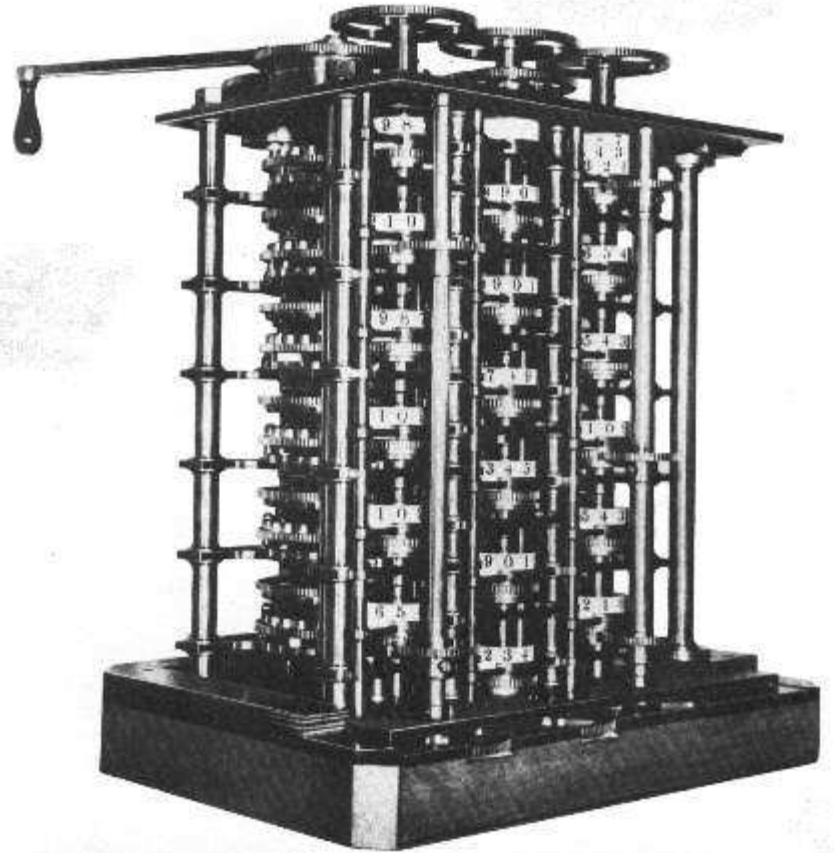


# autonomist marxism



**treason**

<http://treason.metadns.cx>

**nick dyer-witheford**

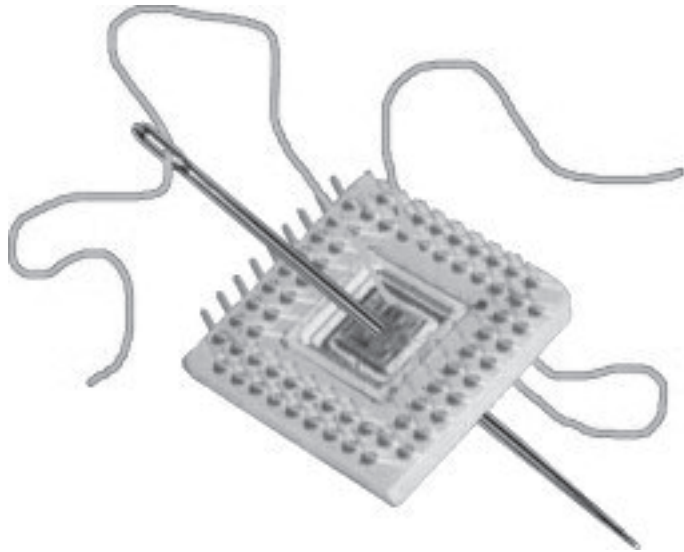
first published in *Capital & Class* as 'Autonomist Marxism and the Information Society' in Issue no. 52, 1994

this edition published by Treason Press, February 2004

- Ryan, Michael (1989) *Politics and Culture: Working Hypotheses for a Post Revolutionary Society*. MacMillan, London.  
 (1991) 'Epilogue' in Antonio Negri. *Marx Beyond Marx: Lessons of the Grundrisse*. Autonomedia/Pluto, London. 191-221.
- Schiller, Herbert J. (1976) *Communication and Cultural Domination*. International Arts and Sciences Press, New York.
- Sivanandan, A (1989) 'New Circuits of Imperialism' in *Race & Class* 30.4: 1-19.
- Stonier, Torn (1983) *The Wealth of Information*. Methuen, London.
- Tahon, Marie Blanche, and Andre Corten [eds] (1986) *L'Italie: le philosophe et le gendarme*. Actes du Colloque de Montreal, VLB Editeur, Montreal.
- Toffler, Alvin (1970) *Future Shock*. Bantam, New York.  
 (1980) *The Third Wave*. New York. Morrow.  
 (1990) *Powershift*. Bantam, New York.
- Touraine, Alain (1971) *The Post-Industrial Society: Tomorrow's Social History: Classes, Conflicts and Culture in the Programmed Society*. Random House, New York.
- Tronti, Mario (1973) 'Social Capital' in *Telos* 17: 98-121.  
 (1976) 'Workers and Capital' in CSE Pamphlet No. 1. *The Labour Process & Class Strategies*. Conference of Socialist Economists, London. 92-125.  
 (1980) 'The Strategy of Refusal' in *Semiotext(e)*. 3.3: 28-35.
- Tsuzuku, Ken (1991) 'Presentation to the 1991 Labour Notes Conference' in 'A Conference on Labour and Team Concepts' in Proc. of a Conference Co-Sponsored by Capilano College Labour Studies Programme and Vancouver & District Labour Council. Vancouver, October 18-19, 1991.
- Virno, Paolo (1980) 'Dreamers of Successful Life' in *Semiotext(e)* 3.3: 112-117.  
 (1992) 'Quelques notes a propos du general intellect' in *Futur Anterieur* 10: 45-53.
- Wainright, Hilary (1982) *The Lucas Plan: A New Trades Unionism in the Making?*. Allison & Bushy, London.
- Walker, Peter (1980) *Guardian* Nov. 19. Cited in Robins and Webster 1988, 7-8.
- Webster, Frank, and Kevin Robins (1986) *Information Technology: A Luddite Analysis*. Ablex, Norwood.
- Winner, Langdon (1977) *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*. MIT, Cambridge.
- Wood, Stephen (1989) 'The Transformation of Work?' In Stephen Wood [ed] *The Transformation of Work?: Skill, Flexibility and the Labour Process*. Unwin Hyman, London. 1-43.
- Wright, Steven John (1988) *Forcing the Lock: The Problem of Class Composition in Italian Workerism*. Unpublished Ph.D. Dissertation. Monash University, Australia.
- Zerowork Collective (1975) 'Introduction' in *Zerowork: Political Materials* 1: 1-7.
- Zuboff, Shosana (1984) *In the Age of the Smart Machine: The Future of Work and Power*. Basic, New York.

## Contents

- 5 Autonomist Marxism and the Information Society
- 6 The Information Society and the Triumph of Capital
- 7 Autonomous Technology/Autonomous Workers
- 8 Infotech Versus the Mass Worker: The Neo-Luddite Moment
- 10 The Social Factory and the Socialised Worker
- 12 Between the Working Class and the New Social Movements
- 15 Communication Against Information
- 18 Postmodern Class Struggle?
- 19 Autovalorisation and the Abolition of Work
- 22 Conclusions
- 25 Footnotes
- 28 References



- Panzieri, Raniero (1976) 'Surplus value and planning: notes on the reading of Capital' in CSE Pamphlet No. 1. *The Labour Process & Class Strategies*. CSE., London. 4-25.
- (1980) 'The Capitalist Use of Machinery: Marx Versus the Objectivists' in Phil Slater [ed] *Outlines of a Critique of Technology*. Humanities, Highlands. 44-69.
- Peláez, Eloina, and John Holloway (1990) 'Learning to Bow: Post-Fordism and Technological Determinism' in *Science as Culture* 8: 15-27.
- Penley, Constance, and Andrew Ross (1991) *Technoculture*. University of Minnesota, Minneapolis.
- Piore, Michael J. and Charles Sabel (1984) *The Second Industrial Divide: Possibilities for Prosperity*. Basic, New York.
- Piotte, Jean-Marc (1986) 'Le cheminement politique de Negri' in M.B Tahon and A. Corten [eds] *L'Italie: le philosophe et le gendarme*, 17-36.
- Piperno, Franco (1986) 'Innovation technologique et transformation de l'être social' in M.B Tahon and A. Corten [eds] *L'Italie: le philosophe et le gendarme*, 123-133.
- Pollert, Anna (1991) 'The Orthodoxy of Flexibility' in A. Pollert [ed] *Farewell to Flexibility*. Blackwell, Oxford.
- Potat, Marc Uri (1977) *The Information Economy: Definition and Measurement*. Vol. 1 of 12. US Department of Commerce, Washington DC.
- (1978) 'Global Implications of the Information Society' in *Journal of Communication* 28.1: 70-80.
- Poster, Mark (1984) *Foucault, Marxism and History: Mode of Production versus Mode of Information*. Polity, Cambridge.
- (1990) *The Mode of Information: Poststructuralism and Social Context*. University of Chicago, Chicago.
- Ramirez, Bruno (1986) 'Notes sur la recomposition de classes en Amérique du Nord' in M.B Tahon and A. Cotten [eds] *L'Italie: le philosophe et le gendarme*, 133-140.
- Ramtin, Ramin (1991) *Capitalism and Automation: Revolution in Technology and Capitalist Breakdown*. Pluto, London.
- Red Notes (1979) *Working Class Autonomy and the Crisis*. Red Notes, London.
- Robins, Kevin (1982) 'New Technology - The Political Economy of General Ludd' in Bannon et al. 66-72.
- Robins, Kevin and Frank Webster (1981) 'Information Technology: Futurism, Corporations and the State' in *The Socialist Register* 1981 [ed] Ralph Miliband and John Saville. Merlin, London.
- (1983) 'Luddism: New Technology and the Critique of Political Economy' in *Science, Technology and the Labour Process* v. 2. [eds] Les Levidow and B. Young. Humanities, Atlantic Highlands.
- (1988a) 'Athens Without Slaves... Or Slaves Without Athens? The Neurosis of Technology' in *Science as Culture* 3: 7-53.
- Rose, Margaret A (1991) *The Post-Modern and the Post-Industrial. A Critical Analysis*. Cambridge University Press, Cambridge.
- Ross, Andrew (1991) 'Hacking Away at the Counter Culture' in C. Penley and A. Ross [eds] *Technoculture*. University of Minnesota, Minneapolis. 107-134.

# Autonomist Marxism and the Information Society

- (1969) *Theories of Surplus Value*. Vols 1-3. Lawrence & Wishart, London.
- (1973) *Grundrisse: Foundations of a Critique of Political Economy*. Penguin, Harmondsworth.
- (1977) *Capital*. Vol 1. Vintage, London.
- Masuda, Yoneji (1981) *The Information Society as Post-Industrial Society*. Washington, DC. World Future Society.
- Mathews, John (1989a) *Age of Democracy: The Politics of Past-Fordism*. Oxford University Press, Melbourne.
- (1989b) *Tools of Change: New Technology and the Democratisation of Work*. Pluto, Sydney.
- Midnight Notes Collective (1979a) 'Strange Victories' in *Midnight Notes* 1.
- (1979b) 'No Future Notes' in *Midnight Notes* 2.
- (1984) 'The Working Class Waves Bye-Bye' in *Midnight Notes* 7: 12-18.
- (1992) *Midnight Oil: Work, Energy, War 1973-1992*. Autonomedia, Brooklyn.
- Morris-Suzuki, Tessa (1984) 'Robots and Capitalism' in *New Left Review* 147: 109-121.
- (1986) 'Capitalism in the Computer Age' in *New Left Review* 160: 81-91.
- (1988) *Beyond Computopia: Information, Automation and Democracy in Japan*. Kegan Paul, London.
- Moulier, Yves (1982) 'Les theories americaines de la "segmentation du marche du travail" et italiennes de la "composition de classe" a travers le prisme des lectures francaises' in *Babylone O*: 175-217.
- (1986) 'L'operairne italien: organisation/ representation/ ideologie: ou la composition de classe revisitee' in M.B Tahon and A. Corten [eds] *L'Italia: le philosophe et le gendarme*, 27-63.
- (1989) 'Introduction' to Negri, *The Politics of Subversion*.
- Murray, Fergus (1983) 'The decentralisation of production - the decline of the mass-collective worker?' in *Capital & Class* 19: 74-99.
- Naisbitt, John (1982) *Megatrends*. Warner, New York.
- Negri, Antonio (1978) *La Classe Ouvriere Contre L'Etat*. Edition Galilee, Paris.
- (1979) 'Domination and Sabotage' in Red Notes, *Working Class Autonomy and the Crisis*. Red Notes, London.
- (1980) *Del Obrero-Masa al Obrero Social*. Editorial Anagrama, Barcelona.
- (1984) *Marx Beyond Marx: Lessons on the Grundrisse*. Bergin and Garvey, Massachusetts.
- (1988) *Revolution Retrieved. Selected Writings on Marx, Keynes, Capitalist Crisis and New Social Subjects*. Red Notes, London.
- (1989) *The Politics of Subversion: A Manifesto for the Twenty First Century*. Polity, Cambridge.
- (1992) 'Interpretation of the Class Situation Today: Methodological Aspects' in W. Bonefeld, R. Gunn and K. Psychopedis [eds] *Open Marxism*. Vol 2. 69-105.
- Noble, David (1983) 'Present Tense Technology' in *Democracy*, Spring: 8-24, Summer 70-82, Fall 71-93.
- (1984) *Forces of Production*. Knopf, New York.
- Nora, Simon and Alain Minc (1981) *The Computerisation of Society*. MIT, Cambridge.
- Oettinger, Anthony G. (1980) 'Information Resources: Knowledge and Power in the 21st Century' in *Science* 209: 191-198.
- Ohmae, Kenichi (1990) *The Borderless World. Power and Strategy in the Interlinked World Economy*. Harper, New York.
- (1991) 'Global Consumers Want Sony, Not Soil' in *New Perspectives Quarterly*. 8.4: 72-73.

This paper argues for the pertinence of autonomist Marxism to an era of computerised capital and postmodern culture. Broadly speaking, 'autonomist Marxism' designates that tradition of Marxism which places at its centre the self-activity of the working class - a tradition with deep historical roots and wide international diffusion.<sup>1</sup> However, perhaps its most developed contemporary expression, and the one I shall focus on here, is that arising out of the struggles of Italian workers, students and feminists during the 1960s and 70s and formulated in the work of such revolutionary intellectuals as Raniero Panzieri, Mario Tronti, Sergio Bologna, Marirosa Dalla Costa, Francois Beradi, and Antonio Negri.<sup>2</sup> When in 1979 the ferment of the Italian New Left was violently repressed under the pretext of counter-insurgency against the Red Brigades the development of this innovative body of theory was abruptly interrupted, and subsequently the heretical tenor of its positions - anathema to neoliberals, Soviet-style nomenklatura and social democrats alike - has ensured it a subterranean existence, even on the left.<sup>3</sup> Yet despite the destruction of the movement in which it was originally based, this strand of autonomist Marxism has continued to develop, undergoing new mutations and making fresh connections.<sup>4</sup>

Indeed, my aim in unearthing the Italian autonomist tradition is far from archeological. Rather, I see its theories addressing issues central to today's debates about the prospects, if any, for a revolutionary left. In particular, they confront the prospect that we are entering a distinctive new era of capitalist development - an era widely and variously discussed under such labels as 'post-industrialism', 'post-Fordism', or 'postmodern capitalism'. A salient feature of this phase is generally agreed to be the extensive deployment by capital of information technologies - computers and telecommunications - in order to achieve unprecedented levels of workplace automation, global mobility and societal surveillance. Over the last two decades the work of certain Italian autonomists, and particularly that of Negri, has devoted increasing attention to the implications of this vast informational apparatus. What makes their analysis particularly important is the perspective it opens on the new forms of knowledge and communication not merely as instruments of capitalist domination, but also as potential resources for working class struggle. It is thus as subversive counter-interpreters of the 'information society' that Negri and his colleagues are discussed here. This reading (and it is worth emphasising that it is indeed a *reading* of the Italian autonomists' work, just as theirs is an active, inventive reading of Marx) necessarily takes issue both with other, very different, Marxist responses to high technology and with some fashionable analyses of new social movements and postmodern culture. Its - unfashionable - contention is that autonomist Marxism's ongoing search for a 'Marx beyond Marx' (Negri 1984) opens paths toward the reconstruction of a twenty-first century communism capable of confronting information age capital with a radically alternative vision of community and communication.

## The Information Society and the Triumph of Capital

In the current celebrations of capital's global triumph two themes twine around and interanimate each other: the rise of the information society and the fall of Marxism. High technology, we are told, is pulling the planet toward a new stage of civilisation characterised by the omnipresence of computer and communication systems, unprecedented rates of scientific innovation, and a knowledge-based economy. The socialist bloc's ignominious collapse is attributed to irretrievable archaisms in a Marxist world-view hopelessly out of step with this emergent reality - price of adherence to a 'labour theory of value' in an era of smart machines; of a 'base/superstructure' model blind to the material significance of symbolic data; or of a 'dictatorship of the proletariat' dependent on the repression of ever-proliferating electronic media (e.g. Brzezinski 1988; Toffler 1990; Ohmae 1991). Conversely, the advanced capitalism of North America, Japan and Europe is seen, by virtue of its enterprise, openness and democracy, as the societal form uniquely fitted to sowing and reaping the cornucopian benefits of the information age (e.g. Eastbrooks 1988; Halal 1986; Ohmae 1990).

Such ideas are not new. When in the late 1960s theorists such as Daniel Bell (1973), Zbigniew Brzezinski (1973) and Peter Drucker (1968) first announced the advent of a 'postindustrial', 'technetronic' or 'knowledge' society their work was explicitly framed as a refutation of the Marxist thesis that capitalism must violently succumb to its internal Contradictions. Declaring unlimited horizons for technological growth, they predicted a peaceful evolution beyond the vicissitudes of industrialism to a brave new world of affluence and stability. While there were more critical strains of postindustrial theory associated with the New Left and the student movement - such as Alain Touraine's (1971) anti-technocratic account of the 'programmed society' both versions were fundamentally at odds with Marxism, regarding proletarian struggle as a grimy relic from a fading smokestack era.

The unexpected return of economic crisis in the 70s briefly blighted such futurology and encouraged Marxists to dismiss it as a mere fad. But within a few years the basic propositions of postindustrialism were revived with redoubled strength, now reappearing under the Japanese label of 'the information society' and centred on the amazing capacities of microelectronics and genetic engineering to reconstitute the basic elements of mental and biological life (Bell 1979; Beniger 1986; Dizard 1982; Masuda 1980; Nora and Mine 1981; Oettinger 1980; Porat 1977, 1978). Fostered by state and corporate sponsors, harnessed to the mass marketing of the microcomputer, and widely disseminated by popularisers such as Toffler (1970; 1980; 1990) and Naisbett (1982), the allure of info-tech bit deeply into the culture of the 1980s.

Here it was swiftly articulated with an ascendant neoliberalism for which notions of information revolution provided a handy way to 'annex the language of social change from socialism' (Webster and Robins 1981, 250). Domestically, the demands of 'inevitable' scientific advance were deployed to berate trades unions resistant to technological change, while internationally insistence on the 'free flow of information' became a vital ingredient in a global reorganisation of the market. At the end of the decade, amidst the excitement of Cold War victory, silicon gee-whizzery fused with anticipations of the 'end of history' (Fukuyama 1992) to create visions of a new planetary order from which technology has

Wishart, London.

Haraway, Donna (1985) 'A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s' in *Socialist Review* 80: 65-107.

Hardt, Michael (1990) 'Review of Revolution Retrieved by Toni Negri' in *Rethinking Marxism* 3.2: 173-181.

Harvey, David (1989) *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Blackwell, Oxford.

Hirshhorn, Larry (1984) *Beyond Mechanisation: Work and Technology in a Post-Industrial Age*. MIT, Cambridge.

Holloway, John (1989) 'Review of Toni Negri's Revolution Retrieved' in *Capital & Class* 38: 122-124.

Jones, Barry (1982) *Sleepers Wake!*. Oxford University Press, Melbourne.

Krippendorf, Klaus (1985) 'Information, Information Society and Some Marxian Propositions' in *Informatologia Yugoslavica* 17.1/2: 7-38.

Kroker, Arthur, and David Cook (1986) *The Postmodern Scene: Excremental Culture and Hyper-Aesthetics*. New World, Montreal.

Lazzarato, Maurizio and Toni Negri (1991) 'Travail immaterial and subjectivite' in *Futur Anterieur* 6: 86-89.

Lebowitz, Michael A. (1992) *Beyond Capital: Marx's Political Economy of the Working Class*. St Martin's Press, New York.

Levidow, Les (1990) 'Foreclosing the Future' in *Science as Culture* 8: 59-79.

Lipietz, Alain (1987) *Mirages and Miracles: The Crisis of Global Fordism*. Verso, London.

Lotringer, Sylvere, and Christian Marazzi [eds] (1980) *Italy: Autonomia - PostPolitical Politics*. Semiotext(e), New York.

(1980) 'The Return of Politics' in S. Lotringer and C. Marazzi [eds] *Italy: Autonomia - Post-Political Politics*. Semiotext(e), Now York. 8-21.

Luke, Timothy (1989) 'Class Contradictions and Social Cleavage in Informationalizing Post-Industrial Societies: On the Rise of the New Social Movements' in *New Political Science* 16/17. 125-153.

Lumley, Robert (1990) *States of Emergency: Cultures of Revolt in Italy From 1968 to 1978*. Verso, London.

Lyotard, Jean Francois (1984) *The Postmodern Condition: A Report on Knowledge*. Minneapolis. University of Minnesota, 1984.

Mallet, Serge (1975) *The New Working Class*. Spokesman, London.

Mandel, Ernest (1975) *Late Capitalism*. New Left Books, London.

Marcuse, Herbert (1964) *One Dimensional Man*. Routledge, London.

Marx, Karl (1963) *The Poverty of Philosophy*. International Publishers, New York.

- Dalla Costa, Mariorosa, and Selma James (1972) *The Power of Women and the Subversion of the Community*. Falling Wall Press, Bristol.
- Debord, Guy (1977) *Society of the Spectacle*. Black and Red, Detroit.
- Deleuze, Giles, and Guattari, Felix (1977) *Anti-Oedipus: Capitalism and Schizophrenia*. Viking, New York.
- Dertouzous, Michael L, and Joels Moses [eds] (1979) *The Computer Age: A Twenty Year View*. MIT Press, Cambridge.
- Dews, Peter [ed] (1985) *Autonomy and Solidarity: Interview with Jurgen Habermas*. Verso, London.
- Dizard, W.P (1982) *The Coming Information Age*. Longman. New York.
- Drucker, Peter (1957) *Landmarks of Tomorrow*. Harper Row, New York.  
(1968) *The Age of Discontinuity*. Harper Row, New York.
- Eastbrooks, Maurice (1988) *Programmed Capitalism: A Computer Mediated Global Society*. ME Sharpe, New York.
- Edmond, Wendy, and Suzie Fleming [eds] (1975) *All Work and No Pay: Women, Housework and the Wages Due*. Power of Women Collective & Falling Wall Press. London.
- Etzioni, Amitai (1968) *The Active Society: A Theory of Societal and Political Processes*. Free Press, New York.
- Fukuyama, Francis (1992) *The End of History & the Last Man*. Macmillan, New York.
- Gorz, Andre (1982) *Farewell to the Working Class*. Pluto, London.  
(1985) *Paths to Paradise: On the liberation From Work*. Pluto, London.  
(1989) *Critique of Economic Reason*. Verso, London.
- Graham, Julie (1991) 'Fordism/Post-Fordism, Marxism-Post-Marxism' in *Rethinking Marxism* 4.1: 39-58.
- Guattari, Felix, and Toni Negri (1990) *Communists Like Us: New Spaces of Liberty, New Lines of Alliance*. Semiotext(e), New York.
- Guattari, Felix (1980) 'Why Italy?' in *Semiotext(e)* 3.3: 234-236.  
(1984) *Molecular Revolution: Psychiatry and Politics*. Penguin, Harmondsworth.
- Habermas, Jurgen (1979) *Communications and the Evolution of Society*. Beacon, Boston.  
(1984) *The Theory of Communicative Action: Vol.1. Reason and the Rationalisation of Society*. Beacon, Boston.  
(1987) *The Theory of Communicative Action: Vol.2. A Critique of Functionalist Reason*. Beacon, Boston.
- Halal, William E. (1986) *The New Capitalism: Democratic Free Enterprise in Post-Industrial Society*. Wiley, New York.
- Hall, Stuart (1989) 'The Meaning of New Times' in S. Hall and M. Jacques [eds] *New Times: The Shape of Politics in the 1990's*. Lawrence & Wishart, London. 116-136.
- Hall, Stuart, and Martin Jacques [eds] (1989) *New Times: The Shape of Politics in the 1990's*. Lawrence &

terminally exorcised the spectre of class conflict.

Across this image of the future autonomist Marxism draws a red line.

## Autonomous Technology/Autonomous Workers

Information society theory is a doctrine of 'autonomous technology,' (Winner 1977) presenting information technologies as the prime movers propelling the economics, culture, and politics of the future. If certain Marxisms have difficulty contesting such determinism this is surely because of a partial complicity in its premises. 'Scientific socialists' who perceive the forces of production as a motor of history relentlessly smashing through anachronistic social relations are ill-equipped to answer a counter-theory which appropriates their own logic and turns it against them, depicting socialism itself as a fetter on the machine-made march of progress. It is no coincidence that several postindustrial gurus are past students of historical materialism who have learnt only too well from Marx's (1963, 109) aphorism that 'The handmill gives you society with the feudal lord; the steam-mill with the industrial capitalist' - and do not hesitate to extrapolate a new epoch based on the microcomputer and communications satellite.<sup>5</sup>

Autonomist Marxism, however, is concerned with the autonomy of humans, not machines. And it is a Marxism centred not on the teleological advance of productive forces, but on conflict between those who create and those who appropriate. At its heart lies Marx's familiar analysis of the relation between labour and capital: a relation of exploitation in which workers, separated from the means of production, are compelled to sell the living labour-power from which the capitalist extracts surplus value. In elaborating this account, however, most Western Marxisms have tended to emphasise only the dominant and inexorable logic of capital.<sup>6</sup> The autonomists' re-discovery - startling enough that Moulrier (1989, 19) terms it a 'Copernican inversion' in post-war Marxism - was that Marx's analysis affirms the power, not of the capital, but of labour.

Far from being a passive object of capitalist designs, the worker is the *active* subject of production, the well-spring of the skills, innovation, and cooperation on which capital must draw. Moreover, the labouring subject is not only active, but *antagonistic*. Capital attempts to maximise exploitation either 'absolutely' (by extending the working day) or 'relatively' (by raising the intensity or productivity of labour). But workers, both in daily practice and organised struggle, persistently initiate their own, very different project. Seeking a secure, full, plenitudinous life that escapes the reduction to mere labour-power, they set in motion a counter-logic that defies capital's by either forcing up the wage level or lowering the duration and pace of the working day. These efforts by workers to reclaim the values they themselves have produced are not merely 'economistic,' but strike at capital's intrinsically political command over labour-power. The horizon to which they point is the separation of labour from capital. Ultimately; capital needs labour, but labour does not need capital. Labour, as the source of production, can dispense with the wage relation: it is potentially *autonomous*.

From these premises flowed the autonomists' most distinctive doctrine, first formulated by Mario Tronti (1979), that of the 'inversion of struggles.' This proposes that it is actually

workers' struggles which provide the dynamic of capitalist development. Capital does not unfold according to a unilateral, undivided and self-contained logic, spinning new technologies and organisations out of its own pristine body. Rather, it is driven by an internal antagonism, reacting to the constant pressure of an incorporated 'other' simultaneously indispensable and inimical to its existence - the working class. It is the need to forestall, disrupt and defeat the crescent powers of this enemy within that spurs capital to develop and perfect itself.

A central instance is its drive to technological innovation. In a pioneering essay that foreshadows much later technology critique, Panzieri (1980) broke decisively with left views of techno-scientific development as an objective, 'progressive' tendency. Rather, returning to the pages in *Capital* on the early introduction of machinery, he proposed that capitalism resorts to incessant technological renovation as a 'weapon' against the working class: its tendency to increase the proportion of dead or 'constant' capital as against living or 'variable' capital involved in the production process arises precisely from the fact that the latter is a potentially insurgent element with which management is locked in battle and which must at every turn be controlled, fragmented, reduced or ultimately eliminated.<sup>7</sup> Simply to ratify the process of technological rationalisation was to ignore that what is being; consolidated in this process is *capitalist* rationality. This is not to deny that technological change can open radical political opportunity for the working class; as we will see, the autonomists were bold experimenters in this field. But it is to reject the notion that such change is *automatically* emancipatory. Whatever possibility technical advance holds out for a 'socialist use of machines' would only be seized to the degree that working class insubordination realises a 'wholly subversive character.' (Panzieri 1980, 57; 1976, 12).

### Infotech Versus the Mass Worker: The Neo-Luddite Moment

From this perspective, the diffusion of information technologies appears not as linear and universal scientific progress but as a moment in the cycle of struggle between capital and labour. To assess the relative strength of the combatants, autonomists introduce the concept of 'class composition' - a gauge of each side's internal unity, resources and will, determined not merely by the technical and social division of labour, but also by cultural milieu, organisational forms and political direction.<sup>8</sup> As the cohesion of the working class grows, capital must respond by offensive restructurations deploying economic, technological and state power to 'decompose' its opponent's organisation. But because capital is dependent on collective labour as the source of surplus value, it cannot entirely destroy its foe. Each offensive, however successful, is followed by a 'recomposition' of the workforce, and the appearance of new resistances by different strata of labour with fresh capacities, strategies and organisational fortes. Rather than being 'made' once-over, the working class is re-made again and again in a dynamic of constant transformation, with working class recomposition and capitalist restructuration pursuing each other in a 'double spiral' of ever enlarging conflict (Negri 1980, 174).

To grasp the significance of the 'information revolution' requires a historical perspective on three successive turns in this spiral. The first is the era of the 'professional worker' - the

*Computer Age: A Twenty Year View*. MIT Press, Cambridge. 163-212.

Bell, Peter. F (1977) 'Marxist Theory, Class Struggle, and the Crisis of Capitalism' in Jesse Schwarz [ed] *The Subtle Anatomy of Capitalism*. Goodyear, Santa Monica. 170-195.

Beniger, James R (1986) *The Control Revolution: Technological and Economic Origins of the Information Society*. Harvard University Press, Cambridge.

Beradi, Franco ('Bifo') (1978) *Le Ciel Est Enfin Tombe Sur La Terre*. Seuil, Paris.

(1986) 'Communication et autonomie' in M.B Tahon and A. Cotten [eds] *L'Italie: le philosophe et le gendarme*, 111-122.

Bologna, Sergio (1976) 'Class composition and the theory of the party at the origin of the workers councils movement' in CSE Pamphlet No. 1. *The Labour Process & Class Strategies*. Conference of Socialist Economists, London. 68-91.

(1980) 'The Tribe of Moles' in *Semiotext(e)* 3.3: 36-61.

(1986) 'Qu'est-ce que l'operaisme aujourd'hui?' in M.B Tahon and A. Cotten [eds] *L'Italie: le philosophe et le gendarme*. 63-80.

Bonefeld, Werner, and John Holloway [eds] (1991) *Post-Fordism and Social Form: A Marxist Debate on the Post-Fordist State*. MacMillan, London.

Bonefeld, Werner, Richard Gunn and Kosmas Psychopedis (1992) *Open Marxism*. Vol 2. Pluto, London.

Bottomore, Tom et al (1983) *A Dictionary of Marxist Thought*. Harvard University Press, Cambridge.

Braverman, Harry (1974) *Labour and Monopoly Capital: The Degradation of Work in the Twentieth Century*. Monthly Review, New York.

Brzezinski, Zbigniew (1970) *Between Two Ages: America's Role in the Technetronic Era*. Viking, New York.

(1989) *The Grand failure: The Birth and Death of Communism in the Twentieth Century*. Scribner, New York.

Caffentzis, George (1980) 'The Work Energy Crisis and the Apocalypse' in *Midnight Notes* 3: 1-28. Repr. in *Midnight Notes Collective* 1992.

(1990) 'On Africa and Self-Reproducing Automata' in *Midnight Notes* 10: 35-41.

Carpignano, Paolo (1975) 'U.S. Class Composition in the Sixties' in *Zerowork* 1: 7-32.

Cleaver, Harry M. (1979) *Reading Capital Politically*. Harvester, Brighton.

(1981) 'Technology as Political Weaponry' in Robert Anderson [ed] *Science, Politics and the Agricultural Revolution in Asia*. Westview, Boulder. 261-276.

(1984) 'Introduction' in Antonio Negri. *Marx Beyond Marx*. Autonomedia, New York. xiv-xxvii.

(1986) 'Reaganisme et rapports de classe aux Etats-Unis' in M.B Tahon and A. Corten [eds] *L'Italie: le philosophe et le gendarme*, 141-157.

(1992) 'The Inversion of Class Perspective in Marxian Theory: From Valorisation to Self Valorisation' in W. Bonefeld, R. Gunn and K. Psychopedis [eds] *Open Marxism*. Vol 2 106-144.

Collectif A/Traverso (1977) *Radio Alice, Radio Libre*. J-P. Delarge, Paris.

Collectivo Strategic (1985) 'The "Technetronic Society" According to Brzezinski' in Solominides and Levidow [eds] *Compulsive Technology*. Free Association Books, London. 126-138.



cites Negri in several of his works.

26. For a scathing critique of Gorz by some North American autonomists, see *Midnight Notes* (1984.)

27. 'Detournement' is a term deriving from the Situationists, with whom the Italian autonomists had a distinct affinity. It describes the reassemblage of elements torn out of their original context in order to make a subversive political statement; see Debord (1977) and, for useful commentary, Cleaver (1992). In addition to Negri's work, see also the relatively upbeat assessment of new technologies in Piperno (1986).

28. This concept of a 'technological ecology' also opens - but does not develop - some intriguing paths toward both critique of and rapprochement with the environmental movement. Like most Marxists, autonomists have been very late in taking the full weight of ecological critique. Their earlier writings ring with a confidence in unlimited material abundance which seems painfully dated in days of ozone depletion, urban toxification and dying oceans. However, aspects of autonomist thought - the anti-productivism of the 'abolition of work' motif, the stress on the specificity of local struggles - could open onto the red-green alliance that is so urgently needed today. Here it may be that Gorz, one of the early left ecologists, has something to teach Negri.

29. For an autonomist Marxist analysis which stresses this aspect of informational capital far more strongly than Negri, see Caffentzis (1980; 1990), and for critical discussion of its relative omission in Negri's work Guido and Bartleby the Scrivener (1985)

30. The discussions on Fordism and post-Fordism are now very extensive. For the Regulation School perspective, see Aglietta (1979) and Lipietz (1987). For a neo-Gramscian appropriation of these ideas by the revisionist wing of the British CP, see Hall and Jacques (1989). A more sober version is Harvey (1989). For differences within the 'post-Fordist' position see Barbrook (1990).

31. This is a blunt assessment of an very diversified school of thought. But for symptomatic displays of the general abandonment of radical left positions which is associated with post-Fordist analysis see the collection on 'new times,' Hall and Jacques (1989), and on 'flexible specialisation' Piore and Sabel (1984) and Mathews (1989a, 1989b). For criticism along the lines offered here, see also Bonefeld and Holloway (1991) and Levidow (1990). For comparison between the French Regulation School and Italian autonomist perspectives, see Moulier (1982) and Negri (1992).

## REFERENCES

- Aglietta, Michel (1979) *A Theory of Capitalist Regulation: The US Experience*. New Left Books, London.
- Anderson, Perry (1976) *Considerations on Western Marxism*. New Left Books, London.  
(1983) *In The Tracks of Historical Materialism*. Verso, London.
- Baldi, Guido (1985) 'Negri Beyond Marx' in *Midnight Notes* 8: 32-36.
- Balestrini, Nanni (1989) *The Unseen*. Verso, London.
- Barbrook, Richard (1990) 'Mistranslations: Lipietz in London and Paris' in *Science as Culture* 8: 80-117.
- Bartleby the Scrivener (1985) 'Marx Beyond Midnight' in *Midnight Notes* 8: 32-35.
- Baudrillard, Jean (1983a) *Simulations*. Semiotext(e), New York.  
(1983b) *In the Shadow of the Silent Majorities*. Semiotext(e), New York.
- Bell, Daniel (1973) *The Coming of Postindustrial Society*. Basic, New York.  
(1979) 'The Social Framework of the Information Society' in Dertouzos and Moses [eds] *The*

highly skilled factory workers who in the first quarter of the 20th century provided the nucleus of Russian Bolshevism and council communism (Bologna 1976; Moulier 1986; Negri 1992). Facing the threat of these revolutionary movements, capital undertakes a drastic reshaping of production, aimed at deskilling the labour force and cutting it off from vanguard activism. The components of this project are, within the organisation of the labour process, Taylorism; in the structuring of the work-day and the wage, Fordism; in economic policy, Keynesianism; and in government, the advent of what the autonomists term 'the Planner State' - governmental welfare programs and industrial strategies aimed at comprehensive social management (Negri 1988, 205). Through these measures capital in the West contains internal dissent, and in the aftermath of World War II, stabilises conditions for a 'Golden Age' of accumulation.

However, this restructuration creates a new working class subject - the 'mass worker' constituted by semi-skilled assemblyline hands concentrated in the giant factories at the core of industrial production, typified in an Italian context by the employees of Fiat and elsewhere by auto workers at Ford in Britain, Renault in France, General Motors in the US. In the late 60s and early 70s the refusal of these workers to restrain wage demands within the institutionalised limits of Keynesianism or tolerate the inhuman conditions of mechanised mass-production manifests in a surge of strikes, sabotage, and absenteeism which throws into question the stability of the Planner State and the post-war settlement.

Responding to this militancy, capital restructures itself yet again. This counter offensive, typified by Reaganism and Thatcherism, combines several elements. The 'Planner State' gives way to the 'Crisis State' as welfare provisions are dismantled in favour of discipline by austerity; monetary policies assume a central role in driving down real wages; draconian measures are instituted against trades unions. At the same time, corporations reorganise to achieve what Negri terms 'socialisation, tertiarisation and flexibilisation' (Negri 1978, 254). The locus of production is decentralised and dispersed away from the industrial factory; there is a hyper-development of the 'soft' or 'service' sectors of the economy; and capital seeks the maximum of geographical mobility and temporal fluidity in order to circumvent the rigidities of working class resistance.

It is here that informatics plays a central role. For Negri, the accentuated importance assumed by computing and telecommunications in the 1970s relates to the corporate need for 'innovation in the instruments and processes controlling the circulation and reproduction of the factors of capital' and to the 'diffuse mechanisation' involved in the 'technological control of socialised work' (1978, 235, 254). High-technology undermines the bastions of the mass worker by bringing in view the 'workerless factory'; telecommunications enables the domestic and international dispersion of operations according to the availability of cheap and docile labour; computerisation permits not only heightened surveillance and segregation on the industrial shop floor, but also the new levels of automation and monitoring necessary for an intense exploitation of office work (see Murray 1983). Beneath the rosy images of the information society lie the stark goals of 'control and reduction in the costs of labour' (Negri 1978, 254).

Such analysis is by no means unique to autonomists. Indeed awareness of the role of informatics in the neoliberal assault on the working class has generated an influential line of quasi-Marxist 'neo-Luddism'. Based largely on 'labour process' perspectives derived froth

Braverman's (1974) seminal studies on the 'degradation of work', but with important strands in media studies, this seeks to expose the new technologies as instruments for deskilling and 'mind management' (Schiller 1976) and to revive, at least intellectually, the resistant tradition of 19th century machine-breakers (e.g. Noble, 1983, 1984; Webster and Robins 1986).

This perspective offers a vital antidote to information society utopianism. Yet it also has serious limitations. On workplace issues its intransigent suspicion of technological innovation can result in the defence - and perhaps romanticisation - of forms of industrial labour which are *already* manifestly dehumanising. More generally, it takes little account of the possibility that members of the working class may find real pleasures and use-values in, and perhaps even subversive purposes for, the new array of communications technologies. Overall, neo-Luddism tends toward a radical pessimism in which Marx's search for revolutionary possibility gives way to nightmare visions of an informatic dystopia dominated by omnipotent technologies of indoctrination, surveillance and robotisation.

The autonomists' analysis of technology, and their celebrations of sabotage as an expression of workers' power, have strong affinities with neo-Luddism. But the real distinctiveness of their analysis lies, I would suggest, in a quite different direction - in the daring claim by some of its theorists that the informational restructuring of capital is a moment not *only* in the disintegration of the working class, but also in its recomposition. The idea that the death of the 'mass worker' is overlapped by the birth of a new revolutionary subject - the 'socialised worker' - has been a central thesis of Negri's from the late 70s to his most recent writings (1978; 1980; 1988; 1989) and to its exploration we now turn.<sup>9</sup>

### The Social Factory and the Socialised Worker

A common contention of early information society theory was that the shift to postindustrial production would bring with it, as by-product of technological change, a 'post-capitalist' social organisation, envisaged in a variety of nebulous and contradictory forms ranging from cybernetic technocracy to electronic pastoralism. More recent versions mute this line of thought in tribute to the renewed ideological respectability of the market. But there remains a faith that the replacement of satanic mills by computerised systems will at least allow some significant softening in the harsh constellation of private property, corporate power and wage labour historically associated with the industrial factory.

The autonomists' view is diametrically opposite. According to Negri, capital's 'informational' restructuring presents a situation foreshadowed in the 'Unpublished Sixth Chapter' of *Capital* where Marx (1977, 1026-40) speaks of the passage from the 'formal subsumption of labour under capital' to its 'real subsumption.' 'Subsumption' designates the degree to which labour is integrated into capital's processes of value extraction. In 'formal subsumption' roughly the early stages of the industrial revolution - capital simply imposes the form of wage labour on pre-existing modes of artisanal production. But in the subsequent phase, 'real subsumption,' the drive to generate surplus results in a wholesale reorganisation of work aimed at reaping economics of scale and cooperation. Science is systematically applied to industry; technological innovation becomes perpetual; exploitation

a liberation from slavery to a kitchen sink', Dalla Costa (1972; 37, 49-51), see also and Ednions and Fleming (1975).

14. See Negri's (1980) analysis of the 'multinational worker' - immigrant workers in Europe. The multinational worker is, Negri says, the socialised worker par excellence, both because s/he faces a range of issues such as education and housing, and because, as an irruption of 'the South' within 'the North,' s/he provides a concrete point of connection with global economy and demonstrates the importance of transnational solidarity.

15. For example, see the critique of the anti-nuclear movement in the autonomist influenced *Midnight Notes* (1979a; 1979b).

16. Negri notes that the distinction is 'imprecise'; in practice information and communication are not easily separable: computerisation represents all attempt by capital to enhance its informational powers, but may in practice allow communicational opportunities for workers. For this reason 'One must... be very careful in the use we make of the distinction, occasionally using it, if one wishes, as an abstract, definitional distinction, but bearing in mind that it is quite inadequate for analysis of the concrete'

17. Since Braverman (1974) the 'labour process' literature has become extensive. My remarks draw on the varied and conflicting positions of Hirshhorn (1984), Noble (1983; 1984), Shaiken (1984), Wood (1989), Zuboff (1984).

18. On Lucas Aerospace, see Wainwright (1982), and for Toshiba-Amplex, Tsuzuku (1991).

19. The individualised exploits of 'hackers' also invite analysis in Negrian terms as an instance of labour's 'autonomous' capacities for sabotage and invention. See Ross (1991).

20. Fashionable Parisian explorations of the postmodern borrow basic concepts - including the very term 'postmodern' - from conservative American sociologists of the 50s and 60s. See Drucker (1957), and Etzioni (1968), and for a thorough examination the postindustrial/postmodern connection Ross (1991).

21. Negri (1989, 117) says that 'in the productive community of advanced capitalism we find ourselves confronted by a primary phenomenon which, following Habermas, we will call "communicative action." It is on the basis of the interaction of communicative acts that the horizon of reality comes to be constituted... Above all, communicative action gives rise to the extraordinary possibility of activating dead socialised labour. Communication is the Direct Current of these relationships'.

22. Habermas, in Dews (1986, 67-9). Critics sympathetic to autonomist Marxism such as Ryan (1989, 32) have strongly attacked this scaling down of leftist ambitions for thoroughgoing social transformation as 'managerial social democracy'

23. The division of the economy into sectors originates in the three sector model - agriculture, manufacturing, services - proposed by Clark (1940). Information society theorists such as Porat (1977) add information processing as a fourth, 'quaternary,' sector. Other postindustrialists such as Jones (1982) add a 'quinary' level of domestic services. This classificatory escalation is a striking illustration of the logic of the 'Social factory.'

24. Negri's arguments about the obsolescence of the law of value are one of the most controversial aspects of his work (see Holloway 1989). A somewhat different line of analysis by Caffentzis (1991) argues that the law still operates in conditions of hightech automation, but compels more and more anomalous and crisis-ridden results, requiring mass impoverishment on a global scale in order to support sectors of the world economy with a high organic composition of capital. For other, non-autonomist, analysis of the effects of computerisation on value theories see Morris-Suzuki (1984; 1986; 1989) and Ramtin (1991).

25. Gorz, as editor of 'Les Temps Moderne,' ran a special issue on the Italian New left, and approvingly

4. The main vehicle for the current work of Negri and his colleagues is the French journal *Futur Antérieur*. Two North American journals influenced by autonomist Marxism are *Zerowork* (now defunct) and *Midnight Notes*.

5. For a contemporary technologically determinist Marxism, see Cohen (1978). The influence of Marxism on information society theory is evident in Bell (1973) and Toffler (1983).

6. Arguably this tendency began with Marx himself, who wrote *Capital*, but never his projected book on wage labour. The result is a perspective in which capital appears as the active, dynamic force, relentlessly unfolding its own inner logic through the laws of intercapitalist competition. The worker figures as passive object ground between the wheels of capital's exploitative machine. This machine is, to be sure, a self-destructive one - driven toward disaster by inexorable laws such as that of the 'falling rate of profit'. Eventually, the immiseration of workers reaches a nadir such that, in a moment of massive reversal, the proletariat revolts. But the machine runs toward breakdown on its own. The political consequences of such a view have varied. On the one hand, it has generated a teleological - and fatally misplaced - confidence in the inevitability of revolution. On the other, insofar it is suspected that the 'laws' of economic collapse are not manifesting on schedule, it fosters the vision of capital as an invincible juggernaut capable of assimilating every opposition within its one-dimensional order. Both views substitute fatalism for militancy, extinguishing from Marx every spark of revolutionary fire. On the 'one-sided' aspect of Marxist political economy see Negri (1984), Thompson (1978), and especially Lebowitz (1992).

7. The source of this perspective is, of course, Marx (1977, 563): 'It would be possible to write quite a history of the inventions made since 1830, for the sole purpose of supplying capital with weapons against the revolts of the working class.' Cleaver (1981) gives an important exposition of autonomist Marxism's theory of technology.

8. For the concept of 'class composition,' see Cleaver (1992; 1979), Moulrier (1986, 48-56; 1989, 41), Negri (1988, 209), Ramirez (1986, 136), Zerowork (1975, 3-4).

9. As Wright (1988, 306) points out, the term 'socialised worker' ('operaio sociale'), referring to a 'class figure bound up with the proletarianisation and massification of intellectual labour,' was first coined by Romano Alquati in his analysis of the student movement, and subsequently developed by Negri. There is also an anticipation of Negri's argument about the socialised worker as techno-scientific labour in Berardi (1978)

10. The indispensable preface to this formulation is not only the work of Tronti (1973) but also of Dalla Costa and James (1972) analysing the integration of the unwaged work of women in the home into the capitalist economy: see also Cleaver (1979).

11. For an exciting and informative summary of the criticism of Negri's 'socialised worker' thesis by Bologna and others of his Italian comrades see Weight (1988, 287-339). It should, however, be noted that Negri's account of the 'socialised worker' has developed over the course of a decade, and its most recent versions (1989; 1992) are far more substantial than its initial enunciation (1978).

12. Negri derives this language of 'singularity,' 'molecular,' and 'molar' from Deleuze and Guattari. He says "'Molecular" refers to the complex of relations which are developed... among the plurality of social subjects. "Molar" refers to the reduction of this complex of multifarious relations to a relationship characterised by a dualistic opposition.' (Negri 1989, 94). See Deleuze and Guattari (1977), Guattari and Negri (1990).

13. These struggles converged in the demand for 'wages for housework,' a slogan which became the focus for an international, and ongoing campaign - and for considerable controversy within feminism. It should be noted that Dalla Costa emphasised the tactical nature of the slogan for a movement whose ultimate objective was not the expansion of the wage system, but its destruction: 'Slavery to an assembly line is not

focuses on 'relative' intensification of productivity rather than 'absolute' extension of hours; and consumption is organised by the cultivation of new needs which beckon on new industries in an orgy of 'productions for production's sake' (1977, 1037).

For Negri, the decline of the industrial factory, far from signifying a leap beyond capital, marks a phase of 'real subsumption' deeper and more comprehensive even than Marx's prophetic lines suggest. Deindustrialisation and demise of the mass worker are only one side of a process whose other face is an accelerated advance of capitalist organisation into new zones. Indirect labour in the scientific-technological infrastructure becomes as important as direct labour on the factory floor. Circulation - marketing, retail, finance and banking - is precisely meshed with production, and itself becomes a major arena for profit extraction. The reproduction of labour-power - its education, recreation, training and, with biotechnology, its conception and gestation - is profoundly commodified. All these developments have appeared earlier. But now, facilitated by the tracking, integrative, and calculative power of information technologies, they reach a new pitch of intensity and inter-connection. One can no longer speak of a punctual site of production - the factory - as the privileged location for the extraction of surplus value, which instead proceeds at proliferating nodes within a giant metabolism of capital. We confront the phenomena whose embryonic stages Tronti (1973) first discerned in the 1960s under the name of the 'social factory,' and whose more advanced forms the autonomists designate the 'diffuse factory,' the 'factory without walls,' (Negri 1989, 204) or the 'information factory' (Collectif a/Traverso 1977, 107).

The thesis of the 'socialised worker' is an attempt to redefine the nature of labour-power in this context, where simple 'factoryism' is irrelevant and a whole series of functions previously seen as marginal to production have become tightly integrated into the circuits of capital.<sup>10</sup> These conditions, brought to light, as Negri observes, largely by feminist, youth and student movements, demanded 'an innovation in the vocabulary of class concepts' expressing the transition from:

...the working class massified in direct production in the factory, to the social labour-power, representing the potentiality of a new working class, now extended through the entire span of production and reproduction - a conception more adequate to the wider and more searching dimensions of capitalist control over society and social labour as a whole (Negri 1988, 209).

Such language is reminiscent of Mallet's (1975) earlier concept of a 'new working class' located in technologically advanced industry. But Negri's theory differs significantly in conceiving the emergence, not of a select intelligentsia of technical workers, but of a generalised form of labour-power needed by a system now suffused in every pore with techno-science.

If the 'mass worker' laboured on a factory assembly-line, the 'socialised worker' emerges in the 'soft' or 'tertiary' sectors of the economy, as a bank clerk, health care worker, teaching assistant - examples which, however, only foreground characteristics toward which a whole range of work, including that in auto-factories, pulp-mills or steel plants, now tends. The 'mass worker' was 'massified' by his concentration in giant industrial sites; the 'socialised

worker' is 'socialised' by her participation in a far more ramified and expansive system of value creation. Because her productivity arises within this complex division of labour, a central element in her work involve *communicative* and *coordinative* tasks. These depend on an elaborated *technological* network of informatic systems whose abstract, digitalised operations render *intellectual* activity directly productive, while at the same time eroding the privileges which have traditionally segregated mental from manual labour, making the dataface site of a new, cybernetic proletarianisation (Negri 1989, 89-101).

Integration into the social factory stretches well beyond the immediate point of production. Capital's colonisation of the spheres of circulation and reproduction means that recreation, education, health care, welfare, are all subject to increasingly precise monitoring and regulation aimed at sustaining the overall, social conditions of corporate profit. The thorough incorporation of activity beyond the shop floor into economic strategy means, says Negri (1988, 219), that the temporal measure of exploitation has become not the working day but the *life-span*. Facing this expansion and elaboration of capital's calculus we have indeed, he observes, 'gone beyond Marx', and might choose not to speak of a socialised *worker* but of an *operator* or agent; yet by retaining the traditional Marxist epithet he emphasises that the principle governing this comprehensive organisation of time and creativity remains the expropriation of labour (1989, 84).

It should be immediately noted that Negri's theory of the socialised worker is highly controversial, even amongst those with whom he shares a broadly similar political orientation; for example Bologna, who had himself provided an important autonomist analysis of the diffusion of social conflicts out of the factory into the body of society and the multiplication of Marx's revolutionary subject into a 'tribe of moles' (1980), was intensely critical of Negri's attempt to contain the complexities arising from the restructuring of labour-power within a single grand theoretical construct.<sup>11</sup> Moreover, Negri's enthusiastic discovery of this 'new' working class subject often seems to underestimate or dismiss the continued resilience of some 'old' 'mass worker' struggles: one thinks, for example of the persistent, and, from capital's point of view, very untimely, militancy of coal miners in both Britain and the USA. Nevertheless, while acknowledging its problematic elements, we believe Negri's thesis deserves broader attention than it has received - not because it is a flawless construction, but because it constitutes a militant and innovative probe into territory so far largely colonised by the apologists of silicon capital.

### Between the Working Class and the New Social Movements

For information society theory too has its portraits of a new kind of labour-power - the white-coated, educated and content 'knowledge workers' of the information age. In the work of Bell or Toffler the automation of brutal physical toil, the 'user friendly' new technologies, the allegedly cooperative ambience of the informed workplace, and the affluence generated by high-tech productivity are all represented as reconciling labour and management, finally eliminating that hostile proletariat which has been capital's historical nightmare. Where Negri's thesis breaks decisively with such accounts is in asserting a continuing *contradiction* between the needs of the new labouring subject and the

of collective individuals. In addition, new technology and the expansion of new productive forces increase the importance of this collective basis of production, and highlight its new, rather than its old, contradictions (1989, 206).

As we have seen, the drive of autonomist analysis is toward identifying the new openings that appear in these conditions, tracing how the communicational diffusion of value extraction catalyses new identities and solidarities antagonistic to commodified command; how the arrival of what Negri and Guattari (1990) term 'integrated world capitalism' creates the practical preconditions for internationalised opposition; and how the same technologies that appear to let capital overrun labour also bring in view the severing of the wage relation on which capital depends.

These potentialities are now only an obscure verso to the shiny recto of capital's informed restructuring. But to dismiss them as chimerical merely confirms neoliberalism's grip on the collective imagination, denying the openness inherent in a historical moment of massive disruption and recomposition, sealing off with safe predictions outcomes which can only be the result of political contest. In such contestation, theory itself is an active constituent not only of the combatants' strategy, but also of their subjectivity and will. Affirming the regenerative nature of class struggle, autonomist Marxism acts as a virus in the circuits of the information society, interrupting its programmed screens with messages about possibilities of which its rulers would prefer we remain uninformed.

---

### FOOTNOTES

1. In adopting this usage I follow Cleaver (1979), whose work constitutes the major mapping in English of the theoretical positions and historical unfolding of autonomist Marxism. He shows how the work of the Italian stream discussed here was overlapped and influenced by that of the American Johnson-Forest tendency and the French *Socialisme on Barbarie* group.

2. This synoptic account of the Italian autonomist Marxism necessarily distorts its subject's complex history: in particular it scants the relationship of the earlier Italian operaismo or 'workerism' focussed around factory struggles of the industrial proletariat to the later currents merged in the broad social movement of *autonomia*. Tronti and Panzieri belong to the former, not the latter. Indeed, Tronti split politically with theorists of *autonomia* such as Negri who built substantially on his work. Nonetheless, I find sufficient continuity in their line of thought to classify all as 'autonomist Marxists'. A key English language analysis of the Italian New Left is Wright (1988), which emphasises the difference between *operaismo* and *autonomia* and gives a fascinating analysis of the debates and struggles within the movement. Other theoretical and historical introductions include Cleaver (1979), Ryan (1989), Moulrier (1986; 1989), Negri (1980), Moulrier (1986; 1989), Piote (1986), Bologna (1986), Lotringer and Marazzi (1980), Lumley (1990). The articles in Tahon and Cotten (1986) provide a valuable retrospective assessment. Important anthologies of autonomist Marxist writings are *Red Notes* (1979) and Negri (1988). Balestrini's (1989) novel gives a vivid picture of the rise and fall of *autonomia*.

3. Two instances will suffice: readers will look in vain for any mention of autonomist Marxism in either Perry Anderson's (1976; 1983) periodic reports on the state of Western Marxism, or in Bottomore's (1983) otherwise excellent *Dictionary of Marxist Thought*.

important because it is one of the few surviving strands of Marxism to take the measure of high technology in terms of opportunities, not for capitalist consolidation, but for class struggle. As such, it constitutes a trail of fire amidst a tradition largely turned to ash. This can be clearly seen by contrast with the perspectives on 'post-Fordism' which now dominates discussion of contemporary capitalism on the neo- or post-Marxist left. Using the Regulation School's concept of historically varying capitalist 'strategies of accumulation,' each of which achieves stabilisation by a corresponding socio-cultural 'mode of regulation', whose operations are often analysed in terms of Gramscian hegemony theory, this line of thought argues that we are witnessing a transition from Fordism to a new, as yet only partly emergent, post-Fordist regime.<sup>30</sup> Computerisation, deindustrialisation, decline of the industrial worker, rise of new social movements, postmodern culture are all seen as elements in this transition, and both critics and promoters of the 'post-Fordist' thesis have represented it as a left alternative to postindustrial or information society theory (Hall 1989; Pollert 1991; Levidow 1990).

In its acknowledgment of accelerating alterations of economic, political, and cultural forms the post-Fordist paradigm surpasses many more ossified Marxist analyses. But this advance has come at a price. As Julie Graham (1991) has pointed out, Regulation School analysis, by taking as its starting point the requirements for successful accumulation carries with it a subtle bias toward viewing conflict and crisis as aberrant and exceptional for capital, rather than endemic and ongoing. Focusing on the elasticity of accumulation regimes, stress falls on capital's capacity for stabilisation, rather than its propensity for disruption. Moreover, as Peláez and Holloway (1990) point out, in many post-Fordist accounts, recognition of the centrality of technological change to current corporate restructuring tends to slip into an acceptance that the terms and directions of this change have effectively been set by capital. The political consequences of this optic are dispiriting - not to say defeatist. Neoliberal regimes are seen surfing on the crest of irresistible historical tendencies. If the left is to catch this wave of the future, its options are limited to various forms of detente with triumphant capital: in these 'new times' socialist parties campaign for election as promoters of capitalist modernisation, and radical horizons shrink to the dimensions of social democracy plus new social movements, market socialism, and workplace cooperation with capital based on 'flexible specialisation'.<sup>31</sup>

The autonomists - who start with class struggle, rather than capitalist accumulation - see things differently. The transition from the mass worker to the socialised worker is a shift very similar to that from Fordism to post-Fordism. But for the autonomists, capital's resort to high technology is a moment in its historical flight from the power of collective labour. What appears like a route of escape, however, leads only to the re-location and expansion of the original contradiction. Informatics gives the corporate order the mobility to evade and disperse the strength of the mass worker, and as are indeed central to the neoliberal agenda of deregulation, privatisation and globalisation. But as Negri observes:

The only problem is that extreme liberalisation of the economy reveals its opposite, namely that the social and productive environment is not made up of atomised individuals and that where these exist, they represent marginal or residual phenomena ... while the real environment is made up

requirements of the system s/he serves: the socialised worker is subsumed within capital, yet s/he is still against it.

Indeed, Negri not only - as we will see in the next section - rejects suggestions that high technology has pacified the workplace, but also insists that the arena of anti-capitalist contestation widens far beyond it (1980, 36). Here autonomist Marxism invites comparison with 'left' versions of postindustrial theory. Touraine's (1971) critique of the 'programmed society' saw no end to social struggles, but forecast a shift from issues of class toward new anti-technocratic movements of students, environmentalists, feminists and community activism (see also Luke 1989). Negri concurs with 'Fontaine about this new pluralisation of conflict, but sees reflected in it a central dynamic still focussed on the extraction of surplus value (1984, 171-190).

The socialised worker, subject of advanced capital, has advanced needs - needs not only for wages, but for leisure, health, education, community and environment. Stimulated by capital's own requirements for a productive workforce and buoyant consumption, the assertion of these demands conflicts with its equal imperative to reduce labour costs by driving down direct incomes and the social wage. This contradiction throws popular movements into confrontation with the corporate order across a widening spectrum of issues. The socialisation of production does not eliminate class struggle, but, on the contrary 'socialises' it, displacing and refracting the war of capital and labour through a multitude of spheres far removed from the immediate point of production.

With the deepening subsumption of labour, the collision is not limited to that between workers and companies, but involves entire communities and a capitalist order increasingly mediated by state intervention. But at the same time, this passage from the factory to the social factory brings with it issues unmapped by traditional Marxism, putting at stake not just the wage but the social wage; not just productive but reproductive labour; not just the shopfloor but education and culture; not just industrial hazards but environmental pollution. Struggles at each site manifest their own specificity or 'singularity'. Yet all encounter a barrier in capitalism's subordination of every use-value to the universal logic of exchange. There thus exists the possibility for these discrete 'molecular' movements to unfurl into a general 'molar' confrontation on class lines (Negri 1989, 94-95).<sup>12</sup> Such linkage is the route to the political recomposition of the socialised working class.

However, this recomposition demands more than abstract affirmation of a 'united front.' Rather, it has to travel through the multiplicity of concrete and sometimes contradictory demands arising within the socialised labour force. Pivotal to the development of this perspective was the feminism of Marirosa Dalla Costa and Sema James (1972), whose analysis of housework argued the need for women to organise simultaneously against masculine domination and capitalist exploitation. Rejecting both conventional Marxist designations of domestic work as outside the field of class struggle, and feminisms which saw women's oppression originating in intrinsic differences between the sexes, Dalla Costa defined women's role in the reproduction of labour-power - through childraising and housework as a form of exploitation simultaneously distinct from, and complementary to, that of wage labour in production. The invisibility and isolation of female domestic drudgery was functional to capital, which profited by avoiding the full costs of recreating the successive generations of its labour force; but this exploitation was relayed through the patriarchal

organisation of the family which made households dependent on the wage of a male breadwinner. Working class women had to fight both against the masculine authority in the home, union and workplace, and against a profit system which consumed male and female labour alike.<sup>13</sup>

Pursuing analogous arguments around the unwaged or ghettoised labour of ethnic, regional students, and 'marginal' groups, *autonomia* contended that capital mediates its exploitation over the working class as a whole through the privileging of particular sectors - waged over unwaged, skilled over unskilled, male over female, white over coloured (see Cleaver 1979, 159-160). Undoing this strategy of division required that subordinated groups organise against the specific forms of their oppression - sexist, racists - inside the working class, simultaneous with, and as integral part, of the general contest against capital. The 'autonomy' of autonomist Marxism thus affirms *both* labour's fundamental otherness from capital, and *also* the recognition and embrace of diversity within the working class.

While this line of analysis was originally applied to the stratifications of the 'mass worker' it, if anything, gains in relevance with the 'socialised' restructuring of capital. Aided by the scope and flexibility of new technologies the 'factory without walls' not only expands into new zones of commodification but simultaneously achieves a heightened segmentation of work, consumption and urban space, creating a so-called 'dual society' whose divisions (actually multi-, not bi-, polar) relentlessly follow lines of gender and ethnicity. Dalla Costa's perspective - which foresaw the possibility of capitalist restructuring recuperating the feminist revolt against domesticity - points the way to analysis of the new gendering of socialised labour, a complex configuration which simultaneously inducts female workers as the low wage pool of the information economy, promotes the 'double shift' in the home, commodifies domestic activities as 'service' industries, wires homework into electronic sweatshops, and transforms human reproduction into a full-blown site of commercial activity through reproductive technologies and genetic engineering. Similarly, the autonomist stress on the specificity of anti-racist struggles stresses the way in which immigrants and ethnic minorities make up what Sivanandan (1989) terms the 'new under class of silicon age capitalism,' providing its peripheral, peripatetic labour while simultaneously yielding up their cultures for the revitalisation of its high-tech entertainment industry.<sup>14</sup>

For Negri, the dialectic of integration and segmentation, universalisation and balkanisation, inherent in capital's deepening subsumption of society means:

...that no one can deny the specificity of concrete autonomies, but that all must be absolutely convinced that there is no possibility of getting out of the miseries of the concrete autonomies unless the dialectic of these autonomies is conquered ... It's either/or: either we accentuate the antagonisms and competitions in the concrete cases or we construct a political and subjective totality dialectical of these segmentations. And by a totality (or globality) we do not mean in the least an organic project that minimises the differences but simply in Marxist terms, the wealth of concrete individualities, that is, in this case, the concrete segments of this process. All this finds its material base if, escaping the myth of factory

constructing his image of the socialised worker Negri grossly over-generalises attributes and capacities which are in fact available only to quite limited sections of the working class, even within the most technologically advanced zones of capitalism. The ambitious sweep of his theory may seem to pass too lightly over those tendencies toward the dualisation of the high technology workforce which separate out a thin strata of relatively well-skilled, well-paid workers - who may indeed possess some of the capacities Negri assigns to the 'socialised worker' but are huddled in defence of their relative privilege - from the larger mass of post-industrial service-sector labour-janitors, fast-food operatives, and data entry clerks - who remain subject to all the most deskilling and isolating effects of technological domination. Moreover, since this polarisation of the workforce tends to fall along predictably sexist and racist lines, the socialised worker thesis risks the accusation of universalising experiences most readily available to labour insofar as it is white and male - precisely the sort of move which, as we have seen, autonomist Marxism have usually fought strongly against.<sup>29</sup>

In my opinion, Negri, in his eagerness to identify the leading edge of working class development, does leave himself somewhat open to this sort of charge. But his writings also contain elements of an answer to such criticism, albeit one which deserves better elaboration. Thus in a recent article Lazzarato and Negri (1991, 87) stress that the communicative capacities and technological competencies which they see manifesting in the contemporary working class, while most explicit among qualified high-technology workers, are *not* the exclusive attributes of this select group, but rather exist in 'virtual' form among contingent and unemployed labour force. They are, that is to say, not so much the products of a particular training or specific work environment but rather the premises and prerequisites of everyday life in a highly integrated techno-scientific system permeated by machines and media (see also Virno 1992). Over this emergent body of knowledges and aptitudes, capital is certainly trying to impose its own functional grid of selection and segregation, sorting, promoting and discarding entire sectors of the working class according to priorities of profit and control. But labour's familiarisation with and appropriation of its informational habitat is a process which squirms under and over attempts to strategically contain and stratify it. This process manifests in initiatives by *all* sectors of the class to seize the new communicational resources for their own ends, initiatives amongst which can be listed the appearance of women's computer bulletin boards, the use of international networks to publicise marginalised and invisible labour struggles, feminist and anti-racist media activism and the videotaping of police abuses in ghettoised communities. Heightened tendencies toward segmentation of the workforce are, in Negri's analysis, a basically *reactive* strategy of neo-liberal capital against the equalitarian potentials resident within highly socialised labour-power, a 'divide and conquer' gambit that assumes increasingly arbitrary, destructive, and fantastic features the more it runs counter to the practical dependence of production on widely distributed and interlinked pools of knowledge and communication. In speaking of the socialised worker he is identifying not so much a given or fully achieved level of class solidarity, as a potential which capital is striving to hold down - an axis of struggle *against* segmentation and dualisation, the basis for a political project of recomposition (1989, 145-146).

Negri's work, and the larger matrix of autonomist Marxism out of which it grows, is

Thus the entire thrust of Negri's recent work is to emphasise the capacities that an intensively technological environment bestows on the socialised worker. As Negri puts it, whereas the mechanised hell of the mass worker encouraged the rejection of science, for the socialised worker the issue is rather the 'control of science' - the 'attempt to break the connection between knowledge and power and establish alternative controls' (Negri 1989, 86). What makes this shift in emphasis possible is the organic familiarity which contemporary workers have with computers and communications. To grasp this new aspect of the work situation, Negri refers to the techno-scientific production systems as an 'ecological machine', a habitat in which astounding technological devices have become so quotidian as to assume the aspect of a 'second nature' - and hence to be no longer a unilateral instrument of domination, but susceptible to constant deviations and micro-appropriations, to unexpected quarryings and harvestings. (Negri 1989, 93).<sup>28</sup> This concept of the 'ecological machine' bears comparison with Haraway's (1985) provocative appropriation of the figure of the human-machine 'cyborg' as a useful image for socialist-feminist activism. Both metaphors break with the consolidated left legacy which sees in science and technology only the 'one dimensional' logic of capital (Marcuse 1964).

Those who believe that what the left needs now are better 'models' of an alternative society will be exasperated by Negri's omission of detailed blueprints for this reappropriation of the 'ecological machine'. He, and other autonomists, have generally followed Marx's rigorous refusal of utopian speculation about the precise architecture of a communist future. But what they do insist on is the unquenchable appearance of the future in the present - the manner in which self-constitutive projects of the working class are currently prising open spaces of experimentation and freedom. From this perspective the struggles we have already touched on - struggles over the self-direction of workers' collective technical knowledge, over the communal appropriation of computer and media networks, and over the freeing of educational and research resources from the hegemony of 'business' - are of more than immediate significance. Rather, they point to an horizon in which the importance of informatics can be envisaged both in terms of its potential to reduce labour time and also as the technical enablement for democratic, distributed, decentralised forms of planning and coordination alternative to either market or state command. In acknowledging and affirming the appearance of these possibilities, the autonomists offer a Marxist recuperation of the promises of information society theory.

## Conclusions

Negri's 'socialised worker' is clearly none other than the 'socialised individual' posited by the Marx of *Grundrisse*, the inhabitant of an advanced techno-scientific capitalism whose 'constantly expanding and constantly enriched system of needs' and 'rich individuality ... as all-sided in its production as its consumption' comes into deepening conflict with capitalist social relations and provides the foundation for the creation of communism (1973, 749, 409, 325). To discern the features of this subject emerging amidst the tumult of the 1970s and 1980s - a decade most on the left would reckon as near-catastrophic - is undoubtedly audacious. Some will find it simply foolhardy. It might be objected, for instance, that in

production you enter the truth of the process of social production and reproduction, where the functions, the consumption, the elements, the differentiation of the process are fundamental for its own operation, that is for the operation of producing and circulating wealth... (1980, 36-37).

The socialised worker is thus a figure conjugated between 'old' class theory and analysis of 'new' social movements, whose recognition demands a critique of both positions. On the one hand, it requires rejection of fundamentalist Marxisms which nullify the importance of gender, ethnicity, and cultural community. On the other, it opposes strains within the new social movements which abandon the critique of capital, and attend to issues of class in as tokenist fashion as Marxists' have often done to matters of gender and race.<sup>15</sup> The creativity of autonomist analysis arises from this attempt to square the critique of political economy with the circle of the identity politics in a 'reunification of the traditional components of the class struggle against exploitation with the new liberation movements' (Guattari and Negri 1990, 128).

This project demands innovations in left organisation which go beyond both Leninist vanguardism and single issue politics. The corollary of *autonomy* thus becomes a strategy of *alliance*. The development of 'a set of recompositional mechanisms that start, precisely from a base of dishomogeneity' (Bologna 1980, 51) requires experimentation with modes of transverse, 'multi-centred' forms of struggle in which 'the different components will in no way be required to agree on everything or to speak the same stereotypical language,' (Guattari 1980, 110) and which 'stress similar attitudes without imposing a "general line"' (Lotringer and Marazzi 1980, 8). The experimentation with coalitions, rainbows, rhizomes, networks, and webs which has been a salient feature of anti-capitalist movements in the last decade, for Negri, denotes the search for a politics adequate to 'the specific form of existence of the socialised worker,' in which:

The new is not something unitary, but something manifold. The paradigm is not solitary, but polyvalent. The productive nucleus of the antagonism consists in multiplicity (1989, 87).

## Communication Against Information

The era of this new social subject is, according to Negri 'a moment in which the problem of human society is posed in completely new terms - not only in terms of production, but also, and above all, in the field of communication' (1989, 203). With this, he seems to place himself squarely on the terrain of the information society theorists. It is they, after all, who declare that today's central socio-economic relations are no longer those governing the transformations of matter and energy, but rather involve the storage, processing, transmission and control of data. And on this basis they not only assert the obsolescence of Marxisms' crude preoccupation with capital and labour, but also suggest that the sheer numerical multiplication of communication technologies will bring quantum leaps in free exchange of knowledge and opinion, democratic participation, economic equality, and general

electronic enlightenment. For Negri, however, the emerging plane of information flows, communication channels and data pools is one still wracked by expropriation and resistance, where conflict between creators and accumulators has not been transcended, but only translated into new and amplified fields. Avoiding the 'base/superstructure' metaphor, whose baggage of mechanical materialism has so plagued Marxism, Negri's analysis of communication rests instead on Marx's (1977, 1054) observations about the importance of 'labouring cooperation.' For Marx, a central feature of 'real subsumption' was capital's appropriation of 'collective unity in cooperation, combination in the division of labour, the use of the forces of nature and the sciences.' Developing this theme, Negri says that the advent of the 'social factory' produces 'a specific social constitution - that of cooperation, or, rather, of intellectual cooperation i.e. communication - a basis without which society is no longer conceivable' (1989, 52). To coordinate its diffused operations and activate its huge technological apparatus, capital must interlink computers, telecommunications, and media in ever-more convergent systems, automating labour, monitoring production cycles, streamlining turnover times, tracking financial exchanges, scanning and stimulating consumption in the attempt to synchronise and smooth the flow of value through its expanded circuits. By the elaboration of this vast 'command, control, communications and intelligence' system:

Advanced capitalism directly expropriates labouring cooperation. Capital has penetrated the entire society by means of technological and political instruments (the weapons of its daily pillage of value) in order, not only to follow and to be kept informed about, but to anticipate, organise and subsume cash of the forms of labouring cooperation which are established in society in order to generate a higher level of productivity. Capital has insinuated itself everywhere, and everywhere attempts to acquire the power to coordinate, commandeer and recuperate value. But the raw material on which the very high level of productivity is based - the only raw material we know of which is suitable for an intellectual and inventive labour force - is science, communication, and the communication of knowledge. (1989, 116).

Such mobilisation requires that capital furnish and familiarise labour with a habitat 'wired' with technologies - televisions, microcomputers, fax machines, videos - through which streams of information, instruction and feedback can be channelled. Indeed, in a cryptic but suggestive passage, Negri claims that 'communication is to the socialised worker what the wage relationship was to the mass worker' (1989, 118). By this he does not mean that TV programs replace pay. Rather, he is suggesting that access to communicational resources now constitute part of the bundle of goods and services capital must deliver to workers in order to ensure its own continuing development. In the era of the Keynesian 'planner state,' wage demands became institutionalised as the motor of economic growth. Just as, for the mass worker, capital generalised the norms and practices of mass consumption, so today, for the socialised worker, capital tries to establish the social conditions of communication, 'plugging in' its workforce to the information systems that now mediate all

microelectronics yielding a 'liberation from work,' opening 'paths to paradise' (Gorz 1985) and enabling Marx's famous leap from necessity to the realm of freedom. This perspective is in fact directly influenced by the autonomists and draws on the same passages of *Grundrisse* which they find so fertile.<sup>25</sup> But for Gorz the general reduction of labour time is a technological necessity, a tendency not only independent of class conflict, but actually antithetical to it. Automation, in destroying work, also liquidates the working class; we must say 'farewell to the proletariat,' as postindustrial socialism is quietly invented in do-it-yourself, back-yard experiments of the new 'non class of non workers' (Gorz 1982).<sup>26</sup> Negri's future is far less tranquil. Computerised capital can, he says, continue to impose the law of value even when its historical justification has evaporated, commodifying new sectors of human activity, expanding the command of the wage, incessantly recreating its proletariat, unless it is forcibly interrupted by the organised efforts of workers to reclaim their life-time. The collapse of wage labour is no teleological - or technological - certainty, but a matter of political power.

The autonomist aim is an alternative society based on 'autovalorisation'. Negri suggests this has a dual aspect (1979, 126). Its negative side is 'the refusal of work' - a 'reduction of individual and overall labour time which is sold to capital'. The reverse, positive aspect is a process of 'revolutionary innovation' measured by the 'multiplication of socially useful work dedicated to the free reproduction of society.' Autovalorisation is not 'socialism' understood as nationalisation of industry or the public direction of wage labour; for autonomists this would be only the stultification of the law of value, not its supersession (Negri 1984, 166). On the contrary, it represents a recovery of the anti-statist dimensions of Marxism. The diversity of socialised labour, its increased capacity for self-organisation and the richness of communicative resources available to it render obsolete the Bolshevik concept of a centralised, authoritarian 'dictatorship of the proletariat,' and makes possible a rethinking of revolutionary goals in terms of a 'working class pluralism' (Negri 1980, 37). The program outlined by Negri and his comrades include the guaranteed equalitarian incomes, the reconstruction of a participatory civil society outside the state, the building of networks of localised, user run social services, radical innovation and rearrangement of the working day, and the passage of production into communal, cooperative forms, some of which they see foreshadowed in feminist organisational experiments (Negri 1988; Guattari and Negri, 1990).

This project would clearly draw on the full communicational and computational resources of the 'information society'. We have seen that unlike scientific socialists - and information society theorists - autonomists find no inherently 'progressive' logic in technological development. In this they join other Marxisms which declare the primacy of social relations over productive forces. But unlike neo-Luddites they do not perceive this only in terms of a monolithic capitalist control over technological innovation. Rather, their insistence on the perpetually contested nature of the labour-capital relation, on the 'invention power' of labour and the basic autonomy of human creativity tends away from attribution of fixed political valencies to machinery and towards a focus on possibilities for counter-appropriation, refunctioning, and 'detournement', seeking ways in which the technical instruments used by capital to decompose the unity of the working class can be converted into means for its recomposition.<sup>27</sup>



maximise surplus labour and maintain sales:

One tendency throws workers onto the streets and makes a part of the population redundant, the other absorbs them again and extends wage labour absolutely... (Marx 1969 v.2, 573).

This analysis suggests that capitalist computerisation will not create a leisure society, but rather an enlarging sphere of work, with labour wiped out in primary and secondary industry 'mopped up' by the tertiary, quaternary, or quinary sectors as farther and farther flung domains of human activity are assimilated within the social factory.<sup>23</sup>

However, as this process proceeds, its contradictory nature becomes increasingly apparent. With the advent of the social factory, we reach the point foreseen in *Grundrisse* where:

...the creation of real wealth comes to depend less on labour time and on the amount of labour employed than on... the general state of science and on the progress of technology (Marx 1973, 705).

A monstrous 'imbalance' or 'disproportion' is created between labour and the vast automated apparatus within which the worker now acts as 'watchman and regulator':

In this transformation, it is neither the direct human labour he himself performs, nor the time during which he works, but rather the appropriation of his own general productive power, his understanding of nature and his mastery over it by virtue of his presence as a social body - it is, in a word, the development of the social individual which appears as the great foundation-stone of production and wealth (1973, 705).

In such a world, 'labour theories of value' are indeed anachronistic. Yet this, says Negri, marks a crisis, not for Marxism, which has always seen wage labour as an historically transitory form of social organisation, but for capital, whose legitimacy depends on upholding the necessity and rationality of the wage relation. Allocating income in exchange for a discrete quantum of work becomes increasingly implausible when productivity depends on the overall mobilisation of society's scientific resources:

The theft of alien labour time, on which the present wealth is based, appears a miserable foundation in face of this new one, created by large-scale industry itself (Marx 1973, 705)

There now exists the potential for the decisive divorce of capital and the working class.<sup>24</sup>

However, such separation depends on class struggle. Here Negri's analysis must be distinguished from the superficially similar arguments of Gorz. One of the left's few unabashed optimists about the 'information revolution,' Gorz (1985; also 1982, 1989) sees

facets of economic activity.

But the analogy suggests more. In the Keynesian era, attempts to domesticate pay demands as part of capitalist growth plans ultimately failed, and became a focus for struggle. Similarly, Negri sees the communication resources as an emergent arena of tension. By informing production, capital seems to augment its powers of control. But it simultaneously stimulates creative capacities which remains autonomous from its command, and constantly threaten to over spill into rivulets irrelevant to, or even subversive of, profit. Indeed, insofar as the increasingly 'communicative' texture of the modern economy discloses and intensifies the fundamentally 'socialised,' cooperative nature of labour, it comes into friction with capital's hegemony.

This antagonism can be schematically represented as a conflict between *communication* and *information* - an opposition roughly analogous to Marx's distinction between living and dead labour: communicative activity is 'current,' information its 'imprisonment... within inert mechanisms of the reproduction of reality once communication has been expropriated from its protagonists.' (Negri 1989, 119)<sup>16</sup> Information is centralised, vertical, hierarchic; communication is distributed, transverse, dialogic:

Capital must... appropriate communication. It must expropriate the community and superimpose itself on the autonomous capability of manufacturing knowledge, reducing such knowledge to a mere means of every undertaking of the socialised worker. This is the form which expropriation takes in advanced capitalism - or rather, in the world economy of the socialised worker (Negri 1989, 116).

Capital tries to capture the communicative capacity of the labour force in its technological and organisational forms 'like a flat, glass screen on which is projected, fixed in black and white, the mystified cooperative potentialities of social labour - deprived of life, just like in a replay of *Metropolis*,' while the direct current of communication takes transverse 'polychromatic forms' (Negri 1989, 116). Or, in a different formulation, 'conflict, struggle and diversity are focussed on communication, with capital, by means of communication, trying to preconstitute the determinants of life,' while, on the other hand, 'the socialised worker has come to develop the *critique of exploitation* by means of the *critique of communication*.' (Negri 1989, 118, 58).

While Negri's analysis of this conflict remains highly abstract we can concretise it by glancing at recent debates around the computerised labour process.<sup>17</sup> Initially, Marxists and management consultants alike saw computerisation as deskilling workers - in Negrian terms, enhancing the 'informational' command of capital. Both parties have been surprised to discover that sometimes the new systems require more, rather than less sophisticated operatives and could even permit the reintegration of previously fragmented tasks by allowing the lateral, 'communicational,' flow of data between workers on the shopfloor. Profoundly threatening to Taylorist hierarchies, these communicative possibilities are therefore often abruptly repressed by management's intentional selection of technological options which 'dumb down' and isolate the workforce.

In other instances capital experiments with techniques - 'quality circles', 'team concept'

- to mobilise the cooperative intelligence and problem-solving capacities of workers, while at the same time restraining them within the acceptable horizons of corporate control. Such strategies try to circumscribe domesticated, functional zones of 'communication' within an overall vertical hierarchy of 'information.' Their precarious nature is, however, occasionally revealed by episodes such as those at Lucas Aerospace in the UK and Toshiba-Arnplex in Japan, where high technology workers have exploded in demands for direct, autonomous control of production.<sup>18</sup> For Negri, this capacity for the subversive reintegration of 'execution and conception' outside of managerial control - replacing informational command by communicational collectivity - is one of the hallmarks of the socialised worker.

The tension between information and communication is not, however, limited to the shopfloor, but rather permeates the entire social factory. An important part of the Italian *autonomia* movement was the use of 'free radio' for political purposes: the activists of 'Radio Alice' in Bologna spoke of 'subverting the instruments of information' and 'reversing the cycle of information into a collective organisation of knowledge and language' (Collective a/Traverso 1977, 107, my trans.). Negri's later work clearly conceives the multiplication of such subversions - pointing to how the expansion and diversification of *media*, although commercially driven, inadvertently opens spaces for 'alternative' communication projects; to how *schools and universities* become sites of conflict between capital's rising need for an functionally educated workforce, and people's insistence in learning for their own purposes; to how even in *cyberspace*, capital's attempt to overleap the mass worker with globalised computer systems has itself created a matrix for the networking of environmental, peace and labour groups.<sup>19</sup> The fragmentation and fragility of these oppositional efforts is evident; but the autonomists discern in them prefigurations of an emergent and insubordinate class subject whose identity is rooted in the communicative interconnections of socialised production.

### Postmodern Class Struggle?

This line of analysis places autonomists in an intriguing relation to theorists of 'the postmodern.' Postmodernists and post-structuralists often explicitly link their propositions about the semiotic construction of contemporary subjectivity to the growing prominence of information technologies (e.g. Poster 1990). Indeed, such theories can plausibly be seen as recent inflections of the postindustrial and information society thesis stressing the cultural, psychological, and aesthetic consequences of high technology.<sup>20</sup> Marxists have generally treated such notions with withering contempt. But Negri, who avows respect for Foucault's micropolitics (1979, 1980) and actively collaborates with the post-structuralist anti-psychiatrist, Felix Guattari (Guattari and Negri, 1990), has a more complex attitude.

Negri identifies two wings of postmodern thought. One is the fatalistic school of Baudrillard (1983a; 1983b; Kroker and Cook 1988), which see all social dissent vanishing into a 'black hole' of informational simulation and manipulation. The other, exemplified by Lyotard (1979), applauds the effervescent diversity it believes is promoted by the diffusion of informatics. For Negri, both positions offer important insights into the centrality of communications in the era of 'real subsumption', but each provides only a partial

perspectives. The first responds to the deepening reach of computerised commodification, but nihilistically denies the possibility of resistance; the other recognises the socialised worker's potential for diversified and democratic communications but occludes issues of exploitation and capitalist control. Only when the two tendencies are seen counterpoised in ongoing conflict does an adequate perspective emerge.

Negri has in fact referred to his own work as a theory of 'class antagonism in the postmodern world' (1984, xvi) - apt enough description for his vision of molecularised, communicational anti-capitalist conflict. Yet his insistence on the universal and progressive goals of this struggle is also reminiscent of the postmodernists' modernist opponent, Habermas. His contrast between dominative information and insurgent communication owes an acknowledged debt to Habermas's (1979, 1984, 1987) theory of communicative action, which upholds an 'ideal speech situation' of democratic, symmetrical dialogue unobstructed by inequities of power and skill as a yardstick against which to treasure emancipatory social change.<sup>21</sup>

However, for Habermas economy and workplace lie outside the orbit of such judgement, and are subject to an instrumental logic which finds inexorable embodiment in capitalist rationalisation. The consequence is a purely defensive social democratic politics which aims to protect select areas of the 'life-world' from the encroachments of the 'system', but abandons any fundamental challenge to its capital's dominance of productive activity.<sup>22</sup> For Negri, in contrast, the advent of the 'factory without walls' makes it impossible to split work from life. The increasing prominence of communicative action is precisely a result of the socialisation of production. Conflict between instrumental and communicative logic crystallises around the contradiction between capitalist command and collective labour; and the horizon of the 'ideal speech situation' can only be reached by way of full-blown revolutionary project whose ultimate objective remains the demise of capital.

### Autovalorisation and the Abolition of Work

Indeed, what autonomists share with information society theorists is a sense of millennial possibility - a belief that new technological resources make practical a society characterised by an unprecedented liberation of time, transparency of organisation, and pluralistic creativity. Where they differ is on whether these hopes are realisable within capitalism - an issue brought into sharp focus around a slogan to which both parties lay claim: the abolition of work.

At its most euphoric, information society proposes nothing less than the elimination of labour. Artificial intelligences, expert systems and robotics will give us toil-free abundance, 'Athens without slaves' (Walker, cited in Robins and Webster 1988, 7-8), the leisure society. For autonomist Marxists, such promises are spurious because they ignore the embedding of technologies within the social relations of capital. Marx repeatedly observed that the introduction of automation into a system whose very existence is predicated on wage labour, where both production and consumption turn upon payment for work, produces paradoxical results. The thrust for profit encourages the technological minimisation of necessary labour, but simultaneously drives toward an expansion of the workforce to both