



From Here to Eternity?

In the final sentences of the editorial which introduced the December–January issue of this magazine, Paul James pinpointed the single issue that has rapidly moved into the foreground when most Australians give thought to the future wellbeing of themselves and their children:

And if we don't start acting upon climate change mitigation, life as we know it in our relatively comfortable metropolitan centres will be swept over by a chaos hitherto unknown since Noah counted the animals.

Spot on. That's the scale of the transformation we are facing. Just for the present climate change is the main point of focus of the now widespread sense that our civilisation is at risk. Running a close second is the more domestically immediate awareness that we may be approaching peak oil. And quite apart from the way the present mode of oil consumption feeds into climate change, its short supply would have quite direct social consequences as well. For instance, unless there is a rapid turn towards alternative transport, a major increase in fuel prices would tend to immobilise the hundreds of thousands of people in the new suburbs of the outer urban fringe.

Then again, in close interaction with climate change, as well as the consumption of oil, there is the issue of the global population explosion with its potential to uproot settled ways of living and to prompt mass migrations on a global scale. Nobody talks about that much in Australia. It is as if, just because it is not close to home, we can continue on as if it carries no risk for us.

When the availability of clean air and water, or an accustomed climate, can no longer be taken as given because change is biting into basic conditions of existence, one basic reason for so many people being slow to react is exactly because those conditions are so profoundly taken for granted. When that assumption is placed in question people are left non-plussed. Especially in the short term, a sense of powerlessness is engendered. A deeper sense of being that we take to be the more or less stable ground of experience is affected. We can no longer simply take for granted the ground upon which our individual actions, along with our whole culture, is based.

At least in an historical register, shifts of this order have not been uncommon even if their sources have been distinctly varied. There is clear evidence that natural cycles of climate change have destroyed past civilisations. But the more immediately relevant issue is the way so many civilisations have destroyed themselves. Jared Diamond, in his recent book, *Collapse* (Allen Lane 2004), has set out numerous examples of how they have done so by over-consuming the natural resources upon which they depended.

In the first instalment of a two-part essay, GEOFF SHARP argues that the techno-sciences are creating a radical discontinuity in human social life.

Nevertheless ours may be the first civilisation that, while it has developed means of estimating the longer-term availability of the conditions and resources upon which it depends, is doubly unable to curb the way it is undermining them. Doubly so because, while it resembles past civilisations in the sense that it undermines its natural conditions of existence, it is quite radically set apart from them by normalising a radically different overall form of life: one that appeals to short-term gratification as well as to our sense of mortality.

In this, the first half of an essay which ranges across these issues, I will focus upon the role of the technosciences as they contribute to an unprecedented shift in social life. The discussion will note how this shift, both by its novelty and its comprehensive scale, stands in the way of the ready understanding which could help remedy its effects. The second part of the essay, to appear in the June–July issue, will turn towards the way neo-liberal aspirations, depending upon their fusion with the technosciences, consolidate public myopia. The essay will conclude with a brief discussion of the signs and prospects of a different way into the future.

An Unprecedented Transformation

The significance of an overall transformation in our way of living can scarcely be exaggerated. While the biological conditions of life — air, water, climate — are now moving to the centre of attention, that process can also have a masking effect. It can divert attention from the larger reality that a whole range of ecological effects are consequences of the more comprehensive process of change, the root conditions of which are both novel and unacknowledged. Within it, our relation to the natural world is one aspect only of the changing way in which we carry on our lives in common.

The central paradox of this changed social form of living is that for much of the population it is not yet apparent that it marks a radical discontinuity in their mode, as well as their sense, of social being. It is as if the change is so great that people can only slowly grasp its significance. Hence they are slow to respond. Or, if pressed to do so, they are likely to insist that any undermining of the ecological- and resource-related conditions of life can be remedied by a technological fix. Hence the question of the viability of an unprecedented transformation of the institutional arrangements of social life as such remains almost entirely outside the field of social understanding. Because most people do not seriously entertain the notion that their deeper sense of being may be socially constituted, they do not ask whether there are limits to the reconstitution of the social as distinct from the biological conditions of their lives.

To touch upon these issues is to imply a comprehensive ambit claim, but for the purposes of this short essay I must restrict myself to a brief reference to one of the central tenets: to what the German philosopher Martin Heidegger spoke of as 'The Question Concerning Technology'.

Questions Concerning Technology

During the last 40 years a number of *Arena's* editors have touched upon the way the increased prominence of the intellectually related groupings has affected that deeper sense of existence which we take to be the more or less stable ground of our actions. Whether those effects are manifested in work, in family life, or in politics, the central issue becomes the pivotal role of the emergent branch of the intellectually related practices: the technosciences. Condensing this issue to a manageable brevity, I am suggesting that, directed by the structured interests set within the economy, a new order of technique, emergent from the sciences, is allowing the recon-

stitution of our relation to the natural world, to one another, and to our own bodies.

The general effect of this shift, this discontinuity, is that the familiar world which we have built up or accommodated ourselves to, or which capitalist greed and individualism has built up for us, is drawing to a close. Capitalism, as an expression of the turn to the conquest of nature within the long trajectory of the Enlightenment, has become a different composite. It has fused with a different, a technologically more abstracted, way of both taking hold of and constituting social reality.

There is good reason to conclude that whereas, within capitalism, labour and machinery could be directed and exploited as means for sustaining a social structure of inequality, there are now widespread reservations about that particular way of framing socio-political understanding. That more abstracted order of being which is the hallmark of the technosciences has rapidly moved into place in the decades following the Second World War. It is reconstituting the basic experience as a well as the institutional arrangements of social being.

If the conquest of nature was the explicit sign of the Enlightenment, the reworking of the social order by way of rising capitalism was also integral with that project. Nevertheless the transition was never clean cut. Even as it accented progress and change, a certain core assumption of stasis persisted. For instance, at the heart of the impetus Protestantism lent to capitalism it retained its own religious memory of the origins and fallen condition of humankind ('Change and decay in all around I see, Oh Thou who changest not, abide with me'). Even as the flux of experience recorded change, at its core, basic identity and human nature were taken to be the same.

As secular humanism permeated cultural understanding that core sense of stasis persisted at the centre of identity. The difference was that it was now frequently grounded in an evolutionary, as distinct from a divine, sense of the origins of human nature. Hopes of fulfilment especially gradually turned towards immediate gratification and expectations of material progress as the expectation and the ideal of an afterlife was gradually marginalised.

The Technosciences and the Limits of 'Human Nature'

The proliferation of the technosciences marks the end of the Enlightenment because their focus is no longer upon the 'conquest of nature' but upon its reconstitution. It has become absolutely vital to acknowledge the significance of the break in continuity concealed by the belief that technological change is simply more of that same progress which has defined modernity. The critical issue is that the vastly enhanced role of the technosciences subverts the whole project of the conquest of nature within which, in the name of progress and enlightenment, classical liberalism put down its roots. It does so because whereas liberalism took the natural world, including its version of human nature as given, as being a permanent presence, its sense of conquest was in the mode of enlarging understanding of the natural world and of utilising its resources. The technoscientific way of taking hold is fundamentally different: it no longer takes the natural world or human nature as such as given. On the contrary its project is to reconstitute them. Nuclear power is not simply 'supercharged' coal, wood or oil. As 'natural' resources these have a given quality. Although differing in their ready availability they could have been directly turned to practical advantage at any time since our species learned to manage fire.

It scarcely needs to be emphasised that nuclear power is not merely different in degree. It cannot exist at all except as a consequence of technologies of transformation which themselves depend upon highly abstracted theoretical work. Nuclear power, in its relation to humankind, is not a given attribute of the natural world. It is a product of technosciences and intellectually related practices far removed from historical labour. Or take, for instance, the computer: clearly it is inseparable from contemporary production and communication and obviously it did not simply emerge from labour or craft. Likewise the transgenic products now proliferating in agricultural and medical applications share derivations from the theoretical clarification of the double helix and success of the genome project. The new-found capacity to transform organic matter, at least in principle, is discontinuous from the grafting, selection or crossbreeding of earlier experience.

One of my main objectives in emphasising this discontinuity, from the way we have framed our whole way of living within modernity, is to highlight how this break is actually being obscured. Claims of a triumphal continuity are at present widely accepted: neo-liberal capitalism can appear to be simply a continuing progress from the modern era of liberal capitalism.

That belief draws its main sustenance from the surge in productivity associated with the reconstruction of economic life and a limited redistribution of a greatly increased social product. That much is familiar. Clive Hamilton especially

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has drawn attention to the process in Australia. But there are other aspects of the same transformation which are profoundly challenging but slower to break into the public realm. Often, among the general public it is as if questions such as an end to mortality remain solely in the realm of science fiction. Yet, contrary to that perception, they are often at the cutting edge in research establishments with their disorienting potential hidden as if they are no more than progressivist dreaming.

In the second half of this essay (to appear in June-July) I will concentrate on the way the illusion of continuity is sustained in the public realm by the fusion of the technosciences with the neo-liberal project. But first I will make a brief detour and in a more descriptive register outline how a post-human discontinuity lies half-hidden, for the present, within that neo-liberal trajectory.

The Immortal Condition

A year or so ago a figure whose by-line is 'Dr Karl' and who partakes of a degree of public celebrity as a science journalist, announced in the *Saturday Age* that 'we might be the last generation to die'. Dr Karl Kruszelnicki's column tends to work at the boundaries of the known or the credible. While

in general it seeks to present verifiable claims it also overlaps with that 'gee whiz' and 'How Can it be So?' approach to science identified a generation ago with Professor Julius Sumner Miller. In Dr Kruszelnicki's case verifiability collapses entirely, simply because, irrespective of technoscientific possibility, Kruszelnicki's proposition is absurd in social terms. Just suppose that dying ceased today. Given the present rate of procreation the world's population would be far more than doubled within the normal lifespan of those living now. Moreover, with little space to move and the need to end reproduction, our whole received sense of meaning and value would also be in tatters.

One need scarcely go on. Kruszelnicki's proposition is manifestly absurd. How he can seriously put it forward is a far more urgent subject of inquiry than the proposition as such. Apart from his own stunning incomprehension of social consequences, the lack of any public response is also interesting in its own right. Does that stem from a common-sense recognition of the limits of possibility which is widespread among the general public even if there is a more than occasional lapse within the scientific community?

With my interest stirred by a recent similar pronouncement at the University of Melbourne, I attended a seminar presented by Professor V. F. Eastop, who has a background in genetics and is based in the John Curtin School of Medicine at the Australian National University. His highlight too was the prospect — or the threat — of immortality. Eastop was visiting at the joint invitation of the Departments of Genetics, of Information Science and also of Mathematics. The event was widely advertised under the title of *Humanity Plus* and particularly in the earlier stages of the proceedings there was some emphasis upon how individuals affected by a range of disabilities might be restored to a fuller sense of physical wellbeing.

In terms of style, Professor Eastop's presentation leaned away from a conventional seminar and towards a promotion, just as its title, *Humanity Plus*, also moved away from mere restoration of physical wellbeing. A tendency confirmed in the PowerPoint-presented hope, or slogan, IMMORTALITY, projected across the wall behind him.

In the course of 30 minutes he had not merely raised the prospect of the new species type. He was conjuring up the possibility of reconstructing the limits of what we take to be the human condition and intimating the emergence of a different — a techno-animate — order of being.

The most interesting feature of this proposition was that, at least in terms of its boundless implications, it left those present speechless. At least they did not take up the enormity of what was being proposed. They numbered around 100 or so and from the short time available for discussion and questions one surmised that they were overwhelmingly drawn from the scientific departments of the University. Why did the discussion simply remain within the 'scientific' parameters of the presentation which might from other points of view have been described as preposterous, 'insane' or perhaps, more accurately and colloquially, as simply 'off the planet'? After all, such terms were readily bandied about when, for many years, a Sydney resident devoted his days to chalking 'Eternity' on the pavement.

My guess is that the silence which prevailed upon the fundamental break within the history of human being, which Professor Eastop was foreshadowing, was imposed by two main circumstances. The first was that most of those present shared his assumptions and were ready to endorse the perspectives they grounded. More searchingly, those assumptions hide a latent ambiguity. While they reflected the turn to the material world which underpinned the secularising

impulse of the Enlightenment, in a more basic sense they were also continuous with the Judaeo-Christian tradition. Even as the secular impulse began to diverge so radically from the otherworldly focus of that tradition it left unquestioned the traditional constraints, the vulnerabilities and deeply felt emotions associated with the beginning and the end of human life. The poignant passage from the Book of Job still spoke out within the secular impulse to hold firm to assumptions concerning human limitations which have remained unquestioned for millennia.

Man that is born of woman is of few days and full of trouble. He cometh forth like a flower, and is cut down: he fleeth also as a shadow, and continueth not.

The secular impulse at first justified itself as a religious quest to verify the work of the hand of God in nature. While even in later phases of the Enlightenment Descartes' confidence that 'science would soon let people live forever' was a rarity, it has become an active current within contemporary biotechnology.

Because scientific inquiry has not often found a way of questioning its received assumptions concerning the sense of freedom associated with the conquest of nature, because it has yet to take on board the shift from conquest to reconstitution, it too often takes this process to be continuous. That is the first side of its inability to respond to the radical break entailed in the shift from the restorative perspectives of traditional medicine towards the conquest of mortality as such. It is complemented by a parallel shift, and an unassimilated understanding, of the relation of the sciences to the technosciences, both in the reconstruction of the economy and the recomposition of society generally. The absence of that appreciation of the need for a continuing and broadly based evaluation of the relation of scientific practice to overall human wellbeing emerged clearly in Professor Eastop's address. He said that *the general direction of his work was market-related, consumer driven and effective in attracting R&D funding*. Incorporation within the circuit of neo-liberal individualism was evident. My proposition here is that the shallow materialism and intensified individualism of capitalism in its neo-liberal fusion with the technosciences has also found a point of convergence here with that primeval individualism of personal survival which is one aspect of the sociality of human nature.

Lest these be thought to be isolated and perhaps eccentric examples it should be noted that the aspiration to move out beyond the limitations of the human condition is evident within a wide range of the technosciences. It has sought to ground a sense of continuity within both religious and humanist traditions. David Noble in his *Religion and Technology* (Alfred Knopf, New York, 1997) records that at NASA Werner Von Braun believed that 'Only man was burdened with being an image of God cast into the form of an animal ... And only man has been bestowed with a soul which enables him to cope with the eternal'. Noble quotes one of Von Braun's close associates who observed that 'among the space community ... [his beliefs were] more the norm than the exception'. They included the hope that it 'may be man's destiny to assume immortality ...'.

Although inclining towards humanist detachment in matters of religion, Ray Kurzweil entitles one of his early works *The Age of Spiritual Machines* (Viking, New York, 1999). Fascinated by the exponential growth of the power of computers he foreshadows the grafting of silicon to flesh and with that perhaps progress towards the realisation of Descartes' dream of spirit as the basic reality.

Francis Fukuyama, apparently in retreat from his neo-con manifesto, *The End of History and the Last Man* (Free Press, New York, 1992), went on to publish a more rounded discussion of possible consequences of the bio-technological revolution, *Our Post-Human Future* (Farrar, Strauss and Geroux, New York, 2002). His epigraph to Chapter One quotes Heidegger's warning to the effect that the march of technology could deny to human beings the chance to explore their essential humanity. Fukuyama's book may be seen as a more open-minded afterthought, in some parallel to Heidegger's own retreat from Nazi connections.

In his conclusion, Fukuyama returns to the founding assertion of the American republic that 'all men are created equal', which, as he acknowledges, in its turn rests on 'the existence of a stable human essence'. Fukuyama a little later continues:

We may be about to enter a posthuman future, in which technology will give us the power gradually to alter that essence ... But this kind of freedom will be different from all other freedoms that people have previously enjoyed.

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As I noted earlier, the central issue here is the reconstitutive power of the technosciences as expressed in its unforeseen undermining of the conditions of biological existence, in the depletion of resources, and especially in the radical discontinuity in the institutional arrangements of social life.

The widespread failure to grasp either the fact or significance of that discontinuity is, as I noted earlier, grounded in the unprecedented scope of the transformation involved. That notwithstanding, it is also a change which proceeds within an arguably subordinate framework of political and socio-economic arrangements which are marked by their own discontinuity and to which I will turn in the forthcoming conclusion to this essay. Although secondary, this discontinuity is far closer to public awareness as people sense the break from the presumed continuity between the classical image of the capitalism marked by liberal-democratic political institutions and those of the neo-liberal order as expressed in the movement towards an authoritarian regime as outlined in an earlier essay ('The Neo-Authoritarian Drift', *Arena Magazine*, No 84).

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From Here to Eternity?

After working on the draft of this article, which follows on from its first half 'From Here to Eternity' (*Arena Magazine*, April–May issue, no. 88), I happened to read an account of how, for Jewish survivors, the searing recollection of the Holocaust had re-emerged with a new intensity in the closing years of their lives (Fiona Harari in *The Weekend Australian*, 31 March 2007). In the aftermath of their personal survival, the only way for them to return to a 'normal' life had been to push from the foreground of memory, to repress, the fate of so many of their contemporaries. They did so by way of resuming the conventional routines of everyday life.

As these now elderly people retired, had time on their hands and faced the prospect of their own mortality, it was as if what had been repressed returned with renewed intensity.

While the overall life of society is by no means a simple accumulation of the different individual lives of its members, repression is one of the meeting grounds of personal and collectively shared experience. It would be far more difficult for individuals to 'forget' the horrific memories which might pervade their everyday sense of wellbeing unless an active process of denial was at work within the common culture. Does a similar process of turning away, to resume the habitual rhythms of everyday life, come into play when we face disruptive future prospects?

The lethargic response to the evidence of the likely effects of climate change certainly seems to suggest that it does. Nevertheless it is critically important to remember that this is a collective response. It is propped up by the settled institutional arrangements and cultural assumptions within which we both carry on in the present and anticipate the future. By and large individual repression of both past and future threats occurs within that collective framework. In every social world it becomes significant when tensions and structured conflicts emerge to break through the denial of the traumatic which 'normality' imposes. One such line of tension now marks the difference between the scientific and specialist workers who study climate change and the majority of their contemporaries. As they report its implications for the biological conditions of life, in a different register to everyday experience, it is inevitable that they should stand somewhat apart. The governments and peoples who receive the results of their investigations carry on a more down-to-earth, a less abstracted, mode of existence. They have few resources for independently verifying what they are told. They see the sun rise but they need Galileo to convince them that, within a more abstracted way of knowing, the turning earth presents the phenomenon of the rising sun.

In the second instalment of a two-part essay, GEOFF SHARP explores how the technosciences are contributing to an illusion of social continuity by creating unprecedented discontinuity.

Take for instance the recent declaration of a crisis in the waterflows in the Murray-Darling basin. Is this a result of drought, knowledge of which is accessible to country people relying on direct experiences and memory? Or must understanding depend on scientific analysis? That is of data drawn from deep drilling which, for instance, taps into cosmic cycles far removed from direct experience but made accessible by scientific apparatus which radically extends the power of the unaided senses.

Democracy, such as we have, presumes the prominence of the first type of experience, but that primacy is slipping away. Ask yourself, how do you know the difference between drought and climate change or, even more difficult, a mixture of both processes? The problem is obvious. Increasingly the majority of citizens have no effective way of assessing the new evidence. They are vulnerable to the politics of theatre and beat-up as any genuinely democratic determination of policy recedes before a more elitist management of consent.

The relation of these two modes of experience marks the unprecedented discontinuity which I outlined in the first half of this essay (*Arena Magazine* no. 88). Four hundred years ago, as the scientific revolution gathered pace, Galileo's heresy was still only a pointer towards the present. He and his compelling illustration of the validity of the Copernican theory of the universe were readily put down. But that response is by no means as readily available to the powers of the contemporary world.

Discontinuity

As noted in the first half of this essay the discontinuity associated with proliferating technosciences is comprehensive. The technosciences have reconstituted the natural world in unprecedented ways. This process of reconstitution is not confined to the natural world, however. It works in conjunction with the emergence of a different social world as well. It has transformed the mode of production, reworked the economy, and reconstituted the forms of interchange which frame everyday life.

It is crucially important to recognise that the way the technosciences have done so contributes to an illusion. Far from the unprecedented discontinuity which they introduce being readily apparent, it presents itself as continuity: as an improvement of the circumstances of an earlier generation. In the short run this reconstituted world is experienced as a liberation; it feeds into the freedom so central to the neo-liberal mantra, while far more slowly the recognition dawns that to radically reconstitute what it means to be human is also to lose the heritage which is inseparable from that meaning.

For the present the most obvious sign of discontinuity is climate change. Obviously denial and incapacity to appreciate its significance are still widespread. But, paradoxically, the effect of that denial is that it also limits the chance to understand that the recognition of climate change can be a step towards a wider understanding. Within such an understanding, climate change becomes symptomatic: one aspect of an unsustainable way of living.

The discontinuity we are facing now has many facets. Climate change is certainly the most obvious among them but not necessarily the most basic in any causal sense. Added to habitability, including the availability of water, the purity of air and even the way our bodies are constituted, there is the more immediately pressing social question. In their fusion with capital, the technosciences have introduced a radical discontinuity in the social forms within which we carry on our lives in common. As I pointed out in the earlier

half of this essay it is exactly the unprecedented character of this potential for change, along with its comprehensive scale, and especially the way it hides its own social dynamic, which makes it so difficult to adequately imagine or to spell out the steps of a response.

Indeed denial, or at least scepticism, in the face of climate change is a typical first response to the evidence of discontinuity, as we have seen so clearly in the case of Prime Minister John Howard. Both for Howard and Rudd the unreadiness to squarely face discontinuity tends to reduce questions of the basic conditions of existence to politicking. In other cases it can lead to 'shooting the pianist' as happened when Dr Graeme Pearman, the one-time head of the Climate Division of the CSIRO, found when he presented well verified results of the processes at work. As if instinctively, others felt bound to reject them. The findings discordant with their own 'experience' of the regularity of seasons and other weather patterns. Moreover, they tended to disturb a deeply embedded sense of social normality.

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As evidence drawn from unfamiliar sources is gradually taken on board, the first response is to seek sustainability. While people do shift their ground, they are reluctant to recognise the full scope of the impending discontinuity. Instead they ask how the established framework of social life can be maintained by increased efficiency or by alternative means. At first sustainability was a term that implied a distinct turn towards the natural environment. As the reality of climate change and limited resources have become more deeply rooted within public awareness the connotation of sustainability is moving from green to mainstream.

That shift is only one small step on the way to public appreciation that recognition of an emergent discontinuity is the condition for a wider understanding which could allow some continuity for the human condition and for all that they value within its practices and traditions.

No doubt climate change in its relation to the biological conditions of life and their undermining by contemporary overconsumption is the best point of entry for maintaining at least some awareness of sustainability. To even begin to break through deeply grounded assumptions of the permanence of the conditions of life can prepare the ground for a further step.

Unsustainability is not confined to the undermining of the biological conditions of life or even to the exhaustion of the resources upon which contemporary overconsumption depends. The basic expression of unsustainability is normality. It is the conventionality of the distinctive form of life which gives rise to these particular consequences.

The contemporary fusion of the technosciences with the mode of production and especially the expanded market is the epitome of that form. Insight into the way in which people are drawn into compliance with its trajectory, in the

name of the improvement of the human condition, while undercutting what it means to be human, is the basic issue for our civilisation.

One expression of this trajectory is the way research directed towards 'immortality' or 'the age of spiritual machines' reaches beyond the limits of the human condition.

Aspirations towards the conquest of mortality are active in the field of computer science as well. Digitalisation, information science as the technological production of what is taken to be mind and with that the collapse of the distinction between spirit and matter, is at the heart of the discontinuity marked by the trajectory which aspires towards the reconstitution of both the biological and social conditions of life.

While that goal may be inherently absurd it nevertheless defines the trajectory within which far more limited steps are taken. I am suggesting that the overall logic of the whole endeavour should be recognised and the overall project approached with extreme caution, lest we destroy all that we value. That caution is by no means publically evident.

Professor V. F. Eastop's perspective, which I outlined in the previously published section of this essay, was explicitly 'market related and consumer driven' (*Arena Magazine* no. 88). It illustrated, in the particular field of the biological sciences, the reconstitution of the conditions of what we take to be our humanity.

The nexus within which this shift is being both constituted and obscured is the fusion of the technosciences with capital. In more specific terms then, just how does that break come

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to be masked by the neo-liberal illusion of continuity? Or to revert to the opening paragraphs of this essay, how does neo-liberal reality so customise and thereby restrict the imaginative foresight of its participants that they so often fail to comprehend the implications of its trajectory?

The Neo-Liberal Illusion of Continuity

Unlike a coup or a revolution the build-up of neo-liberal power has been insidious. Its movement towards a neo-authoritarian form has been both gradual and with its own immediate appeal. In the language of democratic politics it achieves legitimacy illegitimately, by way of the social engineering of consent, or at least of inert acquiescence. The pressing question for democratic politics is whether that authoritarian drift can be reversed.

For the present, any sense of the need for an alternative is dominated by the hope of a democratic movement towards sustainability. No one should argue with that as a short-term and limited objective, but too much focus upon the short term can be misleading. If, for instance, sustainability in the face of climate change, peak oil or even overpopulation were to be achieved, these necessary and great stepping stones could well assist a quite different and far more comprehensive view to emerge. It would become more starkly apparent that each of these problems of sustainability was symptomatic. Each one of them is a particular expression of a far

more encompassing problem: the unsustainability of a way of living which remains too unresponsive to the particular way in which the technosciences have fused with capital.

Lest this be misunderstood as an especially wild example of dystopian dreaming let me begin to justify it by pointing to the most embracing myth which lends an aura of legitimacy to the neo-liberal project. That is the idea that sustainability is neo-liberal, that it is an expression of continuity in the sense of renewal and elaboration of whatever classical liberalism had to offer by way of public wellbeing, freedom and democracy.

Liberalism, tied in its economic heritage to the name of Adam Smith, endorsed his notion that notwithstanding the way self-interest governed an entrepreneur's participation in the market the growth of production allowed a hidden hand to operate. In addition to an unintended redistributive effect of the market as such, the moral sentiment of sympathy, expressed through ethical institutions external to the market, reinforced that hand. It contributed to what Smith claimed to be the actual process of redistributing part of the social product for the common good.

Within that way of thinking liberalism depended on the productivity of labour as directed by capital, but the neo-liberal surge in productivity has broken out of that world. At an increasing rate it is coming to depend upon the technosciences. As processes of production and communication were automated, that also fed into the reconstruction of the world of mechanised labour, increasingly they displaced or marginalised the work of the hand. The break from the industrial technologies of liberal capitalism to the reconstitutive power of the technosciences, which at present is so closely fused with neo-liberalism, supports the deceit of continuity by way of a number of closely interlinked misrecognitions.

First it undercuts the once deeply ingrained sense among working people that poverty and insecurity were inherent in the capitalist order of working life. As Clive Hamilton in his *Growth Fetish* (Allen & Unwin, 2003) and David McKnight (*Beyond Left and Right*, Allen & Unwin, 2005) have emphasised, it is the productivity of the 'neo-liberal' order that opens the way for that argument. It clearly has a significant role in undermining the once far stronger belief that the way to improve material wellbeing is by class or union based solidarity and collective action.

Nevertheless these arguments need to dig deeper; they stop short of emphasising the nature of an actual discontinuity. By emphasising increased production and sidelining the way the technosciences are now in fusion with capital, they lend a sense of continuity to capitalism. Neo-liberalism can then appear to emerge within the lineage of liberalism while the way the technosciences allow a general reconstruction of social life obscures the reality that, as a framing category, capitalism itself is increasingly being placed in question.

Secondly, and clearly distinguishable from any increase in material wellbeing, is the often exaggerated sense of freedom to determine one's own fate associated with the reconstruction of working skills and capacities. Compared with their parents, people experience a far greater sense of opportunities for changing their circumstances of work and life. It requires a considerable act of the imagination to recognise that the real situation may be ambiguous. It is far easier for people to interpret their actions in individual terms than to emphasise or even recognise that the whole system of occupations is being reconstructed.

In that alternative perspective the change in systemic circumstances even more than their own efforts and aspirations account for their sense of freedom and success. What they

take to be an ongoing capitalist society, within which they may take themselves to have achieved 'upward mobility' relative to their parents, can be better represented as a whole society within which most people are more materially prosperous within markedly different overall institutional arrangements.

It would be hard to overstate the importance of this second account of the reconstruction of social life. Mark Latham's recurrent celebration of his own 'social mobility', the reference to the aspirationalists in discussions of changing voting patterns, or the shift in the meaning of 'the battler' from an individual who is struggling to make ends meet to one who is battling to move up the ladder of success, are all examples of the persuasive power of a neo-liberal interpretation which accents individual achievement. As the vast majority of people stop short of recognising the scale and the comprehensiveness of the fusion of the technosciences with capital their search for bearings in a sea of change can readily respond to the neo-liberal illusion.

More encompassing than the lift in material wellbeing and the expansion of a sense of choice and improved social position beyond their parents' hopes, is the transformation of the social fabric of everyday life. This is to refer to the way the dissolution and relative fluidity of the once close-knit and often face-to-face social forms of neighbourhood are hollowed out, transformed and replaced. Media and the attractions of infotainment and/or the surrogate identifications with celebrity are far from being simply or directly grounded in technologies which emerge within, or which elaborate an ongoing way of living. They depend upon a reconstruction of institutional arrangements so that individuals may readily confuse their far more active agency as a step towards the liberal vision of the 'free individual'.

On the contrary they are neither continuous with, nor do they simply extend an avowedly liberal capitalist society. The requirement that individuals be the self-active agents within media experience does not mean that they become self-determining agents of their own formation. While their choices may be experienced as freedom, that same experience may help to obscure the way it too is radically constrained as the whole style of life is being engineered, reinterpreted and reconstituted within the enlarged reach of the market.

This whole break in the way individuals are constituted is more readily appreciated if one draws together the three aspects I have outlined: the redistribution, at least in part, of an enlarged social product; the misleading sense of mobility as if primarily an individual and aspirational achievement; and finally, the market enlarged in its scope so that it reconstitutes persons as the individualised agents of their own formation — but within its terms.

I am saying that this shift, which I have set out with a certain emphasis upon the sense of enhanced individuality and freedom, is grounded in the fusion of the technosciences — as one main branch of the whole range of intellectually related practices — with capital. The interpretive disciplines, along with their role in ethical formation and critique, are downgraded and marginalised as the process gathers momentum. The sense of freedom that interpretation can engender is being relocated within the transformative power of the technosciences. A whole new branch of now radically reconstructed 'interpretive' disciplines is established. It lends impetus to a process of cultural and political reconstruction: a new direction conducted within the terms of the neo-liberal illusion of continuity.

Economic Roots of the Neo-liberal Illusion

In many ways it is easier to recognise this discontinuity if one recalls the institutional shift upon which neo-liberalism depends by comparison with the situation which prevailed under liberal capitalism. Adam Smith (as I noted in the first part of this essay in the no. 88 issue) distinguished between the self-interest which directed the wilful actions of individuals within the terms of the market as such and the way these same actions also gave rise to the 'hidden hand' as an unintended consequence. Standing apart from the market the institutions of ethical formation reinforced the effects of the hidden hand. This second group of institutions included the universities in their close alliance with the churches.

For the present that whole traditional framework has been wound down. Within the neo-liberal perspective Smith's assumption that ethical formation was reinforced in the institutions outside the market has not been explicitly rejected so much as bypassed. Smith believed it contributed to the necessary element of trust within which buyers and sellers sought to maximise their self-interest but Friedrich Hayek,

The requirement that individuals be the self-active agents within media experience does not mean that they become self-determining agents of their own formation.

who had been Milton Friedman's colleague, and forerunner, feared the way that emphasis could feed into a welfarism with totalitarian implications. Hayek insisted that the pursuit of self-interest, within the framework of the market could provide the basic 'ethical' norms required for the conduct of social life. Buyers and sellers, he believed, had to trust one another to make competitive self-interest possible. Ethical formation could, by this account, be interpreted as integral with the market.

Hence without dispensing with the unintended consequence of the 'hidden hand', Hayek offered a rationale for 'user pays' and for the rejection of the welfare state as well as for endorsement of Margaret Thatcher's dictum, 'there is no such thing as society'. Hayek's 'market *uber alles*' doctrine did not prevent him from recognising and valuing the family as an institution co-existing with the market nor from endorsing support for people affected by events outside the range of the market forces. Quite probably he would have supported bushfire relief even if not drought relief for farmers.

Given the contemporary expansion of the market to encompass a whole style of life, many would acknowledge Hayek as a prescient figure. At least in some implicit sense he sets out a theoretical basis for the emergence of the market in its now familiar form. By its prioritisation of self-interest and its undermining of the relatively influential, even if always compromised role of the ethical institutions in their relation to power, he laid the basis for the resurgence of the neo-totalitarianism implicit in the longer trajectory of the neo-liberal project: that of a totalitarian end condition inherent in the state as the guarantor of the extended market. That potential is certainly a distinct paradox if one takes seriously

Hayek's uninhibited insistence upon freedom as a core value. It is a classic example of the unintended consequences, of which Hayek was so actively aware, of actions directed towards one particular end also contributing to a quite different outcome: 'the best laid plans of mice and men'.

The neo-liberal illusion is itself ambiguous, unintended in the sense that many of its proponents neither recognise that it is unsustainable nor appreciate that by undermining the critical role of the intellectuals and the intellectually trained they are contributing to the likelihood of consequences which, down the track, they might certainly wish to have avoided. As I have emphasised in an earlier part of this article an important aspect of the failure to grasp consequences follows on from the fundamental discontinuity in the move towards the reconstruction of nature and human nature as distinct from taking these as relatively permanent features of the human condition. Once this distinction is taken on board, once one reflects upon the significance of the breaking down of assumptions which have remained in place throughout the history of civilisations recognition of an even more challenging false description is prompted. One which, since for many people it is quite outside the role of intention, should scarcely be termed a deceit. Nevertheless, as a false description it is integral with the neo-liberal assertion of continuity from the days of liberal capitalism.

The Extended Market Undermines Ethical Constraint

One of the central themes of this article has been the profound difficulty people encounter as they seek to understand

To raise public awareness that the technologically mediated social forms which compel the more active agency of subjects are not simply a means to a greater freedom is itself a major task for public education.

a transformation which fundamentally reorders the way of living which they have come to take for granted. 'Conservatism', in this quite general sense of the term, can stand in the way of a fuller understanding of what is at stake in every society which undergoes rapid change. But in our circumstances it takes on a special character.

The discontinuity and the denial which are central themes of this essay do not merely entail a conservative failure to face up to or grasp the present transformation. Failure to respond to change, whether by passivity, active denial or incomprehension is also sustained by identifiable features of the neo-liberal project.

By extending the reach of the market to encompass or redirect a range of institutions which hitherto had been outside its direct reach, neo-liberalism undercuts an ethical framework which restrains the full expression of pure market effects. It begins to throw into high relief that ethical void which, as David McKnight has reiterated (in his *Beyond Right and Left*, 2005), stands at the heart of the market when it is unrestrained by cultural values.

By this essay's account the basic condition for the breakdown of ethical restraint is the fusion of the technosciences with capital. At the personal level the complement to the surge of open-ended growth then begins to find expression as an equally open-ended mode of consumption which is no longer related primarily to material needs. As ethical constraint, expressed as concern for others, is sidelined by the extended reach of the pure market, the norms of individualism begin to encompass the whole life of the person. The world of personal desires moves into place as commonly shared needs are displaced from the foreground of experience and future hopes.

Right at the heart of this shift is *the question concerning technology*. In a fundamental way it begins to interrogate, and so

The question concerning technology is squarely within the centre of the neo-liberal trajectory.

set in motion that once taken for granted sense of permanence at the core of the experience of human being and mortality. Viewed in that perspective the significance of technology now is not restricted to the field of production. Nor is it confined to the reconstitution of our species' relation to the natural world. It includes as well the reconstitution of our interchange with one another, and with that our sense of who we are, what we are and what our future prospects might be.

As this constitutive process is drawn within the extended reach of the market by way of massive and complex networks of technologically mediated interchange, 'the media' are still more or less glibly reduced to further means for persons to gain more fulfilment while the media's radical power of reconstitution is obscured. Proliferating media are naively taken to offer freedom from established constraints while the new constraints of novel forms of life remain as if half hidden as they await exploration and public recognition.

I have already noted that in working towards that recognition it is quite vital to hold onto the guideline that the most common feature of those new constraints is the far more active agency demanded from their subjects. The actual experience of the presence of the other is not imposed, or given, as in face-to-face interchange, it must be sought as a voluntary action. That is why it may be so readily simplified and construed as enhanced individual freedom. At least in the short run any sense of the loss of that full-bodied quality of face-to-face experience, conveyed by the active engagement of the full range of sensory modalities, may be swept aside by the exhilaration of the new freedom to initiate experience. The freedom to choose a program on a television channel can obscure the way the viewer may be 'programmed' by that choice. As it taps into a new realm of individual desires, the social engineering of this new-found scope for 'making one's own life' is by no means self-evident.

Readers of this magazine and its associated journal will realise that a particular approach to the question concerning technology has been a persistent theme within editorial policy for many years. For several of its editors it has depended upon recognition that the technosciences express a way of

knowing and acting which has less to do with clever or talented individuals than with the unique social form of their relation to one another. It is the special character of that mediation which now feeds into the reconstitution, as distinct from the conquest, of the world of nature. This is to place 'the question concerning technology', as discussed in the first part of this essay, squarely in the centre of the neo-liberal trajectory. This is to argue that in evaluating that trajectory, the failure to accord a key role to science-based technologies within theoretical foundations of neo-liberalism is a highly significant omission.

As the main builder of those foundations Hayek was equally unresponsive to any notion of a technologically mediated form of the social. Indeed Hayek regarded the very notion of 'the social' as problematic. It cuts across the radical priority he accorded to the self-interested interaction of individuals in the market. For him, the market as such was not merely the locus of the 'hidden hand', which we associate with Adam Smith's claims of a contribution to the common good. It was the site for the emergence of an ethic as well; an element of trust was held to be integral in the very possibility of viable market exchanges.

Contrary to Hayek this essay asserts that the rebuilding of social forms of ethical formation external to the market as such may be seen as conditions for the restraint, if not the actual replacement of that pursuit of individual self-interest characteristic of modern markets. A fuller understanding of the need for that critique leads on to the recognition that the trajectory of neo-liberalism is towards social breakdown and chaos in international relations. Nevertheless there is little reason for optimism as to the speed with which a fuller understanding of technologically mediated forms of the social might contribute to sustainable redirection of policy.

To raise public awareness that the technologically mediated social forms which compel the more active agency of subjects are not simply a means to a greater freedom is itself a major task for public education. To join it to the further recognition that it is the extended reach of the market as such which introduces a new order of socially engineered constraint can indeed be a daunting task.

It not only challenges the neo-liberal concept of open-ended freedom which now reaches out towards the reconstitution of nature and human nature. In far more immediate terms it also challenges consumerism and radical individualism as aspects of that reconstitutive process. A far stronger public response to this discontinuity is scarcely possible without a deeper public awareness of the ethical formation of persons by institutions outside the direct reach of the market.

Outside or Within the Market

To speak of institutions outside the direct reach of the market is by no means to minimise the way they are affected by the existence of the market as well as by those who derive a special power to influence affairs by their relation to it. Rather it is to recognise that hitherto they have maintained a relative independence which insulates their distinctive forms of interchange from quite direct market effects. Recognising those forms of interchange is a condition of maintaining or renewing them. Hence I must ask the exhausted minority who have reached this point to draw one more deep breath. The next few pages are intended to move towards the heart of the matter on this issue of social form. As they draw back from modes of understanding entrenched in 'common sense' do they, nevertheless, contribute to a grasp of where we are?

Consider for instance the social form of the family. It is

directly related to nature in the sense that the biological reproduction of persons is a condition for every other social institution. Further to that, the basic elements of sociality and morality are founded within family relations and the related ties of kinship. It is especially important to note that these forms of interchange are characterised by the predominance of the direct mutual presence of those concerned. In that respect they stand in direct contrast to the forms of technologically mediated interchange the prototype of which is intellectual practice. And contrary to common sense as this may be for some, it is important to think again and to consider that it too may be integral with a distinctive social form: one which, in contrast to the family, dispenses with social presence by way of technological mediation. It is the relation of these two quite distinct forms of interchange

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which I have referred to in this essay as the institutional framework of ethical formation.

The social form of interchange which, in its various cultural expressions, we associate with the family is now becoming unsettled. At the point of its biological grounding in nature it is being questioned as it were by the technosciences in their conjunction with capital. While the family still resists being reconstituted within the market's enlarged social ambit, intellectual practice, as the other pole of the institutional framework of ethical formation, faces exactly that challenge. Yet that challenge can scarcely be understood in its full significance when the distinctive form of interchange of the intellectual practices is not yet widely appreciated.

Rendering that process visible to a wider public is one of the conditions of continuity for a democratic order. It can contribute to a rationale for policies which might renew institutional arrangements compatible with a different order of constraint consistent with the common good. This is a project which must go beyond any simple exposure of technological mediation of the neo-liberal market and the way that underpins Hayekian foundations of the neo-liberal project. It also requires some minimal projection of the institutional arrangements of a different social order. But before returning to that theme it is necessary to outline what I mean by technological mediation in a little more detail.

The very idea that the intellectually related practices, including the technosciences which are now such a critical aspect of economic interchange and growth, have a unique social form is still an unfamiliar idea for most people. They would have a fair idea of what was meant in saying that a family or even a bureaucracy has a distinctive social form. What then stands in the way of a similar recognition of the social form of intellectual life generally, or of the special features marking the place of the technosciences within the

overall category of the intellectual practices? It could be that two main reasons for this are as follow.

Those engaged in the intellectual practices are commonly still regarded as somewhat different from the general run of their contemporaries. Different because they are engaged in a type of activity which sets them apart and also because it is commonly believed that one must be talented or even especially intelligent in order to qualify for those activities. In short, the defining feature is a taken for granted notion of the nature of the individual. Yet this is a far more generalised notion of that 'nature' and the way it contributes to the special type of activity associated with being a father, a mother or a child.

In these instances, while the defining features of the individual types mentioned are associated with their places within a social form, it is generally accepted that, as an institution, the family also has natural roots. This is far from being demonstrable in the case of the general type of the intellectual, yet in the absence of a social account of their distinctive features, a contrary belief is both still widespread and carries with it excessively elitist implications.

The work of interpretation is a condition for reaching across the difference between different forms of life which constitutes what has been spoken of as that institutional framework of ethical formation which is now being encompassed by the market.

The familiar and misleading portrayal of the intellectual type of individual still derives from a primary focus upon supposedly inherent individual features of those comprising the intellectually related categories. This effectively contradicts any notion that those 'individual' characteristics are grounded in a social form. In effect they lend a certain invisibility to any such form and that opaque screening is doubly difficult to penetrate when the actual character of this particular form of social interchange is so distinctly unlike any existing public understanding of just how social interchange should be conceived. That understanding is still grounded in face-to-face interchange: where one person knows what another is saying and doing and responds. Or, reaching out from that interpersonal situation, where one grouping of persons believes that they know how another is acting and thinking and responds to that. It is as if, in spite of the vast proliferation of the intellectually related categories by way of a process social formation, the idea of 'inherent nature' still carries on a shadowy influence.

In the absence on account of the unfamiliar social form of social interchange which allows 'the intellectual' to emerge as a distinctive social type, the notion of their exceptional quality excludes recognition that their abstracted social character might come to be as widely shared in a given population as basic literacy.

That recognition can immediately lead on to another crucially important insight. As already outlined it is the technosciences, grounded in the special form of interchange marking the intellectually related groupings, which make possible the proliferation of the technologically mediated modes of interchange which are now inseparable from the extended market. In these circumstances that persistence among the intellectually related groupings of a sense of their being individually exceptional, serves to legitimate their fusion with capital in the case of the technosciences. Alternatively, it feeds a certain passivity and disorientation among the interpretive intellectuals as to how they might renew their contribution to the common good. While the signs of a resurgence which might overcome that myopia are widespread, they remain unco-ordinated.

It may now be evident in general terms that the failure to emphasise that the basic mode of interchange within the intellectually related practices is different directly contributes to the failure to recognise that the comprehensive scale and pervasive effects of 'the problem concerning technology' is a main source of the dilemmas facing contemporary civilisations. I have already touched on 'self-interested' reasons why intellectual groupings may respond to potentially elitist accounts of their inherently exceptional qualities. But since the basic issue is their unfamiliar form of social interchange some specific reference to how it is also a carrier of an inherently co-operative potential can offer a glimpse of how recognition of that form can sustain an alternative sense of the way into the future.

Writing and Technological Mediation

The basic form of this particular technological bridging (mediation) between persons is writing and that immediately presents other barriers to the recognition of its significance. The common-sense perception is that writing is a skill, a necessary attribute along with reading, of literacy. Of course it is that. But it is a highly unusual skill: one based on the analytic dismemberment of the sound qualities of the spoken word, their attachment to the written symbols of the alphabet, and the assembly of written words. Integral with that analysis of the spoken word writing as such may depend on a range of technologies, a quill, a brush, a typewriter, a computer, and their elaborations.

Obviously this particular form of technological mediation has been with us for millennia. Along with the way public perception that it is 'just a skill' blunts recognition of its constitutive role, that perception also reduces writing to an adjunct to literacy and a way of facilitating existing forms of interchange. Writing as a skill is so taken for granted, so deeply buried in time, that to think of it as the technological mediation which makes possible a distinctive form of life and interchange scarcely enters the public imagination.

By dispensing with presence, writing as mediation allows the storing and duplication of a particular agent or author's work. It permits it to reach across spaces and times in its availability to others. The reciprocal process sets up an implicit co-operation among authors who in a more fully personal sense are unknown to one another. In short, they are lifted out of the constraints of mutual presence. In a literal sense they are abstracted from that prior sphere of interchange.

As they carry on their individual lives they do so now as if constituted within two different but nonetheless interdependent social levels of being.

This is to speak of the main tradition of the interpretive intellectuals. Across millennia mediation has allowed them, whether as philosophers, advisers in state affairs, or more

often as priests or prophets, and to stand outside everyday life. By way of interpreting the social whole they contribute to its integration within a more extended frame of reference. The work of interpretation is a condition for reaching across the difference between different forms of life which constitutes what has been spoken of as that institutional framework of ethical formation which is now being encompassed by the market.

For the scientific intellectuals, having one of their main tap-roots in that tradition means that mediation by writing continues as the indisputable condition of their interchange with one another. Beyond that a second mediation marks their difference from their peers. Scientific apparatus allows them to extend their given sensory and motor capabilities. Hence they take hold of the everyday experience of the material world differently — more abstractly: both by way of the periodic table and the nuclear reactor they take on the power to reconstitute the world of direct experience.

Clearly it is this different way of taking hold which now marks the discontinuity central to this essay. As the technosciences feed into the fusion with capital the enlarged sphere of the market begins to encompass and undermine the always relative and limited independence of the institutional framework of ethical constraint. In its place the market works towards a normative individualism which reaches across the limits of the human condition. It is tempting to say that as the 'pure market' breaks out of a period of ethical constraint, the tendency is to 'render everything unto Caesar'. But it could be that this new 'Caesar' is both anonymous and blind as it stumbles towards its end?

Conclusion

The second part of this essay commenced by noting how the business of everyday life could deflect attention both from past disasters as well as from a whole range of possible sources of discontinuity for an established way of life. My intention in writing it has been to draw attention to the way neo-liberalism, as the main agent of those sources of discontinuity, also contributes to public ignorance of its trajectory. Among the various ways in which such outcomes might be avoided I have therefore sought to focus on the way neo-liberalism suppresses public understanding. Any such endeavour must find bridges whereby ways of understanding

contemporary social life can affect acting and understanding among the wider public.

Climate change as the unintended consequence of neo-liberal excess, resulting in an unviable reconstitution of the environmental conditions of life clearly presents itself as one bridge into public understanding. It can illustrate both the limits of any liberal conception of freedom and the way the neo-liberal outlook can defer recognition of other crises: the potential crises associated with the missing answers to 'the question concerning technology' as it affects every aspect of life within the human condition.

In concentrating upon forms of social interchange and especially the forms of intellectual practice I have drawn attention to the way the expansion of the social reach of the market undermines the institutional framework of ethical formation. The implication is that words, concentrating upon ethical norms alone, cannot, by themselves, effect reform in the name of the common good. Defence and reconstruction of the institutional framework which can support that end is an indispensable complement.

Above all that will entail recognition that the composition of social life is not all of one weave. It is composed of different constitutive forms. Within the neo-liberal trajectory we have already gone too far in breaking down and coralling the relations of presence. A wider public understanding of how the current institutional arrangements of abstraction contribute to that effect can be part of a solution. If we are to draw back from the current impetus of technoscientific abstraction as the means of passage from the limits of the human condition, further insight into the way the social forms of interchange may be combined in a sustainable way of living is indispensable. That is likely to entail drawing back from one-dimensional globalisation; it is likely to call for the actual practice of the more decentralised way of living, in accord with the natural world yet compatible with extended interchange.

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