hegel stays blind to his own game in respect to this idea: when ideal art is affected by the 'necessary material' of the non-ideal, no 'labor of transformative sublation' can be said to come into being without the former's 'conditions'. In consequence, symbolic art remains at the formal heart of classical art without ever ending or having ended, without allowing itself to be surpassed or left behind. Moreover, as the now quasi-transcendental idea of the ideality of classical art would remain at the dying heart of the Romantic end of art as well, the different arts are never able to escape or end one another, not even in the time of Hegel's own lamenting. They are just as ideal and affected. This is a Hegelian universal formalism which Hegel himself apparently fails to see, and Geulen pursues the argument in order to locate and criticize later thinkers' inheritance of this particular aesthetic resistance.

It would not be expedient to catalogue here the Hegelian nuts and bolts of all of the examples given

by Geulen in her readings of Hegel's (sometimes reluctant) intellectual progeny. And, in fact, any mere underlining of the particularly 'Hegelian thing' in, for instance, Benjamin's *Origin of German Tragic Drama* or Heidegger's 'The Origin of the Work of Art' would fail to observe its own rule as to where it 'starts' (as a 'Hegelian thing' to be applied) and where it 'ends' (as the 'other thinker's thing' to which the 'Hegelian thing' was once applied). Certainly something like this *could* be done but all too easily the result might slip into such stuttering redundancies as Geulen apparently parodies:

[In Nietzsche's] *Birth of Tragedy*, its ironic play with itself, no longer belongs to tragedy, whether as the tragedy of tragedy or the tragedy of the tragedy of tragedy. As Nietzsche assumes an ironic distance from all tragedy and from tragic knowledge as well, his book becomes comedy.

Much of *The End of Art* is focused, then, on how attempts (including Hegel's own) to escape the demands of Hegelian form almost invariably fail by way of certain overdetermined concepts and returns of critical form. In some cases, as with Nietzsche, there is an attempted escape into a form of comedy which would break with all claims made concerning an authentic 'end of art' or of any other such tragic knowledge. However, this escape can establish nothing assertable or solid about its own form, whether cognitive or epistemological, regarding what exactly instigated it or to what purpose it was performed. Indeed, if it did, the assertion would already be expressing a different thing, the comedy retreating backwards from itself. This is the 'retrograde motion' criticized by Geulen. As the Hegelian–Nietzschean event, it cannot denote the comical escape from somewhere 'else' into 'it', but takes place *as* a comic form that refuses to lend itself to being thought *about*. However, the 'actuality' of the event's occurrence is affected to its very core by the moments of tragedy redundantly uttered in its course.

Geulen's survey is a highly admirable study of the impact of Hegel's famous thesis on the history of criticism, despite (or by way of?) the limitations of a few seemingly determinate labels used to push the re-reading of some important thinkers in a very particular direction. In fact, as it turns out, it is therein that the potential for parody actually lies. As Geulen writes of her canonical thinkers, 'at the moment in which [their] "discourse enters into reality"', the language of that discourse is 'forced to treat both reality and thought *as if* they were language, *as if* they had the same name' [my emphasis]. At this point, as Adorno

knew, the discourse to be established is already lost to its rational establishment by the ‘afterthought’ of its unmoored nature; in this place, ‘[d]iscourse is haunted by what it must forget if it is to enter reality as discourse’. The reality of any discourse that wants to settle something is always already broken and cannot be fixed just by remembering to be different, as would-be post-Hegelian thinkers have attempted to do in their precursor’s wake. The final score for Geulen is thus that there is no ‘end of art’, or ‘end of X’s domination’, or ‘beginning of new age’, or ‘beginning of X’s rehabilitation’ ultimately to anchor any discourse in. Instead, there are countless leagues of ghosts, bandying back and forth on the timeless court of radical form like everything else in the game of thinking.

Jarkko Toikkanen

More, less, or something else

Henri Lefebvre, *Critique of Everyday Life, Volume III: From Modernity to Modernism (Towards a Metaphilosophy of Daily Life)*, trans. Gregory Elliott, Verso, London and New York, 2005. xxxiv + 179 pp., £16.99 hb., 1 859984 590 8.

John Roberts, *Philosophizing the Everyday: Revolutionary Praxis and the Fate of Cultural Theory*, Pluto Press, London, 2006. 147 pp., £16.00 pb., 0 745 32410 X.

The title of this review might sum up, albeit perhaps non-sequentially, the philosophical moods of the three volumes of Henri Lefebvre’s *Critique of Everyday Life* (published in France 1947, 1961 and 1981) while also serving to highlight something about John Roberts’s arguments in *Philosophizing the Everyday*. In the early pages of this third volume, Lefebvre wonders aloud about the status of ‘the real’ for critical thinking. After sniping implicitly at Lacanian psychoanalysis and the scientific Marxism of Louis Althusser (which he thoroughly detested), Lefebvre asks:

What does the word ‘real’ mean today? It is the given, the sensible and practical, the actual, the perceptible surface. As for daily life, the general opinion is that it forms part of reality. But does it coincide with it? No, for it contains something more, something less, and something else: lived experience, fleeting subjectivity – emotions, affects, habits, and forms of behaviour. We may add that it also includes abstraction.

In the next breath, Lefebvre adds that such abstractions must certainly take into account commodities and money, possessing as they do an ‘abstract dimension’, and images too: ‘a multiplicity of images, without thereby vanishing into the “imaginary”’. Critical thinking, in Lefebvre’s view, had allowed itself to be trumped by ‘the real’. Having given up on concrete imagination, critical thought now contented itself with endlessly chasing its own fascinating tail down the rabbit-hole of the imaginary.

In 1981, Lefebvre looked around and nearly all he saw, nearly all he felt, was reified thought for a reified world. All that was once fluid and in process was now frozen into postures, broken off in chunks. ‘Everyday life has lost the quality and vigour it once possessed, and dissipated, like the space that has been smashed to bits and then sold in pieces. What charms we have lost.’ But then, having set up his readers for what promises to be a thoroughly depressing ride, Lefebvre switches gear abruptly. Refusing both nostalgic lamentations and futurological longings, he focuses on the ‘possibilities’ (the real possibilities) alive in the interstices of the present, endeavouring to think in and through the innumerable anxieties and tragedies of waking life. For Lefebvre in 1981, philosophy had already missed its moment of realization. Revolution (volume 1) had turned to subversion (volume 2), which had then turned to something more or less akin to tragedy (volume 3). But ‘tragic knowledge’, Lefebvre concludes, ‘does not betoken melancholy science’. Conditions, it seemed, were never more ripe, the contrary never more pregnant. Lived contradictions had spread by now, he thought, so far, so deep and so wide, that they struck everywhere with rhythms that were increasingly discernible by even the most recalcitrant of souls. Quantification (especially of labour time and productivity) had run rampant, become almost absolute, and the qualitative nature of space and time were seemingly, *virtually* eliminated. But, Lefebvre lingers for a moment to add, ‘this “virtually” is very important ... The “virtually” means that this limit [of absolute quantification] is unattainable, and that something else is always possible.’ This virtual inhabits the real as possibilities yet to be fully divulged; the virtual offers a glimpse at an irreducible ‘something else’ within *this* horizon.

Such words, even such sentiments, might simply waft away as quasi-inspirational literature for untethered post-critical thinking, if not for the uncanny prescience of so many of Lefebvre’s diagnoses of the complexly material (and necessarily ‘abstract’) continuities and discontinuities just then beginning to wend their way through – but, now, a quarter century

later, more readily recognizable within – the realms of capital and global markets, modes of governance, aesthetic sensibilities, technological advancements, socio-economic class compositions and decompositions, and, of course, theory itself. Thus, instead of sounding like a lone (if not especially long) whistle in the gathering dark, Lefebvre's third volume of the *Critique of Everyday Life* becomes, by its own lights, 'a metaphilosophy of daily life' written in a kind of sketchy shorthand for post-philosophy-cum-praxis (by carrying philosophy beyond itself, past its own unrealized moment). As such, Lefebvre ultimately hands over to us an open-ended project left to be realized, in multiple and undoubtedly incongruous ways, as 'something else'.

John Roberts's *Philosophizing the Everyday* is one such 'something else'. His task is an excavation of the past in order to aid a reinvigoration of critical-conceptual resources in the present and for the future, as 'the promissory space of total revolutionary praxis'. Written as one long arc (stretching across an almost sixty-year timespan: 1917–75), Roberts provides a densely woven narration that gathers up three especially resonant moments/movements in the evolution of 'the everyday': the Russian Revolution and its wider reverberations across Europe and North America (1917–39), the anti-fascist liberation of post-World War II Europe (from 1945 onward, particularly in France and Italy), and the almost-giddy-with-desperation counter-hegemonic convulsions of the 1960s (peaking of course in 1968, but persisting in all sorts of meaningful ways well into the mid-1970s). Thus, Roberts wants to recover the intricacies of the often far-flung story of 'the everyday' up until the moment when it apparently lost the plot, *circa* 1975.

Like most tales of loss (or lost opportunity), this one has its villains or ciphers, here Michel de Certeau (delegated as most representative of the paradigm shift) and Cultural Studies. But neither one, alone or combined, can properly fulfil their corrosive roles in this narrative quite as completely as Roberts has cast them. Whatever the predicament of the concept of the everyday since the mid-1970s, the particulars of this are, at once, more internal and more external to Roberts's historical narrative than he allows. For instance, it might be worth 'something more' to consider, as Lefebvre did, Althusser and structuralism as significant theoretical detours very much interior to fundamentally praxis-focused debates in Western Marxism of the late 1960s and into the 1970s. This is one reason why de Certeau and Cultural Studies arrive at Roberts's shores feeling more like secondary interlopers than prime

forces capable of appreciably shifting the critical winds all by themselves. This is not, of course, to argue that they have been without any impact on contemporary discourses of the everyday; rather that Roberts offers up broad conclusions about the present state of the everyday that belie the numerous delicacies and finely drawn nuances otherwise found in abundance across his book's main arguments.

As for external factors to Roberts's plot, they would need to include many of the vital matters raised by Lefebvre in volume 3: namely, neoliberalization, ongoing biopolitical machinations, the uneven rhythms of globalization and urbanization, human rights as 'rights of difference', the total informationalization of the everyday, the increasing inescapability of the tragic, and so on. Although Roberts provides a wide-screen view of the socio-political context of change between 1917 and 1975, as dynamic shifts of historical continuity and discontinuity, these matters recede into the background. *Philosophizing the Everyday* is not a 'whodunnit'. The text is framed, briefly at the beginning and the end, by the (too) immediate apprehension of the guilty suspects, and then the still warm body of the everyday is carefully examined. It is a foreclosed and fated, if not always quite fatal, plot. From the moment of its conception, as Roberts notes in his conclusion, the everyday had been destined for its eventual disappearance, giving way to total revolutionary praxis, and, if it has departed prematurely before this mission has been accomplished, at least 'the tropological content of the "everyday" continues to possess extraordinary powers of invocation'. In other words, the critic can still ventriloquize the echo of the everyday's lost potential.

Lefebvre, however, imagines something else. Lefebvre concurs that the everyday has passed on. But the philosopher need not hover about its body, conjuring up its spirit-voice, dressing out its entrails, because the body is not elsewhere. We find ourselves in/as this body, our body. The everyday thus becomes fully synonymous with biological life or with the problem of life itself: the more-than-corporeal, more-than-human, always beyond itself. As Lefebvre states:

Daily life, the organic body of modern society, summons up its *beyond* in time and space. The work that is now concluding has consistently adopted this (relatively) optimistic perspective, despite the introduction of tragic knowledge – or, rather, precisely because of it!

In the end, the only option is – as it has always been – something more, nothing else.

Gregory Seigworth

OBITUARIES

Jean Baudrillard, 1929–2007

Jean Baudrillard, who died on 6 March 2007, had been writing an obituary for quite some time. The subject was ‘the real’, its death long, drawn-out and agonizing. In his incisive analyses of the hyperreal state of being that, he claimed, replaced the real in our time, Baudrillard mapped out with considerable verve the ‘postmodern condition’. Because of this he was at times mistakenly perceived to be more some kind of performance artist than a serious thinker. But perhaps his biggest crime was to have such an almost surrealist sense of ‘black’ humour, expressed in the titles of his essays and books (‘Animals Sick of Surplus Value’, ‘Castrated Before Marriage’), as well as in the form of his arguments, shaped like a Möbius strip, in mimetic enactment of the claustrophobic world of total commutability that he described.

Born in Reims in 1929, Baudrillard developed an interest in German language and culture, studied at the Sorbonne in Paris, and eventually went on to translate, among others, the playwrights Bertolt Brecht and Peter Weiss. He taught German and sociology at the secondary-school level from 1956 to 1966, while completing his higher education at the University of Paris X–Nanterre, where he would eventually gain an academic post. In 1966 Baudrillard defended his thesis, *The System of Objects*, publishing it as a book two years later, in the year of the student uprisings in Paris. The hybrid nature of *The System of Objects* is indicative of the subsequent depth and breadth of Baudrillard’s work. Yet his transdisciplinary approach ironically became, in the popular understanding, a sign of his lack of seriousness, when it should signify the opposite: a genuine search for understanding bound with a refusal to stop enjoying himself in the process. Always in the thick of things, Baudrillard nonetheless managed to occupy a marginal, liminal, virtual ‘outsider’ role for much of his professional life. He could appear more a trickster figure than a professor, something that he cultivated on many occasions. I once met him at the (now defunct) Compendium bookstore in Camden Town, London, wearing a thick full-length coat on an extremely hot summer’s day, reading one of his works in translation while laughing loudly.

Baudrillard crossed many thresholds: attaching himself to Henri Lefebvre’s Utopie group (established 1966), he later argued that he found Lefebvre’s ‘rhetoric... occasionally too set’. Nonetheless, the Utopie group and its journal, which brought together Hubert Tonka (Lefebvre’s assistant at the Institut d’urbanisme), sociologists Catherine Cot and René Lourau, and architects Jean Aubert, Isabelle Auricoste, Jean-Paul Jungmann and Antoine Stinco, produced some wonderfully transdisciplinary work, before the notion itself became fashionable and banal. To get a true sense of the *visual* impact of these, and other early texts by Baudrillard, does involve (ironically) returning to the originals, as the English translations are stripped bare of the montages and collages to which they were originally married. This is a shame, since Baudrillard, who was reading Benjamin and the Frankfurt School some time before they became available in French translation, worked closely with image-texts throughout his life, and gained some renown as a photographer.

Much of Baudrillard’s life was spent occupying and attempting to understand the ‘semiosphere’, whatever terms or phrases he used to conceptualize this space: the hyperreal, the end of production, virtual reality, total commutability, the dominance of the code, or simply the information-rich semiotically saturated environment of a business-class flight. One of his most important early intellectual breakthroughs came in the application of semiotic theory to the study of Marx. While Baudrillard

had already been doing this indirectly in *The System of Objects* via a rereading of Lefebvre's *Critique of Everyday Life* (1947; revised 1958), it is articulated most powerfully in the three books that followed: *The Consumer Society* (1970), *For a Critique of the Political Economy of the Sign* (1972) and *The Mirror of Production* (1973). Examining the constellation of consumer objects Baudrillard realized that the ideology of consumption needed structural and semiotic analysis. Rather than identifying an affluent society, he recognized an underlying logic of penury, in which urban density leads to competition rather than fulfilment of appetite or needs. Contemporary Western society is thus one of ever-receding affluence, or the perception of *scarcity*, as Marshall Sahlins argued. This paradoxical logic, while still attempting to reconcile production and the ideology of consumption, clearly disengages itself from the dominance of production per se. But Baudrillard went further, and deconstructed the entire raft of theories concerning 'needs', suggesting that they are tautological, akin to stating that a fire burns because of its 'phlogistic essence'. Objects and needs, he argued, are simply signs, representing a world of 'generalized hysteria'. But he also warned us that this exultation of signs is concomitantly a denial of real things. An amusing example, from *The Consumer Society*, is the 'Esso neo-log-fire': the log fire and barbecue kit available in car service stations designed to re-create the very mode of heating destroyed by the oil industry in the first place.

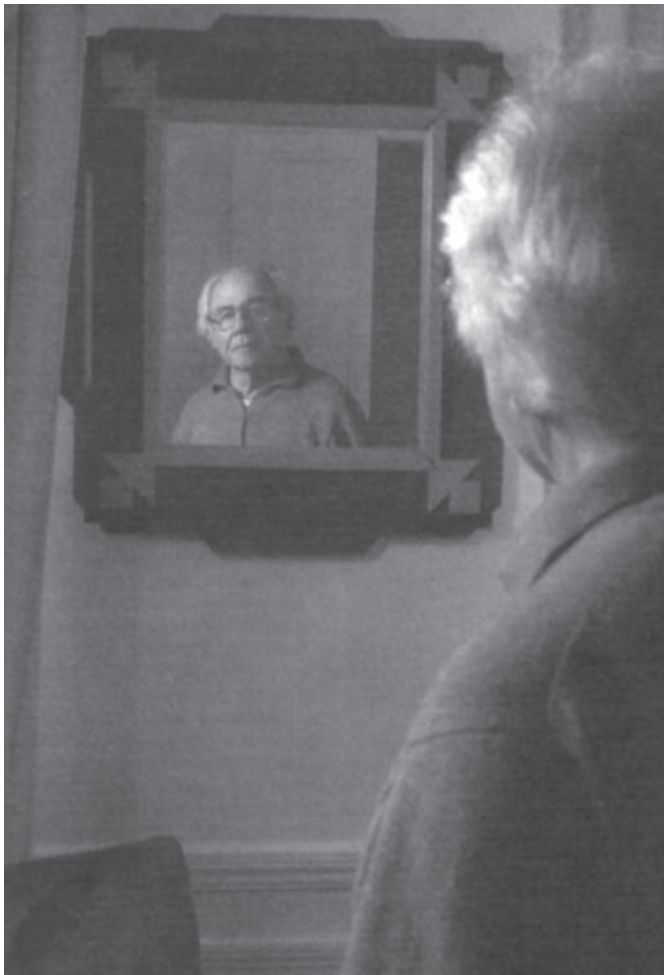
Notoriously, Baudrillard sought to deconstruct Marx by reading consumption as if it were a networked, differential sign effect, doing so most thoroughly in the (at times extremely dense) writing of *For a Critique of the Political Economy of the Sign* and *The Mirror of Production*. The concept of use-value is rejected in these works in favour of exploring the dominance of sign exchange-value that Baudrillard argued is fundamental: a theory of objects is not to be based upon needs, but what he calls social *prestations* (explained by Charles Levin as 'a feeling of obligation to an irrational code of social behaviour') and signification. Working with the examples of indigenous societies, Baudrillard argued that a sociological analysis of consumption is predicated upon replacing use-value with value generated via symbolic exchange. Thus the native potlatch is compared with conspicuous consumption in the West, including the wasting of time in leisure. Symbolic exchange, however, is a threshold process, one which is generative of the 'unique' (in symbolic exchange, say, the event or ritual of gift-giving), yet, at the same time, partakes of the arbitrariness of the sign (the gift is arbitrary, it could be *any object* given). Baudrillard thus went on to distinguish between symbolic and semiotic signs, where the latter are entirely exchangeable.

Much of this theory was mapped out in some detail before Baudrillard proceeded to his famous deconstruction of the Marxist opposition of exchange-value and use-value. More radically, in fact, in the opening chapter of *The Mirror of Production*, he sought to deconstruct the concept of labour per se, which he read as being ideological and 'interconnected with the general system of value'. Use-value, rather than being individual and concrete, is a social relation that expresses an entire 'metaphysic': it is analogous to a moral law, which regulates and establishes the 'object'. Use-value and needs appear only as 'an effect of exchange-value', just as the signified is an effect of the signifier. In other words, Baudrillard did not regard use-value or the signified as some concrete real, some 'elsewhere', that exchange value or the signifier express, represent, distort or 'translate' in a false consciousness. Instead, they are what he calls 'simulation models', constituted or 'produced by the play of exchange-value and of signifiers'. The real is that which is produced by simulation, but it is also that which is foreclosed: it will come to haunt the hyperreal like an impossible and ungraspable shadow, one which will become most obvious via powerful symbolic acts, such as revolutionary uprisings or terrorist acts. In this sense, the 'real' was a word that Baudrillard placed invisibly 'under erasure', to use a term more familiar from Derrida. Perhaps if Baudrillard had

left visible the deconstructive marks of the cross placed through the word, its use would not have led to mistaken charges of nostalgia.

What Baudrillard meant by hyperreality was often misunderstood in turn: in *The Perfect Crime*, Baudrillard makes clear that the hyperreal is that which both expels the real and then masks its 'disappearance'. It could be argued that Baudrillard's deconstruction of Marx shifts the notion of the real from that of negation – the dialectical understanding of the real – to that of a new 'positivity', a non-teleological, non-dialectical dwelling in a productive realm of illusion. At any rate, much of Baudrillard's work explored this dwelling, its frightening consequences, its ironies and contradictions.

The opposing forces or intensities of the real and the hyperreal are given form in *Symbolic Exchange and Death* (1976). The symbolic is outside of the semiotic system of exchange, and it has a magical, mystical power; yet the system can use the symbolic gift-without-return in the ironic 'gifts' of work, consumption, media and the social, all experienced as a positivity without recourse to dialectical critique. The only point of intervention, therefore, is to proffer a gift to which the system cannot respond, except



via its own catastrophic collapse and death. This point would be developed in myriad ways in Baudrillard's later writings, in part because this 'collapse' would appear to be more of a temporary rift or rupture in the hyperreal, one which would almost immediately undergo a process of commodification and introjection. The hostage thus functions in the symbolic rupture of the terrorist attack, where he or she is suspended beyond the normal rules of exchange. Baudrillard argued that, in this sense, entire nations can be held hostage – for example, the German people under Hitler, or virtually the entire planet under the Cold War. 'We' are all subject to terrorism. Hyperreality thus appears as beyond good and evil: the work of the terrorist is to return society to the metaphysical world of ethical structures and events. But this is a fantasy, an impossibility, since the symbolic force of terrorism is that of total disruption (not moral or existential realignment), a temporary vacuum of state power, followed by a increased strengthening of the state apparatus via a reduction of human rights and freedoms.

In some of Baudrillard's later work, such as the essays on the attack on the World Trade Center in New York, his arguments can appear strangely harmless, even retrograde, whereas earlier statements, such as the infamous claim that 'the Gulf War is not taking place', caused much more of a productive stir. One cannot but help imagine that the Pentagon spent many productive hours studying their Baudrillard between Gulf Wars I and II, with the ironic outcome that the transition from 9/11 to Afghanistan and Gulf War II was almost shamelessly seamless. However, Baudrillard himself was always committed not just to an intellectual understanding of the hyperreal, but to one based firmly upon a dedicated experiential account. While *Rolling Stone* journalists headed out to Vietnam, Baudrillard did something that, from a French perspective, was equally daring: he travelled to Las Vegas

and the suburbs of California. Criss-crossing America on the ground and in the air, Baudrillard would produce some of his wittiest *and* most annoying texts. America was 'utopia achieved' and what a frightening place that turned out to be. Yet his love-hate relationship with the place (or at least his fantasy of the place: and what other way is there of experiencing it?) was finally more love than hate.

Nonetheless, some of the most humorous episodes occurred to him back home, such as his 'little catastrophe scenario' in which he loses his passport at the police station where he is reporting the loss of his identity papers. Told that a passport is not 'a true certification of existence' but merely a transit document, in the process Baudrillard discovers that his car was reported stolen four years previously and that he has therefore been driving around in a 'stolen' car with no identity papers. But there is a happy ending to this story: not only does the fact of his car being 'stolen' cancel all of his traffic offences during this period, but his documents are returned – in duplicate.

In books such as *America* (1986) and the various volumes of *Cool Memories* (first volume 1987), Baudrillard's writing adopts an aphoristic form. The translated Baudrillard was often available in gnomic or miniaturized form, such as the Semiotext(e) Foreign Agents Series, and it is in his essays that he was frequently at his most controversial as well as exhilarating. But his vision here is also dark, as he adumbrates the 'code' that generates the hyperreal, or copy-without-an-original – the DNA of genetic engineering; the binary code of televisual and computerized virtual realities (the McLuhanesque 'medium is the message/massage' perhaps more relevantly rewritten as the 'medium is the masturbatory message/massage'); the viral economy or codes of AIDS, stock-market crashes, and computer viruses; the codified world debt/Internet information stockpile, both of which are inexpiable. It is the excessiveness of the code that is part of the problem: the code precedes, produces, and thereby obliterates the original. As he concluded in *The Vital Illusion* (2000), in what perhaps constitutes the conclusion to his entire work: 'Everything will be preceded by its virtual realization. We are dealing with an attempt to construct an entirely positive world, a perfect world, expurgated of every illusion, of every sort of evil and negativity, exempt from death itself. This pure, absolute reality, this unconditional realization of the world – this is what I call the Perfect Crime.'

Richard J. Lane

Seduction, death and dandyism

Marvel Comic hero Captain America was shot dead by a sniper as he entered New York's Federal Court House on 7 March. He was facing trial for defying a Superhero registration law, passed after another Superhero's battle with a villain resulted in a 9/11-like catastrophe that left hundreds of civilians (most of them children) dead. Many Superheros, including Captain America, had initially defied the law, and a civil war threatened. The Captain's decision to turn himself in and to reveal his true identity to the authorities was an attempt to defuse the situation. Asked to comment on the obvious parallel between this narrative, 9/11, the Patriot Act and the war against terror, the president of Marvel Comics was quoted by CNN as saying: 'Every child knew about 9/11. If [he] could see a TV he knew what 9/11 was. The other similarities to things going on are just part of storytelling.'

Jean Baudrillard would have loved this story but did not live to read it, having died in Paris at the age of seventy-seven the day before the news broke. The *Daily Telegraph's* Sam Leith (12 March) found the coincidence highly amusing – the death of the critic of America's hyperreality coincided with the death of one of its defenders

and symbols – and for once it was difficult not to join in the tasteless laughter and *Schadenfreude* that has so often accompanied the death of intellectuals (*The Australian's* obituary was actually headlined 'Death of a Clown'). It was tempting to joke that it was only a simulacrum that had died a simulated death. The *Guardian's* obituary (Steven Poole, 8 March) began with a parody of the title of the deceased's most notorious book: 'Jean Baudrillard's death did not take place. "Dying is pointless," he once wrote, "you have to know how to disappear".' Rereading the music reviews a couple of days later, I found myself wondering why Baudrillard never wrote anything on Dolly Parton – a simulacrum (a copy without an original) if ever there was one and, moreover, a simulacrum who knows that she is a simulacrum.

Baudrillard was neither a Marvel Comics Superhero nor a dumb blonde confident in the knowledge that she is neither dumb nor a blonde, but it is surprisingly difficult to say just who and what he was. He gave little away and said little about himself, presumably in the belief that doing so would be as pointless as dying. The smile remained enigmatic to the end. Baudrillard is usually described as 'a sociologist', but he was a sociologist who showed little concern for Durkheim's beloved 'social facts' (preferably *sui generis*) or for the rules of any sociological method. Sociology was in fact a second career. Baudrillard studied German at the Sorbonne and taught German language and literature in secondary schools from 1957 onwards, before obtaining a post in sociology at the new University of Nanterre in 1965. Three years later, Nanterre became the powder keg that exploded into May '68, but Baudrillard remained characteristically vague about his role (if any) in *les événements*. The shift from German to sociology was apparently made at the suggestion of Henri Lefebvre. It was under Lefebvre's guidance that Baudrillard wrote *The System of Objects* (1968) based on his thesis: his first book, published at the age of forty. Baudrillard once told the *Nouvel Observateur* that he began to think 'relatively late in life' and that, given his qualifications, sociology was the only discipline that remained open to him. In 1965, sociology was indeed a marginal discipline in France and in many ways it still is. There is no *agrégation* in sociology, and the best-known French sociologists tend, like Bourdieu, to have a background in philosophy. Baudrillard did not have a classic academic career, and it was only in 1986 that he achieved the rank of *directeur scientifique* at the University of Paris-X (Dauphine).

There is, however, perhaps one sense in which Baudrillard did exemplify aspects of a classic sociological tradition, which has often been steeped in a theoretical melancholy. Weber worried about the disenchantment of the world, Durkheim at once welcomed modernity's promotion of a liberating individualism and feared the 'suicidogenic' anomie that came in its wake. Baudrillard often appears to have transposed this pessimism to a hypermodernity, and to have refined it into a bleak and cold cynicism.

The obvious starting point for Baudrillard's initial work on objects and consumerism appeared in the late 1960s and early 1970s, just as France began to be annexed by the consumer society. It is no accident that his *Système des objets* (1970) ends with a reading of George Perec's novel *Les Choses* (1965), in which the couple known collectively as 'Jérôme-et-Sylvie' (they have no individuality, either nominal or existential) define themselves solely through the objects they consume. It is not difficult to read this little fable and Baudrillard's essay as an extension of Marx's theory of commodity fetishism crossed with Debord's description of the society of the spectacle and Barthes's lacerating critique of the mythologies of everyday life: the signs cease to be signs of anything (and still less to anything), and consumerism is the activity of systematically manipulating those signs. Although this problematic remains constant throughout much of Baudrillard's later work, it is also supplemented (or gradually replaced) by a sociology or anthropology of the sacred derived mainly from Mauss's work on the gift relationship and Bataille's notion of the 'accursed share'. The emphasis is no longer

on production or even consumption, but on a surplus that cannot be disposed of. Once signs and symbols no longer signify, there can be no symbolic reciprocity: the gift cannot be returned, and the surplus cannot be consumed in a potlatch ceremony. By the mid-1980s, Baudrillard reached a stark conclusion: 'critical radicality has become useless' (*Les Stratégies fatales*). By now, 'the real' had been reduced to a 'referential illusion'. If critique becomes impossible, all we can do is watch.

Baudrillard had many talents, including for photography, which he took up relatively late in life. His photographs never show people, but rather the absence of a human presence, and look strangely like some of the paintings of Edward Hopper. He also had a talent for provocation that infuriated many people. The notorious comments in *America* (1986) on the beauty of the idea of sacrificing a woman in the American desert did little to recommend him to feminists. The French gay and lesbian magazine *Têtu* marked his death by recalling the homophobic remarks made in *Écran Total* (1997) about AIDS ('an epidemic of self-defence' on nature's part) and homosexuality itself ('Those who live by the same shall perish by the same'). Even greater offence was caused by the seeming defiance of reality in the three essays on the Gulf War, which was 'not going to take place' 'was not taking place' and 'did not take place'. Such comments do appear to defy common sense and have usually been read as such, but they may not be quite as counter-intuitive as they seem. Baudrillard was always a witty and allusive writer, and the prophecy that the Gulf War would not take place alludes to Jean Giraudoux's play *The Trojan War Will Not Take Place* (1935), which ends, of course, with the Greek army setting off for Troy.

Baudrillard's analysis of the Gulf War conflict is not without its acuity: it 'ended' (only to begin again) with a 'defeated' Saddam Hussein still in power and his elite Republican Guard intact and poised to massacre insurgents who had been encouraged to rise up by the 'victors'. Since then we have watched armies shelling a mountain range (shades of Conrad) in the vain hope of killing an individual who is allegedly responsible for every calamitous act of terrorism that occurs anywhere. And we can now watch a war (or non-war) that began in Iraq *after* a coalition victory had been claimed by George Bush. These are indeed wars in which the virtual and the real become indistinguishable. Pilots trained in virtual environments fly combat missions without being able to see anything but the headup displays projected onto screens in their cockpits. Ground troops inflict on their prisoners pornographic humiliations learned from websites or magazines, and use mobile phones to photograph them. The point of the humiliation and the torture is not to extract intelligence, but to capture an image. The unmanned drones that gather data and acquire targets all over the Middle East are controlled from somewhere just outside Los Angeles. The comments on 9/11 were even more offensive to many. Baudrillard remarked that the terrorists *did* it, but we *wished for it*. And Hollywood has dreamed of it in countless movies: New York and Los Angeles have been destroyed again and again. We love watching those movies.

Ultimately, Baudrillard's stance is very much that of the dandy: cold and even cynical, he watches. A neo-Baudelairean flâneur speeds across a (white) America in a fast car, polishing glacial aphorisms as he goes. Dandyism has its attractions (though they may well be gender-specific), but it dehumanizes both reader and writer. Yes, a global superpower was wounded on 9/11, but can we forget the firefighters (and the passengers of United Flight 93)? They were not playing walk-on parts in a spectacle. Baudrillard's observations about the virtuality of postmodern warfare are not inaccurate but they fail to address the non-virtuality of its outcome. The sabot-discarding armour-piercing round (probably tipped with depleted uranium) hits the front of the turret and the tank crew die in a hellish flood of molten metal. The armour that was designed to protect them disintegrates and helps only to kill them.

David Macey

Philippe Lacoue-Labarthe, 1940–2007

Recent commemorative events in Paris and New York have given some measure of the immense esteem, even devotion, accorded to Philippe Lacoue-Labarthe from a host of individuals from the arts and various intellectual communities. It has far surpassed what might be surmised from any record of the events and accomplishments that marked his public life over the past forty years.

To be sure, the turning points and the achievements are eminently noteworthy. Philippe Lacoue-Labarthe stepped onto the philosophical scene in France not long before the decisive disruption of academic and political life that occurred in the spring of 1968. He experienced the events of this spring and their aftermath from a site of collaborative philosophical activism he had begun to create with his colleague Jean-Luc Nancy in Strasbourg at the invitation of Lucien Braun. Nourished in Situationist thinking and the work of groups such as *Socialisme ou Barbarie*, he found in the events of that spring a kind of unfailing source for a political passion that he directed towards a philosophical critique of the foundations of the political order. This critique was pursued in a range of venues, including his seminars with Jean-Luc Nancy and the research initiative they pursued in the early 1980s under the title *Centre de recherches philosophiques sur le politique*. The acuity of his thinking was never without the tinge of this passion.



In his earlier years, Lacoue-Labarthe worked in an intellectual context that was itself revolutionary in character. Indeed, it is hard to think of the momentum of what became known as the post-structuralist movement in other terms. The genealogy of the particular line of aesthetic and political thinking from which he stemmed, a line that included figures such as Nietzsche and Bataille, and that was presented to this young intellectual from the French south-west by powerful teachers such as Gérard Granel, has yet to be fully written. An intellectual biography will have to inform us of the role of Jean-Marie Pontévia in shaping Lacoue-Labarthe's aesthetic thinking in his early years. Granel, for his part,

undoubtedly played a special role in preparing Lacoue-Labarthe to recognize how the *general* critique undertaken in post-structuralism relied for its possibility on the Heideggerian deconstruction of Western philosophy, and how its Derridean formulation opened the French tradition he had inherited to new critical articulations. Blanchot, we may presume, now became especially important for someone who had eschewed the Sartrean reception of Marxism.

With a profound grasp of the manner in which Heidegger had opened the philosophical tradition to a thought of its end, Lacoue-Labarthe identified a problematic that allowed him to pursue the deconstruction of the metaphysics of subjectivity in a markedly singular way. He was not the only thinker to grasp the import of the question of mimesis in this period (Luce Irigaray made important contributions, as did Derrida). But he developed the question with characteristic care through a penetrating and intense confrontation with thinkers such as Nietzsche, Freud, Reik and Heidegger himself, and carried it into a broader reflection on the constitution of the political order and its modern fate. This trajectory resulted in works such as *Le Sujet de la philosophie* (1979) and *l'Imitation des modernes* (1986), as well as the seminal essay 'Typographie'. It also prepared the critically important work addressed to the question of Heidegger's

engagement with National Socialism that formed the basis of *La Fiction du politique* (1987; trans. Heidegger, *Art and Politics*, 1990), submitted for a Docteur d'État before a jury that included George Steiner, Jean-François Lyotard, Lucien Braun and Jacques Derrida. The confrontation with Heidegger was inseparable from an effort to disengage Hölderlin from what Lacoue-Labarthe understood as a Heideggerian mythologization, and from an engagement with Celan's own struggle with the Heideggerian legacy (most crucially in its silence on the question of extermination).

Other commentators will place their accents differently, and intellectual biographies will provide fuller accounts of Lacoue-Labarthe's work of the late 1980s and 1990s, which saw a development of his engagement with dramaturgy (undertaken initially in the late 1970s with a staging of his translation of Hölderlin's translation of *Oedipus*) and further critical work on Heidegger and Hölderlin, as well as an important book on Wagner (*Musica Ficta*, 1991). But however precise the shape of this intellectual history, it will never suffice to account for the ground of the esteem to which the recent commemorative events have borne witness.

Two points should be made. First, Lacoue-Labarthe's engagements were never undertaken alone, as was immediately visible in his remarkable collaboration with Jean-Luc Nancy and the community they formed around them. The important work on German Romanticism they presented in *l'Absolu littéraire* (1978; drafted at astonishing speed in a single summer) testifies not only to their philosophical and literary commitments, but also to their engagements in relation to the question of community. Lacoue-Labarthe's propensity to share personal and philosophical paths was not, however, the reflection of an impetus to *gather*. Quite the contrary. He pursued a singular trajectory and was in many respects an intensely solitary individual – only a few could claim to have really known him. (It is reported that even Blanchot complained in this regard!) Perhaps only Claire Nancy (in addition to Jean-Luc) joined him in true intimacy. But, in a remarkable manner, his discretion also presented a profound receptivity and hospitality.

Any number of personal traits relayed this invitation: a fragility, something infantile, something that challenged. Always warmth. These personal qualities need not be explored here. But they had a profound effect on the *scene* that Lacoue-Labarthe helped constitute in Strasbourg. His intellectual bearing set a tone that helped make the constellation of intellectual and artistic life there in the 1970s and early 1980s the site of a unique event. No one who experienced that scene, that *idyll*, as Rodolphe Burger has described it, could come away untouched. Lacoue-Labarthe did not carry that event, and he was never its focal point. But, in a captivating manner, he *allowed* it with his person. A rhythm formed in his presence.

A second point also relates to the theme of accompaniment, though it is infinitely harder to evoke. All who encountered Lacoue-Labarthe sensed that he was accompanied by something he desperately sought to bring into the scene of his writing and thinking. In brief, an account of Lacoue-Labarthe's life cannot avoid the question of *literature*, as he experienced it and as he brought it to expression in the late volume *Phrase* (2000). 'Literature' named for him an impossible effort to bring to language something at the margins of language to which only a kind of renunciation and forgetting could begin to be faithful. It was indissociable from an experience of *desistance*, as Derrida once named it, and which Lacoue-Labarthe could not separate from his own dying. The text of *Phrase* is difficult to read for those who saw Lacoue-Labarthe's decline in the last fifteen years of his life, since it speaks to a spreading abandon even in its sober and graceful prose. But it gives us something like the self-dissimulating truth of that decline, as Lacoue-Labarthe knew it. Most importantly, perhaps, it helps us to hear the barely audible suspended refrains that haunt the syntax of this meticulous writer. *Phrase* tells us that we must attend again to the literature he was writing on the scene he shared with so many others – and to an entirely different history.

Christopher Fynsk