Science as Culture

The Californian ideology

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PLEASE SCROLL DOWN FOR ARTICLE

THE CALIFORNIAN IDEOLOGY

RICHARD BARBROOK AND ANDY CAMERON

Not to lie about the future is impossible and one can lie about it at will.
—Naum Gabo, 'The Realistic Manifesto'

■ AS THE DAM BURSTS . . .

At the end of the twentieth century, the long predicted conver-
gence of the media, computing, and telecommunications
into hypermedia is finally happening. Once again, capitalism's
relentless drive to diversify and intensify the creative powers of
human labour is on the verge of qualitatively transforming the way
in which we work, play, and live together. By integrating different
technologies around common protocols, something is being cre-
ated which is more than the sum of its parts.

When the ability to produce and receive unlimited amounts of
information in any form is combined with the reach of the global
telephone networks, existing forms of work and leisure can be
fundamentally transformed. New industries will be born and cur-
rent stock market favourites will swept away. At such moments of
profound social change, anyone who can offer a simple explana-
tion of what is happening will be listened to with great interest. At
this crucial juncture, a loose alliance of writers, hackers, capitalists,
and artists from the West Coast of the United States have suc-
ceeded in defining a heterogeneous orthodoxy for the coming
information age: the Californian Ideology.

This new faith has emerged from a bizarre fusion of the cultural
bohemianism of San Francisco with the hi-tech industries of
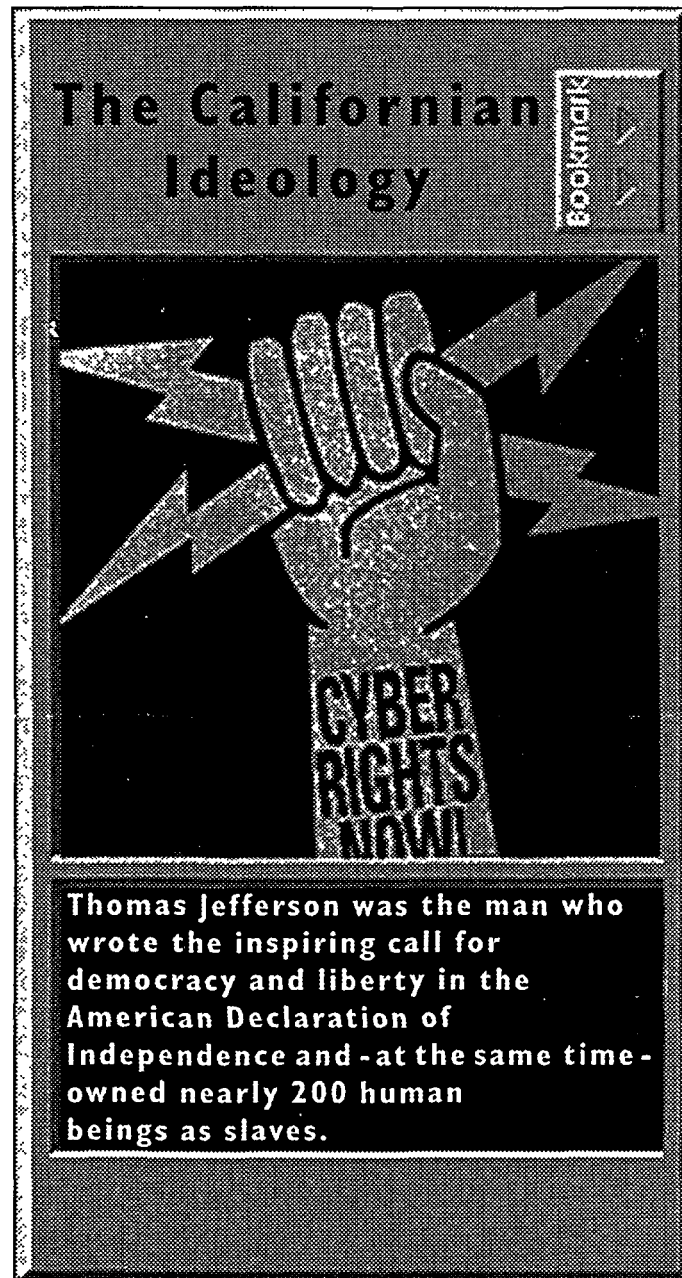
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Silicon Valley. Promoted in magazines, books, TV programmes, Web sites, newsgroups, and Net conferences, the Californian Ideology promiscuously combines the freewheeling spirit of the hippies and the entrepreneurial zeal of the yuppies. This amalgamation of opposites has been achieved through a profound faith in the emancipatory potential of the new information technologies. In the digital utopia, everybody will be both hip and rich. Not surprisingly, this optimistic vision of the future has been enthusiastically embraced by computer nerds, slacker students, innovative capitalists, social activists, trendy academics, futuristic bureaucrats, and opportunistic politicians across the USA.

As usual, Europeans have not been slow in copying the latest fad from America. While a recent EU Commission report recommends the privatisation and deregulation of telecommunications and media companies as the best way to encourage the building of the 'infobahn', cutting-edge artists and academics eagerly imitate the 'post-human' philosophers of the West Coast's Extropian cult (Bangemann, 1994; Virtual Futures, 1995). With no obvious rivals, the triumph of the Californian Ideology appears to be complete.

The widespread appeal of these West Coast ideologues isn't simply the result of their infectious optimism. Above all, they are passionate advocates of what appears to be an impeccably libertarian form of politics—they want information technologies to be used to create a new 'Jeffersonian democracy' where all individuals will be able to express themselves freely within cyberspace (Kapor, 1993).

However, by championing this seemingly admirable ideal, these techno-boosters are at the same time reproducing some of the most atavistic features of American society, especially those derived from the bitter legacy of slavery. Their utopian vision of California depends upon a wilful blindness toward the other— much less positive—features of life on the West Coast: racism, poverty, and environmental degradation (Davis, 1990; Walker, 1995). Ironically, in the not too distant past, the intellectuals and artists of the Bay Area were passionately concerned about these issues.

The Californian
Ideology

bookmark

CYBER
RIGHTS
NOW!

Thomas Jefferson was the man who
wrote the inspiring call for
democracy and liberty in the
American Declaration of
Independence and - at the same time -
owned nearly 200 human
beings as slaves.

■ RONALD REAGAN VS. THE HIPPIES

On May 15, 1969, Governor Ronald Reagan ordered armed police to carry out a dawn raid against hippie protestors who had occupied People's Park near the Berkeley campus of the University of California. During the subsequent battle, one man was shot dead and 128 other people needed hospital treatment (Katsiaficas, 1987). On that day, the 'straight' world and the counterculture appeared to be implacably opposed. On one side of the barricades, Governor Reagan and his followers advocated unfettered private enterprise and supported the invasion of Vietnam. On the other side, the hippies championed a social revolution at home and opposed imperial expansion abroad.

In the year of the raid on People's Park, it seemed that the historical choice between these two opposing visions of America's future could only be settled through violent conflict. As Jerry Rubin, one of the Yippie leaders, said at the time: 'Our search for adventure and heroism takes us outside America, to a life of self-creation and rebellion. In response, America is ready to destroy us . . .' (Rubin, 1971, p. 244).

During in the '60s, radicals from the Bay Area pioneered the political outlook and cultural style of New Left movements across the world. Breaking with the narrow politics of the post-war era, they launched campaigns against militarism, racism, sexual discrimination, homophobia, mindless consumerism, and pollution. In place of the traditional left's rigid hierarchies, they created collective and democratic structures which supposedly prefigured the libertarian society of the future.

Above all, the Californian New Left combined political struggle with cultural rebellion. Unlike their parents, the hippies refused to conform to the rigid social conventions imposed on 'organisation man' by the military, the universities, the corporations and even left-wing political parties. Instead they openly declared their rejection of the straight world through their casual dress, sexual promiscuity, loud music and recreational drugs (Katsiaficas, 1987; Reich, 1970).

The radical hippies were liberals in the social sense of the word. They championed universalist, rational, and progressive ideals,

such as democracy, tolerance, self-fulfillment, and social justice. Emboldened by over 20 years of economic growth, they believed that history was on their side. In sci-fi novels, they dreamt of 'ecotopia': a future California where cars had disappeared, industrial production was ecologically viable, sexual relationships were egalitarian, and daily life was lived in community groups (Callenbach, 1975).

For some hippies, this vision could only be realised by rejecting scientific progress as a false God and returning to nature. Others, in contrast, believed that technological progress would inevitably turn their libertarian principles into social fact.

Crucially, influenced by the theories of Marshall McLuhan, these technophiliacs thought that the convergence of media, computing and telecommunications would inevitably create the *electronic agora*—a virtual place where everyone would be able to express their opinions without fear of censorship.[1] Despite being a middle-aged English professor, McLuhan preached the radical message that the power of big business and big government would be imminently overthrown by the intrinsically empowering effects of new technology on individuals.

'Electronic media . . . abolish the spatial dimension. . . . By electricity, we everywhere resume person-to-person relations as if on the smallest village scale. It is a relation in depth, and without delegation of functions or powers. . . . Dialogue supersedes the lecture' (McLuhan, 1964, pp. 255–56).

Encouraged by McLuhan's predictions, West Coast radicals became involved in developing new information technologies for the alternative press, community radio stations, home-brew computer clubs, and video collectives. These community media activists believed that they were in the forefront of the fight to build a new America. The creation of the electronic agora was the first step toward the implementation of direct democracy within all social institutions (Downing, 1984). The struggle might be hard, but 'ecotopia' was almost at hand.

■ THE RISE OF THE 'VIRTUAL CLASS'

Who would have predicted that, in less than 30 years after the battle for People's Park, squares and hippies would together create the Californian Ideology? Who would have thought that such a contradictory mix of technological determinism and libertarian individualism would becoming the hybrid orthodoxy of the information age? And who would have suspected that as technology and freedom were worshipped more and more, it would become less and less possible to say anything sensible about the society in which they were applied?

The Californian Ideology derives its popularity from the very ambiguity of its precepts. Over the last few decades, the pioneering work of the community media activists has been largely recuperated by the hi-tech and media industries. Although companies in these sectors can mechanise and subcontract much of their labour needs, they remain dependent on key people who can research and create original products, from software programs and computer chips to books and TV programmes. Along with some hi-tech entrepreneurs, these skilled workers form the so-called 'virtual class': '. . . the techno-intelligentsia of cognitive scientists, engineers, computer scientists, video-game developers, and all the other communications specialists . . .' (Kroker and Weinstein, 1994, p. 15).

Unable to subject them to the discipline of the assembly line or replace them by machines, managers have organised such intellectual workers through fixed-term contracts. Like the 'labour aristocracy' of the last century, core personnel in the media, computing and telecoms industries experience the rewards and insecurities of the marketplace. On the one hand, these digital artisans not only tend to be well-paid, but also have considerable autonomy over their pace of work and place of employment. As a result, the cultural divide between the hippie and the 'organisation man' has now become rather fuzzy. Yet, on the other hand, these workers are tied by the terms of their contracts and have no guarantee of continued employment. Lacking the free time of the hippies, work

itself has become the main route of self-fulfillment for much of the 'virtual class' (Hayes, 1989; Lipietz, 1987).
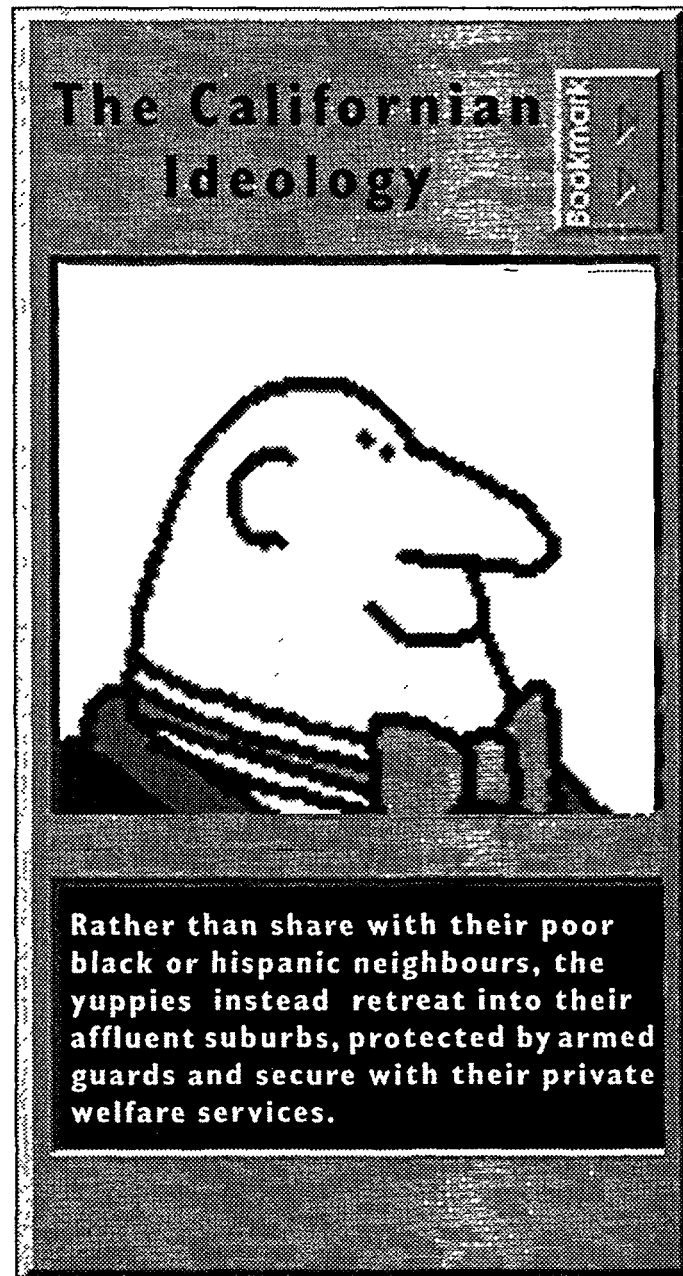
The Californian Ideology offers a way of understanding the lived reality of these digital artisans. On the one hand, these core workers are a privileged part of the labour force. On the other hand, they are the heirs of the radical ideas of the community media activists. The Californian Ideology, therefore, simultaneously reflects the disciplines of market economics and the freedoms of hippie artisanship. This bizarre hybrid is only made possible through a nearly universal belief in technological determinism. Ever since the '60s, liberals— in the social sense of the word—have hoped that the new information technologies would realise their ideals.

Responding to the challenge of the New Left, the New Right has resurrected an older form of liberalism: economic liberalism.[2] In place of the collective freedom sought by the hippie radicals, they have championed the liberty of individuals within the marketplace. Yet even these conservatives couldn't resist the romance of the new information technologies. Back in the '60s, McLuhan's predictions were reinterpreted as an advertisement for new forms of media, computing, and telecommunications being developed by the private sector. From the '70s onwards, Toffler, de Sola Pool, and other gurus attempted to prove that the advent of hypermedia would paradoxically involve a return to the economic liberalism of the past (Toffler, 1980; de Sola Pool, 1983).

This retro-utopia echoed the predictions of Asimov, Heinlein, and other macho sci-fi novelists whose future worlds were always filled with space traders, superslick salesmen, genius scientists, pirate captains, and other rugged individualists (Heinlein, 1950; Asimov, 1953, 1968a). The path of technological progress didn't always lead to 'ecotopia'—it could instead lead back to the America of the Founding Fathers.

■ ELECTRONIC AGORA OR ELECTRONIC MARKETPLACE?

The ambiguity of the Californian Ideology is most pronounced in its contradictory visions of the digital future. The development of

The Californian Ideology

Rather than share with their poor black or hispanic neighbours, the yuppies instead retreat into their affluent suburbs, protected by armed guards and secure with their private welfare services.

hypermedia is a key component of the next stage of capitalism. As Zuboff points out, the introduction of media, computing, and telecommunications technologies into the factory and the office is the culmination of a long process of separation of the workforce from direct involvement in production (Zuboff, 1988).

If only for competitive reasons, all major industrial economies will eventually be forced to wire up their populations to obtain the productivity gains of digital working. What is unknown is the social and cultural impact of allowing people to produce and exchange almost unlimited quantities of information on a global scale. Above all, will the advent of hypermedia realise the utopias of either the New Left or the New Right? As a hybrid faith, the Californian Ideology happily answers this conundrum by believing in both visions at the same time—and by not criticising either of them.

On the other hand, the anti-corporate purity of the New Left has been preserved by the advocates of the 'virtual community'. According to their guru, Howard Rheingold, the values of the counterculture baby boomers are shaping the development of new information technologies. As a consequence, community activists will be able to use hypermedia to replace corporate capitalism and big government with a hi-tech 'gift economy'. Already bulletin board systems, Net real-time conferences, and chat facilities rely on the voluntary exchange of information and knowledge between their participants. In Rheingold's view, the members of the 'virtual class' are still in the forefront of the struggle for social liberation. Despite the frenzied commercial and political involvement in building the 'information superhighway', the electronic agora will inevitably triumph over its corporate and bureaucratic enemies (Rheingold, 1994, 1996).

On the other hand, other West Coast ideologues have embraced the laissez faire ideology of their erstwhile conservative enemy. For example, *Wired*—the monthly bible of the 'virtual class'—has uncritically reproduced the views of Newt Gingrich, the extreme-right Republican leader of the House of Representatives, and the Tofflers, who are his close advisors (Schwartz, 1993; Dyson, 1995). Ignoring their policies for welfare cutbacks, the magazine

is instead mesmerised by their enthusiasm for the libertarian possibilities offered by new information technologies.

However, although they borrow McLuhan's technological determinism, Gingrich and the Tofflers aren't advocates of the electronic agora. On the contrary, they claim that the convergence of the media, computing, and telecommunications will produce an electronic marketplace: 'In cyberspace . . . , market after market is being transformed by technological progress from a "natural monopoly" to one in which competition is the rule' (Progress and Freedom Foundation, 1994, p. 5).

In this version of the Californian Ideology, each member of the 'virtual class' is promised the opportunity to become a successful hi-tech entrepreneur. Information technologies, so the argument goes, empower the individual, enhance personal freedom, and radically reduce the power of the nation-state. Existing social, political and legal power structures will wither away to be replaced by unfettered interactions between autonomous individuals and their software. These restyled McLuhanites vigorously argue that big government should stay off the backs of resourceful entrepreneurs who are the only people cool and courageous enough to take risks.

In place of counterproductive regulations, visionary engineers are inventing the tools needed to create a 'free market' within cyberspace, such as encryption, digital money, and verification procedures. Indeed, attempts to interfere with the emergent properties of these technological and economic forces, particularly by the government, merely rebound on those who are foolish enough to defy the primary laws of nature. According to the executive editor of *Wired*, the 'invisible hand' of the marketplace and the blind forces of Darwinian evolution are actually one and the same thing (Kelly, 1994). As in Heinlein's and Asimov's sci-fi novels, the path forwards to the future seems to lead back to the past. The twenty-first century information age will be the realisation of the eighteenth century liberal ideals of Thomas Jefferson: '. . . the . . . creation of a new civilisation, founded in the eternal truths of the American Idea' (Progress and Freedom Foundation, 1994, p. 13).

■ THE MYTH OF THE 'FREE MARKET'

Following the victory of Gingrich's party in the 1994 legislative elections, this right-wing version of the Californian Ideology is now in the ascendant. Yet, the sacred tenets of economic liberalism are contradicted by the actual history of hypermedia. For instance, the iconic technologies of the computer and the Net could only have been invented with the aid of massive state subsidies and the enthusiastic involvement of amateurs. Private enterprise has played an important role, but only as one part of a mixed economy.

For example, the first computer—the Difference Engine—was designed and built by private companies, but its development was only made possible through a British Government grant of £17,470, which was a small fortune in 1834 (Schaffer, 1995). From Colossus to EDVAC, from flight simulators to virtual reality, the development of computing has depended at key moments on public research handouts or fat contracts with public agencies. The IBM corporation only built the first programmable digital computer after it was requested to do so by the U.S. Defense Department during the Korean War.

Ever since, the development of successive generations of computers has been directly or indirectly subsidised by the American defence budget. As well as state aid, the evolution of computing has also depended upon the involvement of d.i.y. culture. For instance, the personal computer was invented by amateur techies who wanted to construct their own cheap machines. The existence of a 'gift economy' amongst hobbyists was a necessary precondition for the subsequent success of products made by Apple and Microsoft. Even now, shareware programs still play a vital role in advancing software design (Palfreman and Swade, 1991).

The history of the Internet also contradicts the tenets of the 'free market' ideologues. For the first 20 years of its existence, the Net's development was almost completely dependent on the much reviled American federal government. Whether via the U.S. military or through the universities, large amounts of tax payers' dollars went into building the Net infrastructure and subsidising the cost of using its services. At the same time, many of the key Net

programs and applications were invented either by hobbyists or by professionals working in their spare time. For instance, the MUD program which allows real-time Net conferencing was invented by a group of students who wanted to play fantasy games over a computer network (Rheingold, 1994).

One of the weirdest things about the rightwards drift of the Californian Ideology is that the West Coast itself is a creation of the mixed economy. Government dollars were used to build the irrigation systems, highways, schools, universities, and other infrastructural projects which makes the good life possible in California. On top of these public subsidies, the West Coast hi-tech industrial complex has been feasting off the fattest pork barrel in history for decades. The U.S. government has poured billions of tax dollars into buying planes, missiles, electronics, and nuclear bombs from Californian companies. For those not blinded by 'free market' dogmas, it was obvious that the Americans have always had state planning: only they call it the defence budget.[3]

At the same time, key elements of the West Coast's lifestyle come from its long tradition of cultural bohemianism. Although they were later commercialised, community media, 'new age' spiritualism, surfing, health food, recreational drugs, pop music, and many other forms of cultural heterodoxy all emerged from the decidedly noncommercial scenes based around university campuses, artists' communities and rural communes. Without its d.i.y. culture, California's myths wouldn't have the global resonance which they have today.

All of this public funding and community involvement has had an enormously beneficial—albeit unacknowledged and uncosted—effect on the development of Silicon Valley and other hi-tech industries. Capitalist entrepreneurs often have an inflated sense of their own resourcefulness in developing new ideas and give little recognition to the contributions made by the state, their own labour force, or the wider community. All technological progress is cumulative—it depends on the results of a collective historical process and must be counted, at least in part, as a collective achievement.
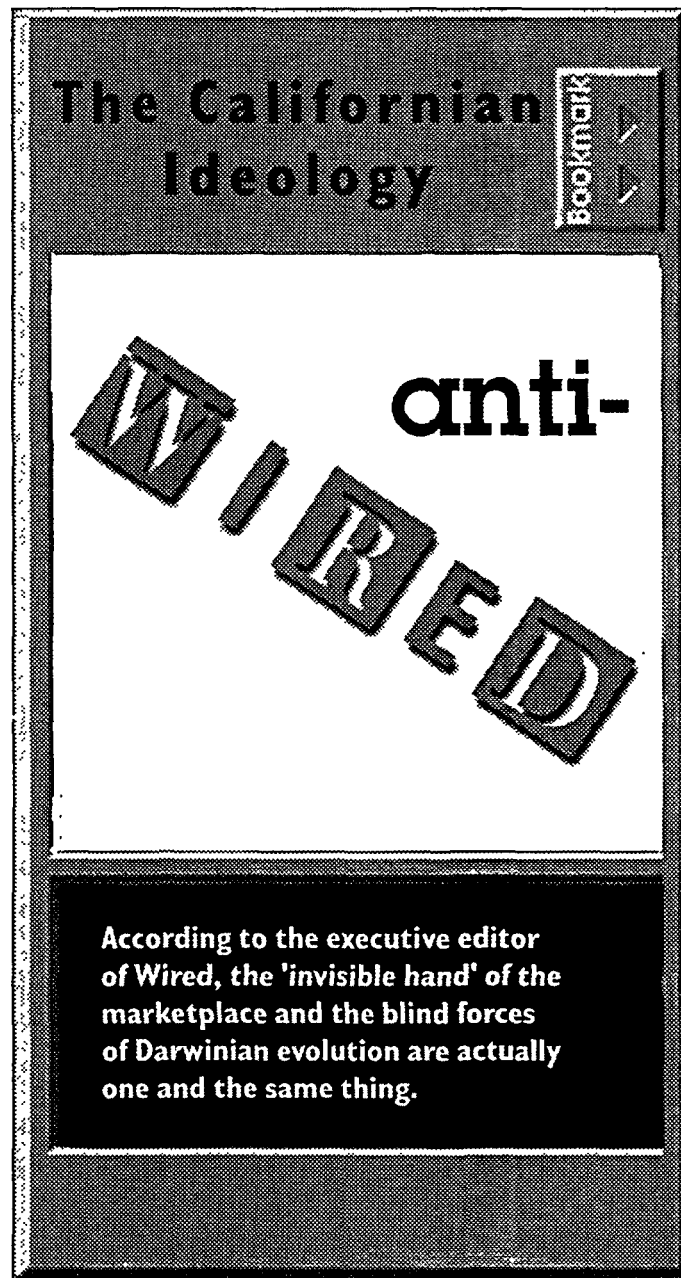
As in every other industrialised country, American entrepre-
neurs have inevitably relied on state intervention and d.i.y initia-
tives to nurture and develop their industries. When Japanese
companies threatened to take over the American microchip market,
the libertarian computer capitalists of California had no ideological
qualms about joining a state-sponsored cartel organised to fight off
the invaders from the East (Hayes, 1989, pp. 21–22). Until the Net
programs allowing community participation within cyberspace
could be included, Bill Gates believed that Microsoft had no choice
but to delay the launch of Windows '95 (Gates, 1995). As in other
sectors of the modern economy, the question facing the emerging
hypermedia industry isn't whether or not it will be organised as a
mixed economy, but what sort of mixed economy it will be.

■ FREEDOM IS SLAVERY

If its holy precepts are refuted by profane history, why have the
myths of the 'free market' so influenced the proponents of the
Californian Ideology? Living within a contract culture, the hi-tech
artisans lead a schizophrenic existence. On the one hand, they
cannot challenge the primacy of the marketplace over their lives.
On the other hand, they resent attempts by those in authority to
encroach on their individual autonomy. By mixing New Left and
New Right, the Californian Ideology provides a mystical resolu-
tion of the contradictory attitudes held by members of the 'virtual
class'.

Crucially, anti-statism provides the means to reconcile radical
and reactionary ideas about technological progress. While the New
Left resents the government for funding the military-industrial
complex, the New Right attacks the state for interfering with the
spontaneous dissemination of new technologies by market compe-
tition. Despite the central role played by public intervention in
developing hypermedia, the Californian ideologues preach an
anti-statist gospel of hi-tech libertarianism: a bizarre mishmash of
hippie anarchism and economic liberalism beefed up with lots of
technological determinism.

Rather than comprehend really existing capitalism, gurus from

The Californian
Ideology

anti-

W I R E D

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both New Left and New Right much prefer to advocate rival versions of a digital 'Jeffersonian democracy'. For instance, Howard Rheingold on the New Left believes that the electronic agora will allow individuals to exercise the sort of media freedom advocated by the Founding Fathers. Similarly, the New Right claim that the removal of all regulatory curbs on the private enterprise will create media freedom worthy of a 'Jeffersonian democracy' (Rheingold, 1994; Kapor, 1993).

The triumph of this retro-futurism is a result of the failure of renewal in the U.S.A. during the late '60s and early '70s. Following the confrontation at People's Park, the struggle between the American establishment and the counterculture entered into a spiral of violent confrontation. While the Vietnamese—at the cost of enormous human suffering—were able to expel the American invaders from their country, the hippies and their allies in the black civil rights movement were eventually crushed by a combination of state repression and cultural co-option.

The Californian Ideology perfectly encapsulates the consequences of this defeat for members of the 'virtual class'. Although they enjoy cultural freedom won by the hippies, most of them are no longer actively involved in the struggle to build 'ecotopia'. Instead of openly rebelling against the system, these digital artisans now accept that individual freedom can only be achieved by working within the constraints of technological progress and the 'free market'. In many cyberpunk novels, this asocial libertarianism is personified by the central character of the hacker, who is a lone individual fighting for survival within the virtual world of information (Gibson, 1984, 1986, 1989; Sterling, 1988).

The drift towards the right by the Californian ideologues is the helped by their unquestioning acceptance of the liberal ideal of the self-sufficient individual. In American folklore, the nation was build out of a wilderness by freebooting individuals—the trappers, cowboys, preachers, and settlers of the frontier. The American revolution itself was fought to protect the freedoms and property of individuals against oppressive laws and unjust taxes imposed by a foreign monarch.

For both the New Left and the New Right, the early years of the American republic provide a potent model for their rival versions of individual freedom. Yet there is a profound contradiction at the centre of this primordial American dream: individuals in this period only prospered through the suffering of others. Nowhere is this clearer than in the life of Thomas Jefferson—the chief icon of the Californian Ideology.

Thomas Jefferson was the man who wrote the inspiring call for democracy and liberty in the American Declaration of Independence and—at the same time—owned nearly 200 human beings as slaves. As a politician, he championed the right of American farmers and artisans to determine their own destinies without being subject to the restrictions of feudal Europe. Like other liberals of the period, he thought that political liberties could be protected from authoritarian governments only by the widespread ownership of individual private property.

According to Jefferson, the rights of citizens were derived from this fundamental natural right. In order to encourage self-sufficiency, he proposed that every American should be given at least 50 acres of land to guarantee their economic independence. Yet, while idealising the small farmers and businessmen of the frontier, Jefferson was actually a Virginian plantation-owner living off the labour of his slaves. Although the South's 'peculiar institution' troubled his conscience, he still believed that the natural rights of man included the right to own human beings as private property. In 'Jeffersonian democracy', freedom for white folks was based upon slavery for black people.[4]

■ FORWARD INTO THE PAST

Despite the eventual emancipation of the slaves and the victories of the civil rights movement, racial segregation still lies at the centre of American politics—especially on the West Coast. In the 1994 election for governor in California, Pete Wilson, the Republican candidate, won through a vicious anti-immigrant campaign. Nationally, the triumph of Gingrich's Republican party in the legislative elections was based on the mobilisation of 'angry white

males' against the supposed threat from black welfare scroungers, immigrants from Mexico, and other uppity minorities. These politicians have reaped the electoral benefits of the increasing polarisation between the mainly white, affluent suburbanites—most of whom vote—and the largely non-white, poorer inner city dwellers—most of whom don't vote (Walker, 1995).

Although they retain some hippie ideals, many Californian ideologues have found it impossible to take a clear stand against the divisive policies of the Republicans. This is because the hi-tech and media industries are a key element of the New Right electoral coalition. In part, both capitalists and well-paid workers fear that the open acknowledgment of public funding of their companies would justify tax rises to pay for desperately needed spending on health care, environmental protection, housing, public transport, and education.

More importantly, many members of the 'virtual class' want to be seduced by the libertarian rhetoric and technological enthusiasm of the New Right. Working for hi-tech and media companies, they would like to believe that the electronic marketplace can somehow solve America's pressing social and economic problems without any sacrifices on their part. Caught in the contradictions of the Californian Ideology, Gingrich is—as one *Wired* contributor put it—both their 'friend *and* foe' (Dyson, 1995).

In the U.S.A., a major redistribution of wealth is urgently needed in the long-term economic well-being of the majority of the population. However, this is against the short-term interests of rich white folks, including many members of the 'virtual class'. Rather than share with their poor black or hispanic neighbours, the yuppies instead retreat into their affluent suburbs, protected by armed guards and secure with their private welfare services (Davis, 1990; 1992). The deprived only participate in the information age by providing cheap nonunionised labour for the unhealthy factories of the Silicon Valley chip manufacturers (Hayes, 1989).

Even the construction of cyberspace could become an integral part of the fragmentation of American society into antagonistic, racially determined classes. Already 'red-lined' by profit-hungry

telephone companies, the inhabitants of poor inner city areas are now threatened with exclusion from the new on-line services through lack of money (Stuart, 1995). In contrast, members of the 'virtual class' and other professionals can play at being cyberpunks within hyper-reality without having to meet any of their impoverished neighbours. Alongside the ever-widening social divisions, another apartheid is being created between the 'information-rich' and the 'information-poor'. In this hi-tech 'Jeffersonian democracy', the relationship between masters and slaves endures in a new form.

■ CYBORG MASTERS AND ROBOT SLAVES

The fear of the rebellious 'underclass' has now corrupted the most fundamental tenet of the Californian Ideology: its belief in the emancipatory potentiality of the new information technologies. While the proponents of the electronic agora and the electronic marketplace promise to liberate individuals from the hierarchies of the state and private monopolies, the social polarisation of American society is bringing forth a more oppressive vision of the digital future. The technologies of freedom are turning into the machines of dominance.

At his estate at Monticello, Jefferson invented many clever gadgets for his house, such as a 'dumb waiter' to deliver food from the kitchen into the dining room. By mediating his contacts with his slaves through technology, this revolutionary individualist spared himself from facing the reality of his dependence upon the forced labour of his fellow human beings (Wilstach, 1925). In the late-twentieth century, technology is once again being used to reinforce the difference between the masters and the slaves.

According to some visionaries, the search for the perfection of mind, body, and spirit will inevitably lead to the emergence of the 'post-human': a biotechnological manifestation of the social privileges of the 'virtual class'. While the hippies saw self-development as part of social liberation, the digital artisans of contemporary California are more likely to seek individual self-fulfillment through therapy, spiritualism, exercise, or other narcissistic

pursuits. Their desire to escape into the gated suburb of the hyper-real is only one aspect of this deep self-obsession (Hayes, 1989).

Emboldened by supposed advances in 'Artificial Intelligence' and medical science, the Extropian cult fantasises of abandoning the 'wetware' of the human state altogether to become living machines (Extropians, 1995). Just like Virek and the Tessier-Ashpools in Gibson's 'Sprawl' novels, they believe that social privilege will eventually endow them with immortality (Gibson, 1984, 1986). Instead of predicting the emancipation of humanity, this form of technological determinism can only envisage a deepening of social segregation.

Despite these fantasies, white people in California remain dependent on their darker-skinned fellow humans to work in their factories, pick their crops, look after their children, and tend their gardens. Following the L.A. riots, they increasingly fear that this 'underclass' will someday demand its liberation. If human slaves are ultimately unreliable, then mechanical ones will have to be invented.

The search for the holy grail of 'Artificial Intelligence' reveals this desire for the Golem—a strong and loyal slave whose skin is the colour of the earth and whose innards are made of sand. As in Asimov's 'Robot' novels, the techno-utopians imagine that it is possible to obtain slavelike labour from inanimate machines (Asimov, 1986a & b). Yet, although technology can store or amplify labour, it can never remove the necessity for humans to invent, build, and maintain these machines in the first place. Slave labour cannot be obtained without somebody being enslaved.

Across the world, the Californian Ideology has been embraced as an optimistic and emancipatory form of technological determinism. Yet, this utopian fantasy of the West Coast depends upon its blindness toward—and dependence on—the social and racial polarisation of the society from which it was born. Despite its radical rhetoric, the Californian Ideology is ultimately pessimistic about fundamental social change. Unlike the hippies, its advocates are

not struggling to build 'ecotopia' or even to help revive the New Deal.

Instead, the social liberalism of New Left and the economic liberalism of New Right have converged into an ambiguous dream of a hi-tech 'Jeffersonian democracy'. Interpreted generously, this retro-futurism could be a vision of a cybernetic frontier where digital artisans discover their individual self-fulfillment in either the electronic agora or the electronic marketplace. However, as the zeitgeist of the 'virtual class', the Californian Ideology is at the same time an exclusive faith. If only some people have access to the new information technologies, 'Jeffersonian democracy' can become a hi-tech version of the plantation economy of the Old South. Reflecting its deep ambiguity, the Californian Ideology's technological determinism is not simply optimistic and emancipatory. It is simultaneously a deeply pessimistic and repressive vision of the future.

■ THERE ARE ALTERNATIVES

Despite its deep contradictions, people across the world still believe that the Californian Ideology expresses the only way forward to the future. With the increasing globalisation of the world economy, many members of the 'virtual class' in Europe and Asia feel more affinity with their Californian peers than other workers within their own country. Yet, in reality, debate has never been more possible or more necessary.

The Californian Ideology was developed by a group of people living within one specific country with a particular mix of socio-economic and technological choices. Its eclectic and contradictory blend of conservative economics and hippie radicalism reflects the history of the West Coast—and not the inevitable future of the rest of the world. For instance, the anti-statist assumptions of the Californian ideologues are rather parochial. In Singapore, the government is not only organising the construction of a fibre-optic network, but also trying to control the ideological suitability of the information distributed over it. Given the much faster growth rates of the Asian 'tigers', the digital future will

not necessarily first arrive in California (Gibson and Sandfort, 1993).

Despite the neo-liberal recommendations of the Bangemann Report, most European authorities are also determined to be closely involved within the development of new information technologies. Minitel—the first successful on-line network in the world—was the deliberate creation of the French state. Responding to an official report on the potential impact of hypermedia, the government decided to pour resources into developing 'cutting edge' technologies.

In 1981, France Telecom launched the Minitel system which provided a mix of text-based information and communications facilities. As a monopoly, this nationalised telephone company was able to build up a critical mass of users for its pioneering on-line system by giving away free terminals to anyone willing to forgo paper telephone directories. Once the market had been created, commercial and community providers were then able to find enough customers or participants to thrive within the system. Ever since, millions of French people from all social backgrounds have happily booked tickets, chatted each other up and politically organised on-line without realising they were breaking the libertarian precepts of the Californian Ideology (Marchand, 1988).

Far from demonising the state, the overwhelming majority of the French population believe that more public intervention is needed for an efficient and healthy society (Le Monde, 1995). In the recent presidential elections, almost every candidate had to advocate—at least rhetorically—greater state intervention to end social exclusion of the unemployed and homeless. Unlike its American equivalent, the French revolution went beyond economic liberalism to popular democracy.

Following the victory of the Jacobins over their liberal opponents in 1792, the democratic republic in France became the embodiment of the 'general will'. As such, the state was believed to defend the interests of all citizens, rather than just to protect the rights of individual property owners. The discourse of French politics allows for collective action by the state to mitigate—or even remove—problems encountered by society. While the Cali-

fornian ideologues hypocritically try to ignore the taxpayers' dollars subsidising the development of hypermedia, the French government can openly intervene in this sector of the economy (Albert, 1993; Delmas, 1991).

Although its technology is now dated, the history of Minitel clearly refutes the anti-statist prejudices of the Californian ideologues—and of the Bangemann committee. The digital future will be a hybrid of state intervention, capitalist entrepreneurship, and d.i.y. culture. Crucially, if the state can foster the technological development of hypermedia, conscious action could also be taken to prevent the emergence of the social apartheid between the 'information rich' and the 'information poor'. By not leaving everything up to the vagaries of market forces, the EU and its member states could ensure that every citizen has the opportunity to be connected to a broadband fibre-optic network at the lowest possible price.

In the first instance, this would be a much needed job creation scheme for semiskilled labour in a period of mass employment. As Keynesian employment measure, nothing beats paying people to dig holes in the road and fill them in again (Keynes, 1964, p. 220). Even more importantly, the construction of a fibre-optic network into homes and businesses could give everyone access to new on-line services and create a large vibrant community of shared expertise.

The long-term gains to the economy and to society from the building of the 'infobahn' would be immeasurable. It would allow industry to work more efficiently and market new products. It would ensure that education and information services were available to all. No doubt the 'infobahn' will create a mass market for private companies to sell existing information commodities—films, TV programmes, music, and books—across the Net. At the same time, once people can distribute as well as receive hypermedia, a flourishing of community media and special interest groups will quickly emerge. For all this to happen, collective intervention will be needed to ensure that all citizens are included within the digital future.
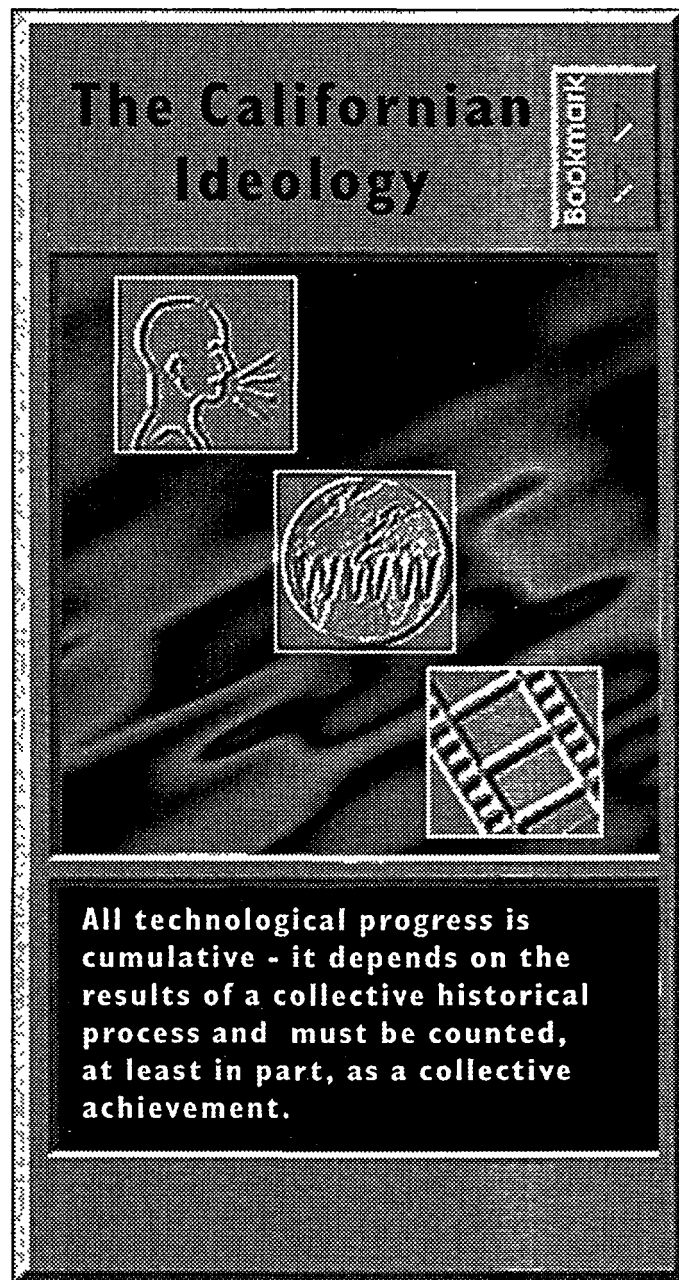
■ THE REBIRTH OF THE MODERN

Even if it is not in circumstances of their own choosing, it is now necessary for Europeans to assert their own vision of the future. There are varying ways forward towards the information society— and some paths are more desirable than others. In order to make an informed choice, European digital artisans need to develop a more coherent analysis of the impact of hypermedia than can be found within the ambiguities of the Californian Ideology. The members of the European 'virtual class' must create their own distinctive self-identity.

This alternative understanding of the future starts from a rejection of any form of social apartheid—both inside and outside cyberspace. Any programme for developing hypermedia must ensure that the whole population can have access to the new on-line services. In place of New Left or New Right anarchism, a European strategy for developing the new information technologies must openly acknowledge the inevitability of some form of mixed economy—the creative and antagonistic mix of state, corporate, and d.i.y. initiatives. The indeterminacy of the digital future is a result of the ubiquity of this mixed economy within the modern world. No one knows exactly what the relative strengths of each component will be, but collective action can ensure that no social group is deliberately excluded from cyberspace.

A European strategy for the information age must also celebrate the creative powers of the digital artisans. Because their labour cannot be deskilled or mechanised, members of the 'virtual class' exercise great control over their own work. Rather than succumbing to the fatalism of the Californian Ideology, we should embrace the Promethean possibilities of hypermedia. Within the limitations of the mixed economy, digital artisans are able to invent something completely new—something which has not been predicted in any sci-fi novel.

These innovative forms of knowledge and communications will sample the achievements of others, including some aspects of the Californian Ideology. It is now impossible for any serious movement for social emancipation not to include demands for feminism,

The Californian
Ideology

Bookmark

All technological progress is
cumulative - it depends on the
results of a collective historical
process and must be counted,
at least in part, as a collective
achievement.

drug culture, gay liberation, ethnic identity, and other issues pio-
neered by West Coast radicals. Similarly, any attempt to develop
hypermedia within Europe will need some of the entrepreneurial
zeal and can-do attitude championed by the Californian New
Right. Yet, at the same time, the development of hypermedia
means innovation, creativity and invention. There are no prece-
dents for all aspects of the digital future.

As pioneers of the new, the digital artisans need to reconnect
themselves with the theory and practice of productive art. They are
not just employees of others—or even would-be cybernetic entre-
preneurs. They are also artist-engineers—designers of the next
stage of modernity. Drawing on the experience of the Saint-Simon-
ists and Constructivists, the digital artisans can create a new
machine aesthetic for the information age (Taylor, 1975; Bowlt,
1976). For instance, musicians have used computers to develop
purely digital forms of music, such as jungle and techno.[5] Interac-
tive artists have explored the potentiality of CD-rom technologies,
as shown by the work of Anti-Rom. The Hypermedia Research
Centre has constructed an experimental virtual social space called
J's Joint (HRC, 1996). In each instance, artist-engineers are trying
to push beyond the limitations of both the technologies and their
own creativity.

Above all, these new forms of expression and communications
are connected with the wider culture. The developers of hyperme-
dia must reassert the possibility of rational and conscious control
over the shape of the digital future. Unlike the elitism of the
Californian Ideology, the European artist-engineers must construct
a cyberspace which is inclusive and universal. Now is the time for
the rebirth of the Modern.

'Present circumstances favour making luxury national. Luxury
will become useful and moral when it is enjoyed by the whole
nation. the honour and advantage of employing directly, in
political arrangements, the progress of exact sciences and the
fine arts . . . have been reserved for our century' (Saint-Simon
in Taylor, 1975: 203).

■ **NOTES**

1 Over the past 30 years, there have been successive attempts to create the electronic agora. According to its advocates, the physical limitations on direct democracy could be overcome through the use of media technologies which would allow everyone to participate personally in political and social decisionmaking, see Barbrook, 1995.

2 There is considerable political and sematic confusion about the meanings of 'liberalism' and 'libertarianism' on both sides of the Atlantic. For instance, Americans use liberalism to describe any policies which happen to be supported by the supposedly left-of-centre Democratic party. However, as Lipset points out, this narrow sense of the word hides the almost universal acceptance in the U.S.A. of liberalism in its classical meaning. As he puts it: 'These [liberal] values were evident in the twentieth-century fact that . . . the United States not only lacked a viable socialist party, but also has never developed a British or European-style Conservative or Tory party' (Lipset, 1996, pp. 31–32). The convergence of the New Left and New Right around the Californian Ideology, therefore, is a specific example of the wider consensus around anti-statist liberalism as a political discourse in the U.S.A.

3 As President Clinton's Labor Secretary puts it: 'Recall that through the postwar era the Pentagon has quietly been in charge of helping American corporations move ahead with technologies like jet engines, airframes, transistors, integrated circuits, new materials, lasers, and optic fibres. . . . The Pentagon and the 600 national laboratories which work with it and with the Department of Energy are the closest thing America has to Japan's well-known Ministry of International Trade and Industry' (Reich, 1991, p. 159).

4 According to Miller, Thomas Jefferson believed that black people could not be members of the Lockean social contract which bound together citizens of the American republic: 'The rights of man . . . while theoretically and ideally the birthright of every human being, applied in practice in the United States only to white men: the black slaves were excluded from consideration because, while admittedly human beings, they were also property, and where the rights of man conflicted with the rights of property, property took precedence' (Miller, 1977, p. 13). Jefferson's opposition to slavery was at best rhetorical. In a letter of April 22, 1820, he disingenuously suggested that the best way to encourage the abolition of slavery would be to legalise the private ownership of human beings in all States of the Union and the frontier territories! He claimed that '. . . their diffusion over a greater surface would make them individually happier, and proportionally facilitate the accomplishment of their emancipation, by dividing the burden on a greater number of coadjutors [i.e. slave-owners]' (Peterson, 1975: 568). For a description of life on his plantation, also see Wilstach 1925.

5 As Goldie, a jungle music-maker, puts it: 'We have to take it forwards and

take the drums 'n' bass and push it and push it and push it. I remember when we were saying that it couldn't be pushed anymore. It's been pushed tenfold since then. . . .' (Marcus, 1995: 46).

■ ACKNOWLEDGMENTS

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