D-P

Note: you must read the *Instructions to Applicants* and the *Guidelines for Applicants* for Discovery-Projects before filling out this form.

Total number of sheets contained in this application	**28**
Project ID (*Research Office use only*)	**DP0208604**

PART A—ADMINISTRATIVE SUMMARY

A1   ORGANISATION TO ADMINISTER GRANT

Name   University of Wollongong

A2   PARTICIPANT SUMMARY

Chief Investigators (CI), Partner Investigators (PI) and ARC Research Fellows (APF, ARF/QEII or APD). Participant details are sought in Part B.

Person number	Family name	Initials	Organisation	Role	ECR
1	Martin	B	University of Wollongong	CI	☐

A3   SUPPORT BEING APPLIED FOR

A3.1   Type

Tick each relevant box.   Number sought

x	Research Grant (personnel and project costs other than Fellowship salaries)
	Australian Postdoctoral Fellowship (APD)
	Australian Research Fellowship/Queen Elizabeth II Fellowship (ARF/QEII)
	Australian Professorial Fellowship (APF)

A3.2   Years

Indicate with a tick the years in which this application seeks support from the ARC:

2002 ☒ 2003 ☒ 2004 ☒ 2005 ☐ 2006 ☐

A4   PROJECT TITLE

Provide a short descriptive title of no more than 20 words.

The methods and dynamics of cyberactivism

A5   PROJECT SUMMARY

In no more than 100 words of plain language, summarise aims, significance and expected outcomes.

Social activists can use the Internet both as a tool and as a new arena for activism in areas including free speech, defamation, civil disobedience, whistleblowing and intellectual property. Different methods of cyberactivism will be catalogued, classified and analysed in order to extract general principles of net-based struggle. A theory of the dynamics of cyberactivism will be developed by generalising the principles underlying nonviolent action.

A6   CLASSIFICATIONS AND OTHER STATISTICAL INFORMATION

A6.1   Keywords

nonviolent action	free speech
social studies of the Internet	information politics
activism	

A6.2   Research classifications

Research Fields, Courses and Disciplines (RFCD)	%
379999	50
370107	25
370199	25

Socio-Economic Objective (SEO)	%
751099	100

A6.3   If the proposed research involves international collaboration, please specify country/ies.

A7   ADDITIONAL DETAILS

A7.1   Have you submitted a similar application to any other agency?   Yes ☐   No ☒

If Yes, please provide details.

A7.2   If any of the participants listed in Section A2 are associated with a Commonwealth Government-funded Centre (eg Special Research Centre, Key Centre of Teaching and Research, or Cooperative Research Centre), please explain how the research proposed in this application is different from the funded core activities of the Centre.

A8 CERTIFICATION

Completing this section is the responsibility of the administering organisation, which must obtain the required signature(s) before submitting the application to the ARC.

A8.1 Certification by the Deputy/Pro Vice-Chancellor (Research) or their delegate or equivalent in the administering organisation

I certify that—

• I am prepared to have the project carried out in my institution under the circumstances set out by the applicant(s).

• To the best of my knowledge all details on this application form are true and complete.

• The amount of time that the investigator/s will be devoting to the project is appropriate to existing workloads.

• The Head of Department has approved this application.

• Approval of the Partner Investigator's participation to the extent indicated has been received from his/her employer.

• This institution supports this application and if successful will provide basic infrastructure and the items listed in the budget for the project.

• All funds for this project will only be spent for the purpose for which they were provided.

• The project can be accommodated within the general facilities in this institution, and sufficient working and office space is available for any proposed additional staff.

• The project will not be permitted to proceed until appropriate ethical clearance has been obtained.

• I have obtained the agreement of other institutions involved to submit this application and to provide the agreed support.

• I will notify the ARC if there is a substantial change to named personnel after the submission of this application.

• I have obtained the agreement of all participants to submit this application.

• I consent, on behalf of the participants, to this application being referred for peer review to persons who will remain anonymous.

• To the best of my knowledge, the Privacy Notice appearing at the top of Part B of this Application Form has been drawn to the attention of all the participants whose personal details have been provided at Part B.

Signature of DVC/PVC(R) or delegate or equivalent (in black ink)	**Name and Title (please print)**	**Date**

Contact Officer for private researchers/organisations:

Name:	
Address for correspondence:	
Email:	
Telephone:	

PART B—PERSONNEL

This information is collected for the purpose of provision to the Australian Research Council in order that it can make recommendations to the Minister for Education, Training and Youth Affairs on the allocation of financial assistance under the *Higher Education Funding Act 1988 (*until the *Australian Research Council Act 200I* commences). The information is protected in accordance with the *Privacy Act 1988*.

The Australian Research Council may disclose this information (except Item B3) to assessors for the purposes of obtaining a peer review assessment of the application. This information will be provided to the Department of Education, Training and Youth Affairs where required by law or for programme monitoring purposes.

Part B must be completed for each participant listed in Section A2

Please do not change the format of this page.

B1   PERSON NUMBER | **1** |

B2   ABBREVIATED DETAILS

GAMS ID	G50703	Role	CI
Family Name	Martin	Initial	B
Department/school/other	Science, Technology and Society		
Organisation	University of Wollongong		

B3   FULL DETAILS

You do not have to complete this section if you have provided a GAMS ID in Section B2.
Gender and date of birth are used only for statistical and identification purposes. This section will not be provided to assessors.

Name and personal details						
Family name	Martin			Given name	Brian	
Title	A/Prof	Gender	M	Date of birth (dd/mm/yyyy)		14/02/1947
Phone	02-4221 3763		Fax	02-4221 3452		
Email	bmartin@uow.edu.au					
Organisation postal address						
Department/school/other	Science, Technology and Society					
Organisation	University of Wollongong					
Postal address line 1	Northfields Avenue					
Postal address line 2						
Locality		State	NSW	Postcode	2522	Country	Australia

B4   MEMBERSHIPS

B4.1   Are you a member of the ARC or its advisory committees?   **Yes** ☐   **No** ☒

B4.2   Are any of your relatives or close social/professional associates members of the ARC or its advisory committees?   **Yes** ☐   **No** ☒

If Yes, please name the ARC member(s) | |

B5   Do you hold a current ARC Research Fellowship (eg SRF, ARF/QEII, APD)? Yes ☐   No ☒

B6   AFFILIATIONS

If you are applying as a Chief Investigator, are you currently drawing salary from a non-higher education sector organisation that is primarily funded for research from Commonwealth or State Government sources?   Yes ☐   No ☒

If Yes, please specify the nature of your employment, association, and/or financial interest (including % of salary).

B1(Repeat) PERSON NUMBER

1

B7   QUALIFICATIONS

B7.1   Highest academic qualification

Type	PhD		
Institution	Sydney University		
Country	Australia		
Year awarded	1976	(or) Date thesis submitted	

B7.2   Other qualifications

Degree/Award	Year	Discipline/Field	Institution and country
BA	1969	Physics	Rice University, USA

B8   ACADEMIC, RESEARCH, PROFESSIONAL AND INDUSTRIAL EXPERIENCE

List current and previous appointment(s)/position(s)—covering a maximum of the past 10 years

Position held	Institution/Organisation	Department	Year appointed and status
Associate Professor Senior Lecturer	University of Wollongong	Science, Technology & Society	1997, continuing 1991, continuing

B10 RESEARCH RECORD RELATIVE TO OPPORTUNITIES

B10.1 Most significant contributions to research field

In the field of nonviolent action research, one of my major contributions has been critical analysis of the standard conceptual framework, in particular my critique of Gene Sharp's theory of power[1] and articulation of the grassroots orientation to nonviolent defence.[2] Another and perhaps more significant contribution has been pioneering several new fields of application for nonviolence theory. This has included the role of science and technology in nonviolent struggle, the role of communication in nonviolent struggle (both the subject of previous ARC projects), nonviolent strategy against capitalism and nonviolent action in and against bureaucracy.[3] This has involved probing and meshing theoretical frameworks from previously disparate fields, for example communication theory and nonviolence theory, to develop vehicles able to provide analytic insight and guidance for future research and action.

In the field of what can be called information issues, I have developed a broad critique built around the idea of corruptions of information power, covering mass media, intellectual property, surveillance, defamation, celebrities and other issues.[4] This work goes beyond previous critiques especially in developing strategies for action.

In the field of free speech, I have promoted the concept of suppression of dissent as an analytic tool to analyse the exercise of power against dissidents including whistleblowers and paradigm breakers.[5] Again, I have paid special attention to strategies for action.

Overall, my most important contribution has been developing conceptual tools that are linked to grassroots strategies to challenge various types of domination.

1. Brian Martin, "Gene Sharp's theory of power," *Journal of Peace Research,* Vol. 26, No. 2, 1989, pp. 213-222.

2. Brian Martin, "Grassroots action for peace," *Social Alternatives*, Vol. 3, No. 1, October 1982, pp. 77-82 [versions also appeared in Japanese and Swedish]; Brian Martin, *Social Defence, Social Change* (London: Freedom Press, 1993).

3. These applications are described in the project description.

4. Brian Martin, *Information Liberation* (London: Freedom Press, 1998).

5. Brian Martin, C. M. Ann Baker, Clyde Manwell and Cedric Pugh (eds.), *Intellectual Suppression: Australian Case Histories, Analysis and Responses* (Sydney: Angus & Robertson, 1986); Brian Martin, "Suppression of dissent in science," *Research in Social Problems and Public Policy,* Vol. 7, 1999, pp. 105-135.

B10.2 Refereed publications, 1996-

The full text of most of these publications is available at http://www.uow.edu.au/arts/sts/bmartin/pubs/.

Books

* Brian Martin and Wendy Varney, *Nonviolence Speaks: Communicating Against Repression* (Cresskill, NJ: Hampton Press, in press), 80,000 words.

* Brian Martin, *Technology for Nonviolent Struggle* (London: War Resisters' International, 2001), 50,000 words.

* Brian Martin, *Nonviolence versus Capitalism* (London: War Resisters' International, 2001, in press), 55,000 words.

Lyn Carson and Brian Martin. *Random Selection in Politics* (Westport, CT: Praeger, 1999), 169 pages.

* Brian Martin. *The Whistleblower's Handbook: How to Be an Effective Resister* (Charlbury, UK: Jon Carpenter, 1999), 167 pages.

* Brian Martin. *Information Liberation* (London: Freedom Press, 1998), 189 pages.

Edited book

 * Brian Martin (ed.). *Confronting the Experts* (Albany: State University of New York Press, 1996), 204 pages.

Book chapters (refereed)

* Brian Martin. Technology, violence, and peace. In: Lester R. Kurtz (editor-in-chief), *Encyclopedia of Violence, Peace, and Conflict, Volume 3* (New York: Academic Press, 1999), pp. 447-459.

* Brian Martin. Against intellectual property. In: Peter Drahos (ed.), *Intellectual Property* (International Library of Essays in Law and Legal Theory, Second Series) (Aldershot: Ashgate, 1999), pp. 517-532.

* Brian Martin. Introduction: experts and establishments. In: Brian Martin (ed.). *Confronting the Experts* (Albany: State University of New York Press, 1996), pp. 1-12.

* Brian Martin. Conclusion: learning from struggle. In: Brian Martin (ed.). *Confronting the Experts* (Albany: State University of New York Press, 1996), pp. 175-183.

Brian Martin and Gabriele Bammer. When experts disagree. In Don Ranney, *Chronic Musculoskeletal Injuries in the Workplace* (Philadelphia: W. B. Saunders, 1996), pp. 101-113.

Articles in refereed journals

* Brian Martin. Nonviolent futures. *Futures,* 2001, in press.

* Brian Martin, Wendy Varney and Adrian Vickers. Political Jiu-Jitsu Against Indonesian Repression: Studying Lower Profile Nonviolent Resistance. *Pacifica Review,* 2001, in press.

Brian Martin. The burden of proof and the origin of acquired immune deficiency syndrome. *Philosophical Transactions of the Royal Society of London B: Biological Sciences,* Vol. 356, 2001, in press.

Brian Martin. Behind the scenes of scientific debating. *Social Epistemology*, Vol. 14, Nos. 2/3, 2000, pp. 201-209.

Brian Martin. Research grants: problems and options. *Australian Universities' Review*, Vol. 43, No. 2, 2000, pp. 17-22.

Brian Martin. Design flaws of the Olympics. *Social Alternatives,* Vol. 19, No. 2, April 2000, pp. 19-23.

* Brian Martin. Defamation havens. *First Monday: Peer Reviewed Journal on the Internet,* Vol. 5, No. 3, March 2000, http://firstmonday.org/issues/issue5_3/martin/index.html

* Wendy Varney and Brian Martin. Lessons from the 1991 Soviet coup. *Peace Research,* Vol. 32, No. 1, February 2000, pp. 52-68.

* Wendy Varney and Brian Martin. Net resistance, Net benefits: opposing MAI. *Social Alternatives,* Vol. 19, No. 1, January 2000, pp. 47-51.

Brian Martin. Suppressing research data: methods, context, accountability, and responses. *Accountability in Research,* Vol. 6, 1999, pp. 333-372.

* Brian Martin. Social defence strategy: the role of technology. *Journal of Peace Research,* Vol. 36, No. 5, 1999, pp. 535-552.

Brian Martin. Suppression of dissent in science. *Research in Social Problems and Public Policy,* Vol. 7, 1999, pp. 105-135.

* Brian Martin. Whistleblowing and nonviolence. *Peace & Change,* Vol. 24, No. 1, January 1999, pp. 15-28. Reprinted in *Philosophy and Social Action,* Vol. 25, No. 3, 1999, pp. 5-18.

* Brian Martin. Strategies for dissenting scientists. *Journal of Scientific Exploration,* Vol. 12, No. 4, 1998, pp. 605-616. Reprinted several times, including in Swedish.

Brian Martin. Technology in different worlds. *Bulletin of Science, Technology & Society,* Vol. 18, No. 5, October 1998, pp. 333-339. Published in an edited volume in Korean, 1999.

Brian Martin. Advice for the dissident scholar. *Thought & Action,* Vol. 14, No. 1, Spring 1998, pp. 119-130.

Brian Martin. Political refutation of a scientific theory: the case of polio vaccines and the origin of AIDS. *Health Care Analysis,* Vol. 6, 1998, pp. 175-179.

* Brian Martin. Science, technology and nonviolent action: the case for a utopian dimension in the social analysis of science and technology. *Social Studies of Science*, Vol. 27, 1997, pp. 439-463.

* Brian Martin. Technological vulnerability. *Technology in Society*, Vol. 12, No. 4, 1996, pp. 512-523.

David Dingelstad, Richard Gosden, Brian Martin and Nickolas Vakas. The social construction of drug debates. *Social Science & Medicine*, Vol. 43, No. 12, 1996, pp. 1829-1838.

Brian Martin. Sticking a needle into science: the case of polio vaccines and the origin of AIDS. *Social Studies of Science*, Vol. 26, No. 2, May 1996, pp. 245-276.

* Brian Martin. Communication technology and nonviolent action. *Media Development*, Vol. 43, No. 2, 1996, pp. 3-9.

B10.3 Ten career-best publications

Brian Martin and Wendy Varney, *Nonviolence Speaks: Communicating Against Repression* (Cresskill, NJ: Hampton Press, in press).

Brian Martin, *Technology for Nonviolent Struggle* (London: War Resisters' International, 2001).

Brian Martin. *The Whistleblower's Handbook: How to Be an Effective Resister* (Charlbury, UK: Jon Carpenter, 1999), 159 pages.

Lyn Carson and Brian Martin. *Random Selection in Politics* (Westport, CT: Praeger, 1999), 161 pages.

Brian Martin. *Information Liberation* (London: Freedom Press, 1998), 189 pages.

Brian Martin. *Social Defence, Social Change* (London: Freedom Press, 1993), 157 pages.

Brian Martin. *Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* (Albany: State University of New York Press, 1991), 266 pages.

Brian Martin, C. M. Ann Baker, Clyde Manwell and Cedric Pugh (eds.), *Intellectual Suppression: Australian Case Histories, Analysis and Responses* (Sydney: Angus & Robertson, 1986), 304 pages.

Brian Martin. *Uprooting War* (London: Freedom Press, 1984), 300 pages. Also published in Italian.

Brian Martin. *The Bias of Science* (Canberra: Society for Social Responsibility in Science, 1979), 100 pages.

B10.4 Other evidence of impact and contributions to the field

International recognition of my work is indicated by translation of my books and articles into some 10 languages and by speaking tours arranged for me in Italy (1991), Netherlands (1993) and Japan (1998), with talks and workshops for both researchers and activists.

In addition to the refereed publications listed above, in the past five years I have also authored significant nonrefereed works, including the book *Suppression Stories* (Wollongong: Fund for Intellectual Dissent, 1997)—defamation aspects were too threatening for some publishers—and major articles (typically 5000+ words) in the journals *Civilian-Based Defense, Philosophy and Social Action* and *Gandhi Marg.* I edited an internally published volume, *Technology and Public Participation* (Science and Technology Studies, University of Wollongong, 1999, 271 pages), a project that forged links between participants in our research programme.

I have extensive practical experience in social action groups, especially Canberra Peacemakers and, since 1986, Schweik Action Wollongong, including leadership in community research projects. In Whistleblowers Australia I was national president for four years (1996-1999) and am currently international director. I helped establish and am co-convenor of Dissent Network Australia. My website on suppression of dissent (www.uow.edu.au/arts/sts/bmartin/dissent/) is widely recognised as a valuable source of information. Personally I have given advice to hundreds of dissidents over the years, experience that contributes to my research contributions in the area.

PART C—PROJECT COST

> **Costs should be quoted exclusive of the GST.**

C1   BUDGET DETAILS

C1.1   YEAR   2002

Column 1	COSTING			
	2	3	4	5
Source of funds	**ARC**	**University**	**Other**	**Total**
DIRECT COSTS				
Personnel (Salaries + On-costs) CI @0.25 FTE +30.56% on-costs Senior Research Associate (level 1) @1.0 FTE + 26% on-costs	 $57,988	 $27,703 $2,099		 $27,703 $60,087
Total Personnel (a)	$57,988	$29,802		$87,790
Teaching Relief				
Total Teaching Relief (b)				
Equipment Mac PowerBook G4 Zip CD External CD RW Drive	 $4,496 $508			 $4,496 $508
Total Equipment (c)	$5,004			$5,004
Maintenance Software Computer consumables	 $250 $250			 $250 $250
Total Maintenance (d)	$500			$500
Travel **Wollongong-Brisbane**	$500			$500
Total Travel (e)	$500			$500
Other				
Total Other (f)				
TOTAL DIRECT COSTS (g)	**$63,992**	**$29,802**		**$93,794**
INDIRECT COSTS				
CIs, PIs and any researcher Level A or above x multiplier	■■■	$27,418		$27,418
TOTAL INDIRECT COSTS (h)	■■■	$27,418		$27,418
TOTAL COSTS (i)	**$63,992**	**$57,220**		**$121,212**

C1 BUDGET DETAILS

C1.1 YEAR | **2003**

Column 1	COSTING			
	2	**3**	**4**	**5**
Source of funds	**ARC**	**University**	**Other**	**Total**
DIRECT COSTS				
Personnel (Salaries + On-costs)				
CI @0.25 FTE +30.56% on-costs		$28,686		$28,686
Senior Research Associate (level 2) @1.0 FTE + 26% on-costs	$60,162	$2,177		$62,340
Total Personnel (a)	$60,162	$30,863		$91,026
Teaching Relief				
Total Teaching Relief (b)				
Equipment				
Total Equipment (c)				
Maintenance				
Software	$250			$250
Computer consumables	$250			$250
Total Maintenance (d)	$500			$500
Travel				
Wollongong - Melbourne	$500			$500
Total Travel (e)	$500			$500
Other				
Total Other (f)				
TOTAL DIRECT COSTS (g)	**$61,162**	**$30,863**		**$92,026**
INDIRECT COSTS				
CIs, PIs and any researcher Level A or above x multiplier	■	$28,394		$28,394
TOTAL INDIRECT COSTS (h)	■	$28,394		$28,394
TOTAL COSTS (i)	**$61,162**	**$59,257**		**$120,419**

C1   BUDGET DETAILS

C1.1 YEAR   2004

Column 1	COSTING			
	2	**3**	**4**	**5**
Source of funds	**ARC**	**University**	**Other**	**Total**
DIRECT COSTS				
Personnel (Salaries + On-costs) CI @0.25 FTE +30.56% on-costs		$29,260		$29,260
Senior Research Associate (level 1) @1.0 FTE + 26% on-costs	$62,336	$2,256		$64,592
Total Personnel (a)	$62,336	$31,516		$93,852
Teaching Relief **CI @ 0.25 + on-costs**	$7,249	$262		$7,511
Total Teaching Relief (b)	$7,249	$262		$7,511
Equipment				
Total Equipment (c)				
Maintenance Software Computer consumables	$250 $250			$250 $250
Total Maintenance (d)	$500			$500
Travel **Wollongong - Brisbane**	$500			$500
Total Travel (e)	$500			$500
Other				
Total Other (f)				
TOTAL DIRECT COSTS (g)	**$70,585**	**$31,778**		**$102,363**
INDIRECT COSTS				
CIs, PIs and any researcher Level A or above x multiplier	████	$28,995		$28,995
TOTAL INDIRECT COSTS (h)	████	$28,995		$28,995
TOTAL COSTS (i)	**$70,585**	**$60,773**		**$131,358**

C2JUSTIFICATION OF FUNDING REQUESTED FROM THE ARC

Personnel A full time appointment of a senior research associate is essential to completion of the project. If we assume conservatively that discovery, documentation, classification, writing up and verification of 50 methods of cyberactivism requires two weeks' work per method and that each of 6 detailed case studies (including participant observation in three) requires two months' work, this accounts for three years of work, with writing carried out along the way.

The appointee will be required to search out and understand a variety of new methods of cyberactivism, a task requiring a sophisticated understanding of social and political dynamics as well as an adequate grasp of technical dimensions. The methods of cyberactivism will have to be understood individually in their social context, in a nuanced way, as well as seen more broadly in relation to other methods, for classification purposes. Skills in searching, email querying, testing of findings and cogent writing of accounts of methods will be required. Based on my experience with collaborations and past ARC projects, carrying out research of the sort planned will require someone with a PhD and several years of postdoctoral research experience, including writing for publication in refereed journals. To obtain someone with the appropriate level of expertise and experience for the challenging tasks in the project, an appointment at the level of senior research associate is required.

Teaching relief Writing up of case material, articles and a book about *methods* of cyberactivism is best done as the project proceeds. However, writing up the theoretical component, a book-length treatment of the *dynamics* of cyberactivism, will require extra time, hence the need for teaching relief for the CI for six months in the third year.

Equipment Intensive use of the net is fundamental to the project, so a high-speed computer is essential. Machines provided by the University of Wollongong are adequate for many but not all purposes of the project. In particular, computer mobility is required for portions of the project, due to the sensitivity of some of the issues addressed. Technically sophisticated recipients of messages can determine the Internet provider address of a fixed computer (for example at a university). Hence, for some of the studies that involve anonymity, it will be necessary to send messages from independent accounts based at different IP addresses, including from other locations. A laptop is ideal for this purpose.

In order to document some cyberactivist initiatives as they occur, software for downloading websites will be used, since a day or week later a site may no longer exist in the same form, for example being withdrawn or modified in the face of defamation threats. Downloading sites automatically is straightforward with the appropriate software, but it does mean archiving large amounts of data that need to be backed up frequently. Hence provision is included for purchase of a suitable CD burner.

Maintenance Most of the software necessary for the project can be obtained free, but in a few cases proprietary products (including updates) will be advantageous, for example firewalls to protect against attacks. A small amount is set aside for this purpose.

Travel Most of the project can be carried out using the net. Nevertheless, a limited amount of travel within Australia is needed in order to arrange participant observation in net actions. Meetings with board members of Electronic Frontiers Australia (many now living in Queensland) will be a priority. If possible the visits will be timed to coincide with relevant meetings of cyberactivists.

C3 DETAILS OF NON-ARC CONTRIBUTIONS

The primary contributions from the University of Wollongong are the CI's salary and basic infrastructure, especially computing facilities, databases and library, plus an office for the senior research associate. A large amount of relevant software is either provided by the university or is available as freeware.

PART D—RESEARCH SUPPORT

D1   RESEARCH SUPPORT

Provide details for all participants listed in Section A2—

•   Support types (**Sup type**) are 'C' for current support, 'R' for requested support for 2002, 'P' for past support.

•   Asterisk (*) any support related to this project.

•   The current proposal must be listed first as 'R' under **'Sup type'.**

•   The File number applies only to past and current ARC/DETYA grants.

Description (All named investigators on any grant held by a participant, project title, agency, scheme)	(*)	Sup type (C, R or P)	ARC File number	2000 ($'000)	2001 ($'000)	2002 ($'000)
Martin, The methods and dynamics of cyberactivism, ARC discovery project		R	DP0208604			64
Martin, Communication technology for nonviolent struggle, ARC large grant	*	C	A7905285	50	55	

D2 ARC large grant report

Brian Martin, Chief Investigator
Communication technology for nonviolent struggle (file number A79905285)
1999-2001

The plan for the project called for detailed study of the dynamics of communication technology in relation to nonviolent struggle, based on case study examination, interviews and queries via computer. The case studies chosen were (1) popular action causing the forced resignation of President Suharto of Indonesia in 1998; (2) popular resistance to the 1991 Soviet coup; (3) international activism leading to the stopping of the Multilateral Agreement on Investment in 1998. In the course of investigating these case studies, the project was broadened in two significant ways. First, the ambit of the study was expanded from communication technology to communication generally, including factors such as systems of meaning and bureaucratic control over government-collected information. Second, as well as looking at the three instances of relatively successful nonviolent struggle, we looked at comparison instances of low profile and less successful nonviolent struggle (or even the absence of struggle), namely (1) the 1965-1966 massacres in Indonesia and the 1975 invasion and occupation of East Timor; (2) Stalinist repression in the Soviet Union; (3) structural adjustment programmes, especially before the 1990s. By looking at these cases, it is possible to throw additional light on problems in communication to support nonviolent struggle.

We examined the three case studies in depth, wrote accounts of each of them and checked the accounts with knowledgeable individuals. Papers were written about each of the case studies: (1) Indonesia: *Pacifica Review* (accepted for publication); (2) Soviet coup: *Peace Research* (published); (3) MAI: *Social Alternatives* (published). As well, we have completed a book manuscript based on this material, using the three case studies plus surveys of a range of perspectives in both nonviolence theory and communication theory, using selected insights from theory to develop a framework for activists to develop communication strategies. It has been accepted for publication in Hampton Press' Communication Series, with great enthusiasm from the external referees.

Due to broadening the scope of the project, technical interviews turned out not to be so crucial; carrying them out has been postponed to 2001. Simulations have been carried out as planned; analysis of them and their implications is under way. In addition, we are working on additional articles covering the theoretical issues in our study, plus undertaking new research focussing on struggles over views of "reality," a central feature of communication for nonviolent struggle that has received little attention.

The most significant aspect of the project so far is how much it has broadened in scope as it has proceeded. This is feasible since so little has been done previously linking nonviolence and communication. There have been no substantial difficulties.

The methods and dynamics of cyberactivism

Background

The rise of the Internet has provided a new tool for social activists, enabling them to communicate globally more easily, cheaply and quickly [1]. Just as significantly, the net also serves as a new arena for activism. Net struggles occur over censorship, defamation, intellectual property and many other issues. How can these struggles be most usefully understood? While social action and social movements off-line have long been examined from a range of perspectives, cyberactivism has not received the same level of scrutiny, partly because the field is so new and changing and partly because only some categories developed for studying conventional (off-line) activism work well in the cyber-environment.

Social activists are only one group with an interest in net dynamics. Corporations seek to make sales and promote their image. Repressive governments attempt to deter or subdue challengers. Militaries prepare for so-called information warfare. The stakes are very high, since what eventually becomes acceptable and practised may well depend on the outcome of struggles early in the net's evolution. Insight into the dynamics of cyberstruggle has the potential to make a crucial difference for activists challenging powerful opponents, such as dissidents opposing repressive governments, citizens exposing dangerous products and whistleblowers revealing massive corruption.

This project has the ambitious aim of classifying and analysing methods of cyberstruggle and developing a framework to understand their dynamics. Furthermore, it will provide a testing ground for a generalisation of nonviolent action theory.

In its short existence, the net has played an important role in numerous struggles. For example:

• The successful worldwide campaign against the Multilateral Agreement on Investment used the web and email as powerful tools for networking and mobilisation.

• The Zapatistas have used the net to expand their struggle in rural Mexico to global dimensions [2].

• The Chinese government has arrested and imprisoned dissidents who have circulated email questioning government actions.

• Various Asian and African governments have established legislation, policies and prices to restrict free use of the net [3].

• Activists have used the net to bypass US government laws against export of encryption software [4].

• Whistleblowers have set up web sites in foreign countries to get around local censorship.

• "Hactivists" have launched denial-of-service and "defacement" attacks against government and corporate websites [5].

• Activists have initiated campaigns against the corporation eToys, including a "virtual sit-in," to drive down the price of its stock, in response to eToy's lawsuits against European arts group etoy in order to gain etoy's domain name .etoy.com [6].

• Massive government surveillance of e-communication through the Echelon system has been exposed and challenged [7].

• Privacy advocates have exposed the collection and use of "cookies" to track individuals' web use.

This is only a partial list. It might be said that cyberspace is where the action is!

Despite, or perhaps because of, this enormous range and level of activity, there has been little done to provide a coherent framework for understanding these conflicts. Many traditional activist organisations, such as Greenpeace, are very good at using the mass media as a tool for campaigning, but have not treated cyberspace as a new arena for struggle, naturally enough since their primary concerns are off-line, namely the environment in the case of Greenpeace. There are quite a number of new groups that focus on net issues, notably the Global Internet Liberty Campaign (GILC) and its member groups such as Electronic Frontiers Australia. Most such groups have relatively little funding and few dedicated activists, with most of their time and effort taken up with urgent campaigning issues, with little capacity for research or even reflection.

The focus in the project will be on cyberactivism aimed at opposing repression, oppression and aggression [8].

Significance and innovation

The theoretical significance of this project can be understood in the context of three aspects of nonviolence theory and practice: the consent theory of power, the concept of political jiu-jitsu and a focus on action in the public arena. Each of these is discussed briefly before outlining the project's contribution.

Consent theory. Gene Sharp is the world's preeminent researcher into nonviolent action. His book *The Politics of Nonviolent Action* is the classic work in the field and is universally cited [9]. The theoretical foundation of Sharp's analysis is the consent theory of power, which in short says that the power of rulers derives from consent by subjects and that nonviolent action is a means of withdrawing consent and thus challenging systems of oppression. Though highly useful to activists, Sharp's framework is open to criticism at a theoretical level. In particular, it does not include processes and perceptions associated with social structures such as capitalism, patriarchy and bureaucracy [10].

Political jiu-jitsu. Sharp analyses the dynamics of nonviolent action, describing stages of nonviolent action campaigns including laying the groundwork, making challenges (which usually brings on repression), building solidarity and discipline to oppose repression, and achieving success by conversion, accommodation or nonviolent coercion. At the core of the dynamics of nonviolent action is "political jiu-jitsu," which occurs when the opponent uses violence against activists. If nonviolent discipline can be maintained, the result often is greater support for the activists by third parties. This core dynamic is widely recognised by both activists and opponents, which is for example why governments use *agents provocateurs* to foment violence and thus undermine the potency of political jiu-jitsu.

Public arena Nonviolence research commonly focusses on action, such as rallies, vigils, strikes and sit-ins, that is in the "public arena," in situations where the adjective "nonviolent" refers to absence of physical violence by the activists and where force or physical violence may be and often is used by opponents against activists, such as arrests, imprisonment, beatings and killings. Indeed, central to the standard image of the nonviolent activist is putting one's body on the line, even though many methods, such as boycotts, involve a withdrawal rather than a presence. The upshot is that nonviolence theory and practice have tended to be restricted to particular types of action, especially those where activists are physically present in public spaces. Struggles to make authoritarian organisations more democratic, for example, have not been studied by nonviolence researchers.

The theoretical aim of the project is to generalise nonviolence theory and to test and refine the generalised theory. The generalisation is, in essence, to broaden the concept of political jiu-jitsu from its ties to physical bodies protesting in public spaces and confronted by physical violence.

Some of the elements of nonviolent action that make it potent are

• popular participation (which is potentially much greater for nonviolent action than armed struggle);

• incorporation of ends within means (which is automatic in the case of nonviolent action that aims at a more nonviolent society);

• appeal to a culturally shared boundary (in the case of nonviolent action, the boundary between violence and nonviolence).

The appeal to the culturally shared boundary between violence and nonviolence is at the core of the conventional concept of political jiu-jitsu. To generalise this, other boundaries can be considered. For example, the distinction between nuclear and nonnuclear has been crucial in mobilisation of movements against nuclear war and nuclear power.

To develop and test a generalisation of nonviolence theory, it is valuable to study an arena where a form of political jiu-jitsu operates but does not conform to the usual self-imposed restrictions of nonviolence research. Cyberspace fulfils this role superbly. First, it is a complex social arena, without the simplicity of Sharp's ruler-subject dichotomy, and thus requires a generalisation of nonviolence theory beyond the consent theory of power. Second, there is no physical violence on the net; therefore, the concept of political jiu-jitsu has to be generalised by looking for other boundaries than physical violence versus nonviolence. Third, bodies are not physically present in cyberstruggles; therefore, a generalisation of nonviolence theory to cover entirely symbolic engagements is required.

Cyberspace thus provides a fertile proving ground for a generalisation of nonviolence theory. By testing generalisations of the theory against the observed dynamics of cyberstruggle, a robust theory of action can be developed, of which nonviolent action, as traditionally defined, is a subset.

While this process of theoretical development builds on nonviolence theory, it makes sense to extract relevant insights from other bodies of theory. Some of those that will be probed for this purpose include social movement theories (such as resource mobilisation theory), political economy and communication theories (such as semiotics and organisation theory). When bringing together ideas from a range of theories, there is a risk of incoherency. This will be overcome by keeping the theoretical focus on the *dynamics* of cyberactivism. For example, political economy gives great insight into the social structural context of struggles—such as the ownership of internet service providers (ISPs) and the judicial interpretation of copyright laws—but has little to say on whether attempts to shut down a whistleblower's website are likely to generate greater attention to it. Similarly, resource mobilisation theory gives insight into the role of resources available to activists and semiotics gives insight into the role of meaning systems, each complementary to understanding the dynamics of action. Theoretical coherence will be maintained by being clear about the domain of each theoretical framework and setting the focus on the dynamics of cyberactivism.

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In summary, the **theoretical significance** of the project is nothing short of generalisation of nonviolent action theory to a range of new domains, with specific testing on case studies in cyberspace. This will be of significance to the development of social science theory, giving greater understanding of the forces that lead to change, in contrast to the more usual emphasis on understanding how change is managed.

While this might be seen as critical of Gene Sharp's framework, the project as a whole actually is modelled on Sharp's great enterprise, namely a mapping and analysis of nonviolent action, a program of research whose fruits have proved immensely valuable. Just as Sharp collected and classified numerous methods of nonviolent action, so will this project collect and classify numerous methods of cyberactivism. Just as Sharp used case studies to inspire and assess his framework for the dynamics of nonviolent action, so this project will use case studies to inspire and assess a generalised dynamics of "apt action."

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The **practical significance** of the project is just as great as its theoretical significance, but is much more easily described. Cataloguing and classifying methods of cyberactivism will provide a valuable resource for activists, giving them ideas and encouraging them to consider options. Case

studies will provide insight into how to proceed for greatest effectiveness. For example, if email petitions are seldom effective, but do work well under certain conditions, this information will be tremendously useful in making a decision whether to launch a petition. Finally, the development of a theoretical framework for understanding the dynamics of cyberstruggle will offer insight to activists in planning actions and campaigns.

The key **innovation** will be the new theoretical framework of apt action and the documentation and classification of dozens of methods of cyberactivism.

It can be argued that insight into cyberactivism will also have value to powerful groups such as governments and corporations, and can be used to develop better methods of opposing as well as supporting free speech. While it is true that researchers cannot control the uses of their findings, the choice of research topic and the conceptual framework used have a big influence on who can obtain greatest benefit from findings. Just as traditional nonviolence research has been far more useful to nonviolent activists than their opponents, so cyberactivism research is likely to be far more useful to cyberactivists than to their opponents.

The special value of the research to powerful groups will be to provide insight into how to deter and oppose "unprincipled" cyberactivism, namely cyberactivism that violates the boundaries of "apt action"—for example, those who cause extensive damage to computer files without warning or justification. This will also be of value to principled cyberactivists.

Relevance of the applicant's skills, training and experience to the project

I have been involved in the study of nonviolent action since the late 1970s and have written extensively on this topic, including critical assessments of nonviolence theory [11]. In the course of this work, I have been a pioneer in undertaking analysis of nonviolent action in new domains, including technology [12], bureaucracy [13], capitalism [14] and communication [15]. This work has required theoretical innovation as well as critical assessment and has prepared me for the challenge of generalising nonviolence theory.

The current ARC project on communication technology for nonviolent struggle has highlighted the important and increasing role of the net in nonviolent struggles. The case studies of the toppling of Suharto and the stopping of the Multilateral Agreement on Investment showed some of the dynamics involved, and our survey of a range of possible case studies showed the importance of net struggles and the paucity of critical studies.

I have been a leader in several group projects that involved interviewing people (such as public servants, tradespeople and computer programmers) about what can be done to oppose an invasion or military coup [16]. This sort of investigation into the practicalities of nonviolent action is highly regarded overseas. My experience in leading group investigations will be valuable for working with groups undertaking net actions. It is also relevant that I have extensive experience in interviewing in a range of areas, including technical specialists at BHP (in collaboration with Colin Kearton), fluoridation partisans, and scientists and engineers.

My background includes 10 years postdoctoral research in applied mathematics and 20 years experience in applications programming. While virtually all my computer knowledge from those years is now obsolete due to the pace of innovation, my experience nevertheless gives me confidence that I can understand new developments such as in encryption and that I can communicate effectively with technical experts. Since 1996 I have personally maintained a large and growing website (http://www.uow.edu.au/arts/sts/bmartin/), thus learning web dynamics first hand as well as by observation. As well as studying various net struggles, especially in relation to whistleblowing, I have become involved myself, thus giving greater insight [17].

Approach

There are five main components to the research. Rather than being sequential stages, they will mostly run in parallel, taking advantage of the capabilities of interaction and quick publication on the net.

Research components
 1. Documentation and classification of methods of cyberactivism.
 2. Preparation of detailed case studies.
 3. Participant observation and action research.
 4. Formulation and testing of theoretical framework.
 5. Communication of results.

In brief, information about methods of cyberactivism, including detailed case studies, will be collected by literature searches (especially web searches), posting of queries, email to relevant individuals and "publication triggers" (see component 5 below). With agreement of the organisers, the researchers will join net campaigns as participants, observing the process and reporting on it, giving an insider's viewpoint to some of the detailed case studies. The theory will be constructed initially as a direct extension of nonviolent action theory, then systematically assessed against the data collected and revised as appropriate. Finally, publication during the project will be used both to report findings and to encourage people to come forward with additional information.

1. Documentation and classification of methods of cyberactivism. Unsystematic collection of examples of cyberactivism—such as the cases listed in this application—already reveals more than a dozen different methods, with one or more examples of each. One simple and obvious method, for example, is creation of a website and mirrors to make information available in the face of censorship. To collect information about methods, several approaches will be used:
   • literature searches;
   • email contact with activist groups using the net;
   • email contact with individuals and groups that have used particular methods;
   • publication triggers (see component 5 below).
Finding information about a method is the first step. Then comes the more challenging step, providing examples of its use. One of the criticisms made of the nonviolent action literature is that case studies are often presented out of context, in a promotional rather than a critical fashion [18]. Therefore, attempts will be made to obtain information from a variety of sources, including targets of the actions. In addition, we will circulate our write-ups to various parties to the action. Of course, in some cases, the "other side" is not likely to respond, for example if it is a repressive government imposing net censorship. Nevertheless, it may be possible to contact functionaries or commentators who can provide a different perspective. The literature on nonviolent action, and on social action more generally, is short on information about the viewpoints and emotional response of targets of action, so this aspect of the study will be important to carry out even if relatively little feedback is obtained.

Realising that net surveillance is a worry to many net activists, several communication options will be explored, including:
   • normal email from our university addresses;
   • encrypted email from our university addresses;
   • normal and encrypted email sent through anonymous remailers;
   • normal and encrypted email sent from off-campus addresses.
With these and other options, a greater range of responses can be obtained [19]. Of course, careful attention will be given to the validity and quality of information obtained from sources whose identity cannot be verified.

It is likely that there will be many dozens of methods of cyberactivism uncovered, perhaps over a hundred. Therefore, this component of the project will consume a sizeable proportion of the effort involved.

2. Preparation of detailed case studies. Out of the numerous cases of cyberactivism, about half a dozen will be selected for detailed analysis. These will be chosen for their typicality as representatives of important types of methods as well as for the volume and quality of information available. (Note that a case study may involve more than one method of cyberactivism.) The same approaches to information collection will be used as for component 1, with special attention to obtaining sending draft case study accounts to participants in order to obtain feedback.

3. Participant observation and action research. In order to gain greater insight into some case studies, the researchers will join some cyberactions, preferably from the planning stage onwards. There are two main ways to proceed. One is to liaise with an organisation, such as Electronic Frontiers Australia, that engages in cyberactivism, and to join a particular campaign. Another is to initiate an action in collaboration with interested others. For example, I am in touch with a number of social activists who are concerned about the use of defamation law to suppress free speech. It would be straightforward to organise a form of cyberactivism on this topic, for example by arranging for publication of material on the web hosted by a foreign ISP. This would thus be form of action research [20].

Participant observation will be in campaigns which themselves may use one or more methods of cyberactivism. This component of the research thus will provide insight into various methods of cyberactivism as well as giving an added dimension to the particular case studies adopted.

While participant observation has long been part of social research, it has not been easy for researchers to join diverse campaigns. In comparison to much traditional activism, many cyberactions are short and sharp and have a global scope, hence offering a much greater opportunity for participant observation.

Suitable ethics clearances will be sought for all aspects of the project, especially the participant observation and action research. Sensitivity will be needed to the special concern felt by many cyberactivists about confidentiality and privacy.

4. Formulation and testing of theoretical framework. The development and testing of a theory of "apt action" will proceed in this schematic way:
   • extraction of core concepts from existing theory;
   • proposal of various possible principles associated with the core concept;
   • generalisation of the core concept by modifying or repositioning the principles;
   • application of the generalised core concept to cyberspace;
   • testing and refinement of the principles and core concept by systematic comparison with case studies of cyberactivism.

This process can best be understood through an example. As discussed earlier, the core concept of Sharp's formulation of the dynamics of nonviolent action is political jiu-jitsu. Possible principles involved in making political jiu-jitsu effective include popular participation and appeal to a culturally accepted boundary, namely violence versus nonviolence. (Note that Sharp did not analyse political jiu-jitsu in terms of such principles. This is where analytic insight and inspiration are especially required in this research!) One example of generalisation of political jiu-jitsu would be using a different culturally accepted boundary, such as privacy versus lack of privacy or censorship versus free speech, to take two examples that can readily be applied to cyberspace.

So far the process is largely theoretical. Next comes testing against case studies. For example, a cybercampaign against the use of defamation law to suppress free speech could be assessed to see whether defamation threats or actions can be used by activists to generate greater support, in other words to draw on cyberpolitical jiu-jitsu. If so, then this is compatible with the censorship versus free speech boundary being a suitable generalisation of political jiu-jitsu as applied to cyberspace.

Obviously, considerable judgement is required, since the dynamics of campaigns are seldom cut and dried. However, since the value of the concept of political jiu-jitsu is sufficiently clear and robust within the domain of conventional nonviolent action, it is reasonable to hope that generalisations of the concept can be tested without enormous ambiguity.

As well as proceeding this way using nonviolence theory, several other potentially relevant theoretical frameworks will be probed and utilised, such as political process theory and semiotics. As noted earlier, these frameworks will be mined for their relevance to the dynamics of action [21]. In addition, they are likely to provide insight into the case studies. For example, political economy will help in understanding the macro context of cyberstruggle.

5. Communication of results. At least five articles will be written covering the case studies, each aimed at a particular audience, including peace researchers, computer scientists, Internet studies scholars, political scientists and social activists, with a prominent journal targeted in each case. As well, the aim will be to write two books (or two volumes of a single book). One will cover the methods of cyberactivism, with examples, plus the case studies. The second will deal with the theoretical innovations dealing with the dynamics of action, illustrated by case material [22].

Because of the subject matter, publication on the net will be sought when possible. It is likely that there will be a surplus of documentary material collected, beyond what can be included in publications. This will be made available on the web.

Some of the publications during the course of the project will be used as "triggers" to stimulate feedback from readers and obtain new information, especially about additional methods of cyberactivism. For this, net publication will obviously be the preferred option. This can include short items for a variety of outlets, including relevant newsgroups.

——————————— **Time line** ———————————
2002
1. Begin literature searching and email contacts. Learn and practise relevant net skills (such as downloading websites). Document and classify 15 methods of cyberactivism.
2. Make initial selection of detailed case studies. Investigate and analyse one detailed case study
3. Contact cyberactivist organisations. Seek ethics clearances. Join one cyberaction.
4. Develop generalised theory of apt action.
5. Write at least two trigger articles about the project, for net circulation. Write up accounts of 15 methods of cyberactivism.

2003
1. Document and classify 25 methods of cyberactivism.
2. Investigate and analyse three detailed case studies.
3. Continue connection with cyberactivist organisations. Join one cyberaction.
4. Apply concepts from nonviolent action theory to cyberspace. Test theory of apt action by comparison with case studies.
5. Write three articles on case studies, for specific audiences. Write at least two further trigger articles. Write up accounts of 25 methods of cyberactivism.

2004
1. Document and classify 10 methods of cyberactivism.
2. Investigate and analyse two detailed case studies.
3. Join one cyberaction.
4. Refine theory of apt action by comparison with case studies.
5. Write two articles on case studies, for specific audiences. Write up accounts of 10 methods of cyberactivism.Write book-length treatment of methods of cyberactivism. Write (July-December) book-length treatment of apt action.

National benefit

Outcomes from the project will include (1) a compendium of methods of cyberactivism, with examples, plus a number of detailed case studies, and (2) an extension of nonviolence theory to wider domains, especially to capture the dynamics of action. Publication of and publicity about these findings, especially through the net, will create wider awareness by cyberactivists on how best to plan and run campaigns.

Nonviolence theory assumes that popular action is necessary to oppose repression and oppression and that nonviolence is more empowering, less damaging and potentially more effective than violence. Developing people's understanding of and capacity to use nonviolent action thus strengthens the ability of a society to beneficially protect and transform itself. Similarly, greater understanding and use of cyberactivism will enable concerned citizens to oppose damaging activities. The most effective cyberactivism is that which appeals to widely shared cultural values. Thus, the project has the potential to promote "responsible" activism and to discourage methods that are damaging to all concerned.

If even a single damaging practice or policy can be reoriented by improved cyberactivism—such as a whistleblower exposing massive corruption, activists challenging a damaging corporate practice, or civil libertarians thwarting government repression—the national benefits are potentially huge. Of course, this depends on the value system of those assessing the benefits.

These benefits will be available worldwide, to all who use and are affected by the net. Just as civil disobedience is usually a more responsible and effective way to promote lasting and beneficial social change than riots, sabotage or terrorism (however justified these might be in some circumstances), so principled cyberactivism will usually be a superior approach to social change. If Australians can take a lead in modelling principled and effective cyberactivism, there will be additional national benefits.

Description of personnel

The **chief investigator** will:
- formulate, refine and periodically reassess the project's framework;
- develop detailed research plans, including methods of collecting information and selection of case studies;
- collect and verify information about methods of cyberactivism;
- choose or initiate cases for participant observation and participate in them;
- formulate and test new theory on the dynamics of cyberactivism;
- formulate and lead publishing strategies.

Within the basic structure of the project, the **senior research associate** will be expected, in collaboration with the chief investigator, to:
- search for documentation about methods of cyberactivism;
- contact individuals and groups to obtain information about methods of cyberactivism;
- compile material on case studies;
- participate in participant observation;
- classify the results according to the theoretical framework utilised;
- contribute to publications.

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1. Examples of material primarily with this orientation include Lynn Cherny and Elizabeth Reba Weise (eds.) *Wired Women: Gender and New Realities in Cyberspace* (Seattle: Seal Press, 1996); *Cybersociology,* Issue 5 ("Grassroots political activism online"), http://www.socio.demon.co.uk/magazine/5/issue5.html, April 1999; Ann De Vaney, Stephen Gance and Yan Ma (eds.), *Technology and Resistance: Digital Communications and New Coalitions around the World* (New York: Peter Lang, 2000); Steven Hick, Edward F. Halpin and Eric Hoskins (eds.), *Human Rights and the Internet* (London: Macmillan, 2000); Laurie A. Kutner, "Environmental activism and the Internet," *Electronic Green Journal,* Issue 12, 2000, http://egj.lib.uidaho.edu/egj12/kutner1.html; Liberty (ed.), *Liberating Cyberspace: Civil Liberties, Human Rights and the Internet* (London: Pluto, 1999); NetAction, "The Virtual Activist 2.0," http://www.netaction.org/training/; Clem White, *Environmental Activism and the Internet,* MA thesis (Massey University, New Zealand), http://arachna.co.nz/thesis/, 1999. A website was a key organising tool for the S11 protests in Melbourne.

2. Harry Cleaver, "The Zapatistas and the electronic fabric of struggle," http://www.eco.utexas.edu/faculty/Cleaver/zaps.html, November 1995; David Ronfeldt et al., *The Zapatista "Social Netwar" in Mexico* (Santa Monica, CA: Rand, 1998).

3. [Eric Goldstein], *The Internet in the Mideast and North Africa: Free Expression and Censorship* (New York: Human Rights Watch, 1999).

4. Steven Levy, *Crypto: Secrecy and Privacy in the New Code War* (Harmondsworth: Allen Lane The Penguin Press, 2001).

5. Stefan Wray, "Electronic civil disobedience and the World Wide Web of hacktivism: a mapping of extraparliamentarian direct action net politics," 1998, http://www.nyu.edu/projects/wray/wwwhack.html.

6. Actions against eToys were initiated by the group RTMark (http://rtmark.com/), which has also undertaken other forms of cyberactivism.

7. Nicky Hager, *Secret Power: New Zealand's Role in the International Spy Network* (Nelson, NZ: Craig Potton, 1996); Steve Wright, *An Appraisal of Technologies for Political Control* (Luxembourg: European Parliament, 1998).

8. Briefly, aggression refers to violent attack (especially military assault), repression to violence for social control and oppression to institutional lack of justice or freedom. Cyberactivism also can be used to promote "bad causes" such as racism. See for example Stacia Brown, "Virtual hate," *Sojourners,* Vol. 29, No. 5, Sept/Oct 2000, pp. 18-23, 65.

9. Gene Sharp, *The Politics of Nonviolent Action* (Boston: Porter Sargent, 1973).

10. Brian Martin, "Gene Sharp's theory of power," *Journal of Peace Research,* Vol. 26, No. 2, 1989, pp. 213-222. See also Kate McGuinness, "Gene Sharp's theory of power: a feminist critique of consent," *Journal of Peace Research,* Vol. 30, No. 1, 1993, pp. 101-115.

11. Brian Martin, 'Mobilizing against nuclear war', *Social Alternatives*, vol 1, nos 6-7, June 1980, pp. 6-11; Brian Martin, 'Grassroots action for peace', *Social Alternatives*, vol 3, no 1, October 1982, pp. 77-82 (also published in Swedish and Japanese); Brian Martin, *Uprooting War* (London: Freedom Press, 1984) (also published in Italian); Brian Martin, *Social Defence, Social Change* (London: Freedom Press, 1993); and others.

12. Brian Martin. 'Science, technology and nonviolent action: the case for a utopian dimension in the social analysis of science and technology,' *Social Studies of Science*, Vol. 27, No. 3, 1997, pp 439-463; Brian Martin, 'Social defence strategy: the role of technology,' *Journal of Peace Research,* Vol. 36, No. 5, 1999, pp. 535-552; Brian Martin, *Technology for Nonviolent Struggle* (London: War Resisters' International, 2001).

13. Brian Martin, Sharon Callaghan and Chris Fox, *Challenging Bureaucratic Elites* (Wollongong: Schweik Action Wollongong, 1997).

14. Brian Martin, 'Nonviolence versus capitalism,' *Gandhi Marg,* Vol. 21, No. 3, October-December 1999, pp. 283-312; Brian Martin, *Nonviolence Versus Capitalism* (London: War Resisters' International, 2001, in press).

15. Wendy Varney and Brian Martin, 'Net resistance, net benefits: opposing MAI,' *Social Alternatives,* Vol. 19, No. 1, January 2000, pp. 47-51; Wendy Varney and Brian Martin, 'Lessons from the 1991 Soviet coup,' *Peace Research,* Vol. 32, No. 1, February 2000, pp. 52-68; Brian Martin, Wendy Varney and Adrian Vickers, 'Political Jiu-Jitsu Against Indonesian Repression: Studying Lower Profile Nonviolent Resistance,' *Pacifica Review,* 2001, in press; Brian Martin and Wendy Varney, *Nonviolence Speaks: Communicating Against Repression* (Cresskill, NJ: Hampton Press, in press).

16. Jacki Quilty et al., *Capital Defence: Social Defence for Canberra* (Canberra: Canberra Peacemakers, 1986) (also published in Italian and Dutch); Alison Rawling et al., 'The Australian Post Office and social defence', *Nonviolence Today*, no 14, April-May 1990, pp. 6-8. Schweik Action Wollongong (Brian Martin, member), 'Telecommunications for nonviolent struggle,' *Civilian-Based Defense: News & Opinion*, Vol. 7, No. 6, August 1992, pp. 7-10.

17. Brian Martin, 'Defamation havens,' *First Monday: Peer Reviewed Journal on the Internet,* Vol. 5, No. 3, March 2000, http://firstmonday.org/issues/issue5_3/martin/index.html.

18. I have made this criticism myself. See for example Brian Martin, "Social defence: arguments and actions," in Shelley Anderson and Janet Larmore (eds), *Nonviolent Struggle and Social Defence* (London: War Resisters' International, 1991), pp. 81-141, at pp. 89-99.

19. In previous research involving net issues, a few respondents preferred to use encryption.

20. For example, Alain Touraine, *The Voice and the Eye: An Analysis of Social Movements* (Cambridge: Cambridge University Press, 1981); Yoland Wadsworth, *Do It Yourself Social Research* (Melbourne: Victorian Council of Social Service, 1984); William Foote Whyte (ed.), Participatory Action Research (Newbury Park, CA: Sage, 1991).

21. Lest this sound overly ambitious, it should be noted that several theoretical approaches in the nonviolence field plus half a dozen communication theory frameworks were explored in the current ARC project on communication technology for nonviolent struggle. This was possible since the focus of the research meant that only some aspects of each theory were relevant. For example, while semiotics has an enormous range of application, in relation to nonviolent action there is a very small literature and a limited number of applications.

22. These mimic two of the three volumes of Sharp's *The Politics of Nonviolent Action.*