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Communication

An effective military depends heavily on effective communication, including transmission of commands, coordination of actions, transmission of information about enemy activities and about the progress of battles, among others. To serve the needs of military communication, massive investments are made into research, development and production of communication systems. For example, specially designed satellites are used to collect information about enemy installations. Massive computer systems are used to decipher foreign and domestic telecommunications. Satellites are also used to detect enemy missile launches, and special facilities are ready to transmit orders to launch nuclear attacks. Military communications are designed to be highly secure and to enable transmission of commands even when some channels have been incapacitated.

Communication is even more central to nonviolent struggle, but the type of communication most useful for nonviolent struggle is quite different than for military purposes. In the military, the role of the commanding officer is central: that person must have reliable information and be able to issue commands. This explains why there is so much attention to maintaining secure communications to the commander-in-chief in the face of attack. Extraordinary efforts— bomb shelters, special telephones, personal guards—are used to protect commanders, especially in times of crisis. Ordinary soldiers are trained to obey, not to take independent initiatives. Soldiers who disobey orders are usually subject to severe penalties; in wartime, they may be executed.

In a nonviolent struggle, participation must be voluntary: there is no way to force people to join in. Therefore, the struggle cannot have commanders in the military sense, since obedience to orders cannot be enforced. A nonviolent struggle can, however, have leaders. Noted examples include Mohandas Gandhi, Martin Luther King, Jr. and Aung San Suu Kyi. In these and other cases, leaders have influence

through their example, intelligence, commitment and charisma. But it is not wise to depend too strongly on such individuals to provide guidance. Many nonviolence leaders take a front-line role, participating in civil disobedience and other confrontations with the opponent. They may be arrested, imprisoned or killed. In general, they are much more vulnerable than military commanders, who usually stay away from the fighting. Therefore, nonviolent activists must be prepared to continue the struggle effectively in the absence of their most experienced and knowledgeable members. All of this means that as many people as possible should be ready and able to analyse the situation, initiate action, make decisions and in general carry on the struggle.

For these reasons, nonviolent struggle is best served by a decentralised, interactive and cooperative system of communication, decision-making and action.[1] This provides a very different set of priorities for science and technology than military agendas.

The following sections examine a number of communication media: television, radio, cassettes, newspapers, leaflets and the underground press, telephone and fax, the post, conversations and meetings, and computer networks. In each case, I comment on the value of the medium for nonviolent struggle and on ways in which this value might be increased. When giving case studies, I try to provide some context for the role of communication technology which, in every case, is only one component of a complex struggle in which social factors are of central importance. The chapter concludes with a general assessment of the types of communication technology most likely to be useful for nonviolent struggle, drawing on theoretical considerations as well as the case studies.

Television

Television is an enormously powerful medium. Most people in western societies watch it for many hours each week. Furthermore, there is a great deal of trust in the image of reality presented on the TV screen, more than in newspapers for example.

There is very little opportunity for participation in the production of broadcast television. It is essentially an autocratic medium. A very few people make decisions about content, which is then transmitted to a large audience. Furthermore, the television image is quite an

artificial and manipulated production. Few people are aware of the tremendous effort that goes into shaping each moment on the screen. Producing a high-quality television programme requires a lot of skill, equipment and money. This means that experienced professionals produce most programmes, especially the ones that most people prefer to watch.

For these reasons, television is ideal for rulers. They can influence popular perceptions by appointing or controlling a small number of television executives and producers. Dictatorships are only willing to allow television that is under their control. It is no surprise, then, that one of the prime targets in military coups is television stations.[2] Precisely because it is an undemocratic medium, it is highly useful to aggressors. Hence, it is important to develop ways to subvert or disable it when a hostile takeover occurs. Many television journalists, producers and technicians are sympathetic to popular movements. If they are aware of methods for nonviolent struggle, they might well be willing to participate by hindering efforts by aggressors to control television and by enabling popular concerns to be broadcast.

Redesigning broadcast facilities and making advance preparations could aid the use (or interruption) of television in a nonviolent struggle. For example, broadcast facilities could be designed so that technicians, staff or even viewers could interrupt transmission in case of a hostile takeover. Some means would be necessary to prevent use of this facility in "normal" times, such as the need for a considerable number of people to enter codes. Broadcast facilities could be designed so that, in case of emergency, a special signal indicating a hostile takeover was transmitted along with the picture. Special tapes could be produced—dealing with methods of nonviolence, ways to undermine control of television by aggressors, etc.—and stored safely for transmission in case of emergency.

Heavy consumption of broadcast television makes a society more vulnerable to takeover. For long-term security based on nonviolent techniques, the role of television should be reduced. If most people are active transmitters rather than just receivers of messages, then there is less possibility for manipulation and central control.

Occasionally, television broadcasts inadvertently aid nonviolent struggle, as in East Germany. From 1945, East Germany was ruled by a communist dictatorship. Secret police monitored activity in all spheres of life. However, West German radio and television broad-

casts were readily received throughout East Germany, giving an attractive—indeed perhaps unrealistically attractive—picture of life under capitalism. In 1961, the border with West Germany was walled off to prevent emigration.

Under the Soviet Union's new policies in the late 1980s, there was no longer a guarantee of armed intervention to support client states in Eastern Europe. On 11 September 1989, Hungary opened its borders with Austria. East Germans, by going "on holiday" to Hungary, could escape to the west. As word spread, including via news on West German radio and television, the initial trickle of emigration became a torrent. At the same time, there were public rallies against the regime in East German cities. Initially attracting only a few people, in the space of weeks the rallies were attended by hundreds of thousands. News of the growing open dissent was again provided by West German mass media. In the face of massive emigration and enormous protests, East German leaders resigned. The regime collapsed in the face of nonviolent expression of opposition.[3]

If television is produced locally for small audiences, its vulnerability to takeover is reduced, especially if there are numerous independent channels. For the purposes of nonviolent resistance, a multitude of locally controlled broadcasts is the direction to go.[4] But the technical skills and costs to produce high quality programmes are significant obstacles to such a goal.

Radio

In an examination of nonviolent struggle, large and powerful radio stations with many listeners are similar to television stations. They are prime targets for an aggressor, since they can be controlled by a few people and have an enormous influence. A long-term goal in developing a social defence system should be to replace such radio stations by interactive communication media. In the meantime, preparations should be made to be able to broadcast resistance messages or, if necessary, shut down big stations in the event of a threat.

Looking over some of the historical instances of nonviolent struggle suggests a more positive role for radio. One case is the collapse of the Algerian generals' revolt in 1961. In Algeria, an armed struggle

for independence from France was waged from the mid 1950s. It was met by severe repression by French troops. French president Charles de Gaulle, seeing that independence for Algeria was inevitable, began negotiations with the independence movement. French generals in Algeria, bitterly opposed to this course of action, staged a coup on the night of 21-22 April 1961. There was even the possibility that they might lead an invasion of France.

Opposition to the coup was quickly demonstrated in France. There was a national one-hour strike and massive rallies. After vacillating a few days, de Gaulle made a passionate plea for troops to refuse to join the rebels. Meanwhile, in Algeria the rebelling generals failed to gain the support of the troops, many of whom were conscripts. Troops heard de Gaulle's broadcast on transistor radios that they had refused to turn in as instructed. Many soldiers just stayed in their barracks. Others reported for duty but purposely failed to carry it out. About one-third of the fighter aircraft were flown out of the country, never to return. The coup collapsed after four days without a shot being fired against it.[5]

The most prominent example showing the power of radio for nonviolent struggle is the Czechoslovak resistance to the Soviet-led invasion in 1968. During 1967 and 1968, communist rule in Czechoslovakia was rapidly liberalised, a process supported throughout the country. This was a severe threat to the Soviet rulers, who organised an invasion of the country in August. Military resistance would have been futile and there was no help from the West. Instead, there was a spontaneous nonviolent resistance to the invasion. People poured out onto the streets. They talked to the invading soldiers and quickly convinced many of them that the Czechoslovak cause was just.

The Czechoslovak military had set up a sophisticated radio network to be used in the event of a NATO invasion. It was used instead by citizens to broadcast messages of resistance, to warn about impending arrests, to counsel the use of nonviolent methods, to tell where troops were headed, and to call a meeting of the Czechoslovak communist party. It took a week before the radio resisters could be shut down. But the Soviets did not obtain their initial objective— setting up a puppet government—until April 1969.[6]

The Czechoslovak radio network had been set up by the Czechoslovak military to survive an invasion from Western Europe; this

network was put at the service of the people's nonviolent resistance, with spectacular results, especially given that the full story of the struggle could be heard on the airwaves in nearby countries. How is it that a technological system designed by the military for centralised control turned out to be so useful for nonviolent struggle?

The answer to this question is that a centralised communication system such as radio, television or the press can be useful to a nonviolent resistance when there is virtually complete support for the resistance and, of course, the system is controlled by the resistance. The Czechoslovak people were united, from workers to top party officials, against the Soviet invasion. Therefore, the radio system, in the hands of the resistance, was a powerful tool. It didn't matter too much which particular Czechoslovaks were making the broadcasts, because there was such widespread agreement about the aims and methods of resistance. For example, when the Soviets brought in jamming equipment by rail, this information was passed to the radio stations, which then broadcast an appeal to halt the rail shipment. Rail workers shunted the equipment onto a siding. It is obvious that if even a single person listening to the broadcasts had alerted the Soviets, they could have avoided this delay. Eventually they brought in jamming equipment by helicopter.

Although a centralised communication medium such as radio can be useful to a nonviolent resistance in these special circumstances, the technology of electronic broadcast remains a vulnerability for the resistance. Once the Soviets took over the Czechoslovak radio network, this brought the active, public phase of the nonviolent resistance to a rapid end. The occasional value of central radio broadcasts to a resistance can be misleading about the general value of radio, which is likely to be of more value to an aggressor.

The strengths and limitations of radio are also suggested by the long history of clandestine radio.[7] In countries where governments control all mass communication, it is commonplace for dissident groups to set up their own radio stations, sometimes broadcasting from a nearby country or sometimes from secret—and moveable—locations within the country. Clandestine radio of this sort is an indication of the lack of free communication. But there are many more clandestine radio stations run by governments, usually by spy agencies. Many of these are "black" stations, pretending to be from a resistance movement and aiming to destabilise a government. This

means that a large proportion of clandestine broadcasting is disinformation. Much more can be said about clandestine radio, and there are some fascinating stories. The important point here concerns radio stations: sometimes they can be useful for a nonviolent resistance, but often they seem of greater use to powerful groups seeking to manipulate public opinion rather than respond to it.

Big radio—large, powerful stations with many listeners—is only one sort of radio. There are also a number of other possibilities. Community radio, in which a station is run with a great deal of participation from local people, and in which the power and range of the broadcast is limited, is much more suited to a resistance.[8] If a city has thousands of community radio stations rather than a dozen dominant stations, it is much better situated to resist a takeover. The greater the diversity of stations, the more likelihood that some of them will be willing to take a stand.

Even more valuable for nonviolent struggle are radio systems that are cheaper and that transmit to only a few people. Citizens band or CB radio is mainly used for person-to-person communication, and is ideal. Even more valuable is short-wave radio, since it can be received thousands of kilometres away. It would be impossible to shut down communication out of a country if every household had a short-wave radio, supplemented by many "public short-waves," namely short-wave radios available for anyone to use, like public telephones.

Short-wave radio was important in the resistance to the Fiji coups in 1987. Fiji became independent of Britain in 1970. The Alliance Party, led by Ratu Kamisese Mara, controlled parliament until 1987. In that year, a coalition of the National Federation Party and the newly formed Labour Party won the election. Six weeks later, there was a military coup led by Lieutenant Colonel Sitiveni Rabuka. The coup was justified by the false claim that the rights of the majority Melanesian Fijians were under threat; the real effect of the coup was to check the challenge to the chiefs of Eastern Fiji who had exercised power via the Alliance Party. But by using the rhetoric of ethnic problems, Rabuka was able to justify the coup in the eyes of many Fijians and outsiders.

Censorship of the media within Fiji was imposed. However, since Fiji is composed of many islands, short-wave radio is widely used and, after the coup, provided direct access to foreign news. In the complicated political situation after the coup, the loyalties of the Fijian

people, and also of governments and people overseas, were wooed. For example, Australian trade unions banned the loading or unloading of ships going to or from Fiji. The Rabuka regime applied pressure on the Fiji trade union leaders to say that their rights were protected; after a few assurances were provided, the Australian bans were suspended. Meanwhile, Fiji Labour Party leaders tried to mobilise support from other governments, to little avail.[9]

One potential limitation of radio is that it is possible for anyone to listen in. Therefore, using short-wave radio to send a message could lead to the sender being tracked down and arrested. But this is more likely if only a few people have access to short-wave transmitters. The more people who have access and skills to use the technology, the less likely anyone is to be targeted. The introduction of public short-waves would reduce the risk still further.

Even better protection is possible using packet radio. A computer is attached to a radio transmitter. A message is typed into the computer, which is then transmitted in digital form to a receiver. No one can simply "listen in." To decipher the message, a suitable computer programme would be required. Even greater security would be provided by putting the message into code. The packet radio transmission can be sent up to a ham radio satellite, which saves the message and transmits it later, perhaps halfway around the world. Packet radio has enormous potential value to a nonviolent struggle.

One other vulnerability of radio is electricity. All large transmitters and most small transmitters and receivers depend on electricity, usually delivered through the grid. For the smaller systems, this vulnerability can be easily reduced. Electricity can be provided by generators—such as an automobile engine—or batteries. For example, a laptop computer and transmitter for packet radio can easily run on batteries. There is also the possibility of radios running on very tiny amounts of power, that can be supplied by batteries, solar energy, or just a wind-up spring such as for a manual alarm clock.[10] In the 1960s, Victor Papanek and Richard Seeger designed a cheap (9 cent) radio receiver for the Third World, based on a used juice can and parafin wax.[11]

In summary, there are a number of ways to make radio facilities more useful to nonviolent struggle. As with television, radio broadcast facilities could be designed so that technicians, staff or even viewers could interrupt transmission in case of a hostile takeover. Broadcast

facilities could be designed so that, in case of emergency, a special signal was transmitted along with the normal signal indicating a hostile takeover. Special tapes could be produced—dealing with methods of nonviolence, ways to undermine control of television by aggressors, etc.—and stored safely for transmission in case of emergency. Information and kits for building small radio transmitters and amplifiers can be disseminated. Cheap, simple-to-use, durable and reliable CB and short-wave radios could be designed and mass produced. The short-wave radios in particular could be designed for smuggling into countries with repressive governments. Encryption for person-to-person radio transmissions can be developed.

Cassettes

Use of audio and video cassettes creates less of a vulnerability than broadcast radio and television, since people use different cassettes. Cassettes are similar to books, in that a relatively few people produce them, but there is a considerable diversity and lack of central control over producing them. With inexpensive video cameras, it is now possible for many more people to produce video cassettes.

Audio cassettes played a role in the Iranian revolution of 1978-79. The Shah of Iran began his rule in 1953. His regime seemed invincible. With enormous oil revenues, he created a massive military machine. Secret police terrorized the population through torture and killings. The regime was actively supported by the United States government and was not opposed by the governments of Israel, the Soviet Union or most Arab countries. This apparently overwhelmingly powerful government was brought down by mass nonviolent action, triggered by religious opponents. The speeches of Ayatollah Khomeini, in exile, were circulated on cassette tapes. Funerals, held forty days after deaths, became protests. When police opened fire and killed mourners, further funerals were held. Opponents burned pictures of the Shah in front of spy cameras of the secret police. Tens of thousands of nonviolent demonstrators were shot dead by troops. Eventually sections of the military defected, and the regime quickly collapsed.[12] (It should be said that although the Shah's regime was toppled largely by nonviolent methods, the successor theocratic regime led by Khomeini was also highly repressive.)

In 1991, a video cassette, combined with television, helped expose Indonesian atrocities in East Timor. The former Portuguese colony of East Timor was invaded and occupied by the Indonesian military regime in 1975. There was continued resistance to the occupiers, both nonviolent civilian resistance and an armed guerrilla struggle. Indonesian troops were highly brutal. As well as torture and killings of civilians, the search and destroy missions against the guerrillas led to widespread starvation. The United Nations condemned the invasion and occupation, but never took any action against them.

Indonesian authorities controlled almost all communication channels. News of resistance and atrocities against the civilian population only reached the outside world via travelers or emigrés. A short-wave transmitter in northern Australia, used to communicate with the East Timorese guerrillas, was shut down by the Australian government.

In November 1991, foreign journalists observed a massacre of hundreds of East Timorese engaged in a nonviolent protest in Dili, the capital of East Timor. One of the journalists, British film-maker Max Stahl, recorded the events on videotape, which was smuggled out of the country. This documentation caused an international scandal. Although there had been many previous massacres witnessed by East Timorese who later left the country, these did not lead to much publicity, partly because of categorical denials by Indonesian authorities. It was the testimony of foreign, independent journalists and of videotape which turned the 1991 Dili massacre into a public relations disaster for the Indonesian occupiers.[13]

Newspapers

Large daily newspapers are enormously influential. Authoritarian governments normally control newspapers directly or subject them to censorship. This is illustrated by the case of the Emergency in India. The Indian government led by Indira Gandhi was widely seen as corrupt and unresponsive. A mass movement developed around the popular figure of Jayaprakesh Narayan, and this appeared to provide a political threat to the government. On 26 June 1975, Indira Gandhi declared an Emergency. Thousands of people were imprisoned, parliament was muzzled, and the press was censored. For the first few days, the electricity supply to key newspapers was cut off.

Financial pressures were applied to those that refused to toe the government's line.

Control of information was a key feature of the Emergency. There was enormous resistance to the government, but groups in different parts of the country knew little of each other. Major demonstrations, with up to half a million people, were not reported and hence unknown elsewhere. Some newspapers capitulated quickly to the censorship requirements, whereas others resisted in various ways. The international press was a key force of opposition; correspondents found innovative ways of getting around censorship. When foreign dignitaries refused to visit India, this hurt the regime; visits by British political figures Margaret Thatcher and Michael Foot were used for propaganda purposes by the regime.

In 1977, Mrs Gandhi called elections, perhaps believing her own government's censorship-created propaganda about her support. In spite of continued (though relaxed) censorship, the opposition Janata Party was elected. Thus the Emergency came to an end.[14]

Because large newspapers are so easily controlled by a few owners and editors, they are not a good communication medium for a social defence system. In the long term, it would be better to aim at systems of dispersed publication. For example, wire service stories might be directly received, at low cost, in numerous small communities. There, any interested person could select a bundle of stories, compile and edit them if necessary, and make them available to others—in printed or electronic form. Thus there might be many thousands of "editors" from whom a person could select. As well, the skills required would be made straightforward enough so that new people could step in without too much trouble. With such a system, an aggressor could not easily take over the press. It is also necessary for wire services to be diversified. At the moment, four international services provide most stories published by the western press. If, instead, there were thousands of small international services, control over the orientation of stories, by whatever means, would be much more difficult.

However, large newspapers will not be abandoned or replaced easily or quickly, so in the meantime it would be useful to have ways to resist aggressors. Printing presses could be designed so that they could be shut down by operators in the face of a takeover and so that a special symbol is printed on every page whenever the press is used against the wishes of the editors and printers. Wire service terminals

could be designed so that messages go automatically to a range of other locations.

Leaflets and the underground press

It is easy for an aggressor to take over a few large printing presses, because only a few people are required at crucial locations in the process. By contrast, small local means for printing leaflets, posters and newsletters are difficult to control. Anyone with a microcomputer and printer can produce high-quality leaflets quickly and easily. The photocopier is even more powerful. A handwritten notice can be reproduced in the hundreds or thousands.

The power of dissident publications in the resistance to the Nazis in occupied Europe is described by Jacques Semelin:

> The central role of the underground press in the general development of institutional resistance must be emphasized. The existence of the underground press must not be considered as just one element among others in resisting Nazism. It does not belong in the same category as sabotage, intelligence activities, protest marches, and so on; nor was the underground press a simple instrument of counter-propaganda in the psychological war carried on by rival powers. This press was the central axis around which internal resistance movements could organize and develop. It was as if the resistance needed an initial ideological basis in order to develop combat structures. Early resisters therefore distributed pamphlets, bulletins, and various newspapers to formulate the values for which they were fighting Nazism. The underground press operated out of conviction rather than from the desire to disseminate information. Its function was not only to address those whom it wanted to rally to its cause, but even more to convince and assert a collective self on the basis of which the new ideological order—that of the occupation—could be rejected.[15]

One vulnerability of small printing operations is electricity. One solution is to have reserve power through generators. Another is manual typewriters and hand-operated copiers using specially-prepared originals, which were quite common until the 1980s.

In rich countries, photocopiers are found in almost every office and in a number of homes. Their role as a basis for community resistance to aggression could be fostered by setting up communal printing facilities in every street or apartment block, with access to a number

of means of producing and copying leaflets and newsletters. The more people who have used equipment to produce information for local use, the more difficult it becomes for any aggressor to control communication centrally.

In highly authoritarian states, such as the old Soviet Union, freely available photocopying was a mortal danger to the state. Guards were posted over photocopiers to ensure that no unauthorised copying occurred. This sort of control inhibited free communication and consequently prevented development in a number of fields, from science to the economy. By making production and distribution of information a part of everyday life—whether to produce a leaflet for a political meeting, a sports event or a sale of goods—the community is very well prepared to continue communicating in a crisis.

To aid nonviolent struggle, cheap, durable and reliable copiers could be designed for use in poor countries. In the case of countries under repressive rule, such copiers could be smuggled into the country in various ways, by tourists or through commercial trade. Copiers could be developed that can be operated even without mains electricity. This might be through batteries or through an optional muscle-powered system.

Some governments and companies, concerned about the leaking of vital documents, have sought the development and introduction of photocopiers that leave some mark on each copied page indicating its source. Generally speaking, such technology is far more useful to an aggressor than to the nonviolent resistance.

Telephone and fax

The telephone is, in many respects, an ideal communication medium for nonviolent struggle. It cannot be used by a single person to send messages to a large number of passive recipients, but rather it is most suited for conversations between two people. True, it's possible to have conference calls, but these become unwieldly with more than a handful of people.

Since telephone is so useful for communication in a nonviolent struggle, the general aim should be to keep the system going. Aggressors are unlikely to shut down an entire telephone system because society depends on it so much—including the aggressors. There are

some important vulnerabilities in telephone systems that deserve attention.

First, it is possible to cut off certain phones, either an individual phone or all those in a whole building or suburb. Aggressors might want to cut off telephones used by the resistance, and the resistance might want to cut off telephones used by the aggressors. In most cases, it would not be so difficult to get around this problem: people can find other phones. Furthermore, with mobile phones the lines become less important. Generally, resisters seek to keep open lines of communication, including communication with the aggressor, so it is not desirable to cut off telephones. It would be important to keep in contact with technicians to encourage them to oppose attempts to shut down phones.

Second, and more important, is the possibility of telephone surveillance.[16] This is quite easy to do, especially with new electronic switching systems. Surveillance of conversations, however it is done, is labour-intensive: someone has to listen to the conversations long enough to make sense of them. This applies even when there are computer systems with voice recognition that are programmed to keep track of conversations only when certain key words are mentioned. Furthermore, the system can be easily foiled if people know the key words and agree not to use them—or to use them all the time!—in their conversations.

If there are only a few resisters, surveillance can be used to keep track of them. If, on the other hand, large numbers of people join the resistance, mass surveillance becomes impossible.

Surveillance becomes even less useful if the resistance operates without secrecy, as many nonviolent activists recommend. If rallies and civil disobedience actions are announced to the authorities beforehand, surveillance is rather pointless.

Nevertheless, telephone surveillance, even when it is infrequent and gains little useful information, is very important psychologically. Many people are frightened enough to reduce their activism. Therefore, antisurveillance measures are important. Cordless and cellular phones should be avoided, since their transmissions can easily be picked up by radio scanners, as some public figures have discovered to their embarrassment.[17] One easy method is to use other telephones, especially public telephones. Another is to use the "call forward"

mechanism on some phones, to bounce a call to a different phone and thus hide the location or identity of the caller.

As well as such practical on-the-spot techniques, there are a number of technological approaches worthy of investigation. Secure methods of putting telephone messages into code—encryption— would make surveillance more difficult. Telephone systems could be designed so that taps are impossible without alerting the callers. They might also be designed so that, in an emergency, no single person could cut off phones. (In ordinary times, technicians often need to cut off phones for quite legitimate purposes.)

Another issue is caller number identification: the ability of the person called to see and capture electronically the phone number of the caller. Arguably, in some cases in an emergency it is useful for people to be able to make anonymous phone calls. On the other hand, the aggressor may try to disrupt the resistance by feeding lots of misleading information into the resistance networks, in which case caller number identification would be useful to the resistance. More investigation and the running of simulations would help in deciding in what circumstances caller number identification would be an advantage for a nonviolent resistance.[18]

Fax machines run on telephone lines, but are different in two ways: they transmit a printed document rather than sounds, and the recipient does not need to be there for the transmission to occur. Fax is a decentralised communication system and has many similarities to both the post and computer networks. Generally speaking, fax is quite useful to the resistance. "Secure" transmissions—sending a fax that can only be printed when the receiver puts in a code—are now possible with some fax machines. The main improvement for fax would be encryption, so that messages cannot be intercepted en route.

The post

The postal system is a global communication network which is generally quite useful for nonviolent activists. A government seeking to monitor the post cannot hope to open and inspect every piece of mail without large amounts of labour and considerable disruption of everyday life. Therefore the usual procedure is selective monitoring of mail: intercepting, reading and sometimes confiscating mail sent by

or to particular targeted individuals or organisations. In order to achieve this, it is helpful for all mail in a country or region to be routed through a single central post office.

To get around monitoring of the post mostly requires organisational rather than technological means. The more that collection, sorting and distribution of mail are done locally, the more difficult it is for any group to monitor or intercept the post. Also, the more decentralised are the authority structures within the postal service, the more difficult it is for an aggressor to take control using only a few trusted staff. If there are several, rather than just one, postal services—such as competing private carriers—then it becomes more difficult to take central control.

It is significant in this regard that most governments have tried to monopolise postal delivery by outlawing, heavily taxing or tightly regulating private delivery services. In the historical development of the post, this was done in order to raise revenue and to prevent enemies from communicating without the ruler's knowledge.[19] This shows that secure and reliable postal delivery—not easily monitored centrally—is of great value to nonviolent opponents of tyranny.

More fundamental than formal ownership of postal services is the attitude of postal workers. If they are sympathetic to the resistance, then they can ensure that important letters or parcels are delivered without inspection. They are also in a good position to deliver messages from the resistance along their delivery routes. It's also possible for the resistance to avoid interception by using false names and addresses, putting one letter inside another, and various other techniques.

There are a few technological systems that are relevant. One is automatic sorting of letters by postcode. If this is used in some way to help monitor the post, the machines could easily be disabled. In any case, it would be an interesting problem to design such equipment so that it provided no advantage for any group wishing to monitor the post. Another issue is the surveillance of postal workers using video-cameras and other apparatus. Such surveillance could be used by agents of an aggressor to detect postal workers supporting the resistance. For the purposes of nonviolent resistance, it would be best to get rid of technology that puts workers under surveillance.

Conversations and meetings

In spite of all the technological advances, face-to-face conversations remain one of the very best means of communication. Also quite useful are meetings, whether this involves 3, 30 or 300 people. The smaller the number of people in a meeting, generally, the more each person can contribute and the fewer opportunities there are for manipulation or domination. It may be worthwhile for an aggressor to send observers or arrange for surveillance of mass meetings of hundreds or thousands of people. But monitoring of hundreds or thousands of small meetings becomes impossible.

It might seem that technology is largely irrelevant to face-to-face conversations, but this is not so. Modern technology has greatly increased the capacity for surveillance, for example by electronic listening devices.[20] Investigations are needed into convenient, low-cost ways of avoiding or foiling such surveillance.

Computer networks

Computer networks are a powerful means of communication most suitable for nonviolent struggle.[21] Such networks are interactive and cannot easily be dominated by a small number of users. Information on the network is transmitted by telephone lines and, indeed, computer networks are very similar to telephone systems. There are several major differences. First, computer networks deal mainly with text rather than voice. Second, it is much easier to save, copy and distribute text via computer networks than via phone. Third, the skills and investment required to become a skilled user of computer networks are much greater than to become a proficient user of the telephone.

The first two factors generally make computer networks a more powerful means of communication, from the point of view of nonviolent struggle, than the telephone. The third factor considerably reduces its value. As the price of computers declines and the software for hooking into networks becomes more user-friendly, computer networks will become more and more valuable as a people's communication technology.

Computer networks—collectively called "cyberspace"—will undoubtedly play an increasing role in communication in crisis situa-

tions. They have been used to send alerts about human rights violations, to mobilise opposition to vested interests and to provide information to activists opposing repressive regimes. For example, computer networks have been used for communication by the peace movement in former Yugoslavia,[22] to resist the 1991 Soviet coup[23] and to organise publicity about persecution of minority groups in Iran.

Computer networks have several vulnerabilities, again similar to the telephone. If the telephone system is shut down, so is most computer communication. But this is not so likely because, like the telephone system, computer networks are used more and more for functions such as commercial transactions. Therefore, anyone who shut down the networks would risk alienating a large proportion of the population, including powerful organisations.

Another key problem with computer networks is surveillance, namely logging into particular accounts or intercepting particular electronic messages. The system administrator in charge of local networks has the capacity to monitor or cut off the accounts of individuals. Hackers are able to surreptitiously enter other people's computer files or to read their messages.[24] There is also the less elegant method of tapping telephone lines and deciphering computer-generated data that is being transmitted.

System administrators are key individuals in computer networks. If they support the resistance, then the networks become a powerful tool for resistance. But system administrators could also serve the aggressor, whether as a result of sympathy, bribery or intimidation, for example by monitoring messages from certain individuals or by closing down their accounts. Therefore, it would be useful to design networks so that the power of system administrators is limited, either permanently or just in emergencies.

Another solution to the problem of surveillance is encryption of messages, namely putting them into code. There are various ways to do this, including some extremely powerful encryption techniques that also give a highly reliable way of verifying the sender's identity: an electronic signature.

There was an enormous controversy over the US government's promotion of a system of encryption designed by the National Security Agency (NSA), a multi-billion dollar spying enterprise focussing on electronic communication. The NSA's proposed encryp-

tion system—commonly associated with one of its components, the Clipper Chip—relied on a system of coding that could be deciphered using information obtained from two specified organisations, given the permission of legal authorities. Some sceptics, though, did not trust the claims of the NSA, and believed that the agency designed the algorithm and Clipper Chip so that all messages could be read by the NSA.[25]

Generally speaking, secure communication is valuable to a nonviolent resistance, which therefore would be better served by unbreakable encryption. The most popular system outside the government is called Pretty Good Privacy or PGP.[26] It reportedly has been used by guerrillas in Burma and dissidents in Russia.

There may seem to be some contradiction here, in that many proponents of nonviolence argue against secrecy. For example, they inform police and other relevant authorities about details of their planned nonviolent actions. They argue that openness reduces fear and hence the possibility of violence by authorities, and that this approach is the best way to win more supporters.

However, this opposition to secrecy is quite compatible with support for confidentiality and privacy in other circumstances. The point is that the nonviolent activists choose to communicate their plans for rallies, strikes or occupations to others. This is quite different from eavesdropping on friends having a personal conversation. Encryption of telephone or computer communication is roughly similar to ensuring the confidentiality of a private talk.

There are quite a number of developments that would make computer networks even more effective for nonviolent struggle. Computer systems could be designed so that certain powers of the system administrator are overruled when a certain percentage of users enter a designated command designed for emergencies. Computer systems designed for business or scientific purposes could be adapted so that, in the event of emergency, resistance messages could be hidden within the usual data. Principles and methods of nonviolent resistance on computer networks can be developed.

Computer networks can be prepared for resistance. For example, important data can be stored in remote locations. Names and addresses of key activists can be protected, for example by being embedded in larger lists. Contingency plans to use other computers, other accounts and other networks can be prepared. Emergency

messages and sequences of action can be prepared. Simulations of resistance communication in emergencies can be run, and the results used to redesign systems for more effective operation in such situations.

Communication in nonviolent action

The acknowledged pioneer of nonviolent action was Mohandas Gandhi. Gandhi was not a systematic theorist, but rather developed his ideas in conjunction with his campaigns, first in South Africa and then in India. Gandhi's writings and practice provided much of the inspiration for later development of nonviolent action theory and practice.[27]

Gandhi believed in the power of truth.[28] He felt that truth could communicate directly to the heart of an oppressor. He called his method of struggle "satyagraha," which literally means truth-force but can also be translated as meaning nonviolent action.[29]

It is possible to go so far as to argue that the essence of satyagraha is communication: whereas violence, as a form of communication, is a monologue, nonviolence tries to turn a conflict situation into a dialogue.[30] Although this is only one interpretation of satyagraha, it highlights the close connection between communication and nonviolence. The connection can also be argued directly in terms of a Gandhian theory of nonviolent communication.[31]

For Gandhi, truth was not just a linguistic construction. It had to be present in the lives of its advocates, through their humility, compassion, good works and willingness to suffer for the cause of justice. The key issue here is the power of such truth, or truth-in-life, to achieve a better society.

How can such truth be communicated? In his campaigns, Gandhi was always careful to first try conventional channels, such as making polite requests of officials to change their policies which were causing suffering or lack of freedom. If this did not work, he would then, quite openly, initiate a campaign utilising nonviolent methods, such as marches, boycotts, or undertaking illegal activities. These methods might be interpreted as a form of coercion, albeit nonviolent coercion. Gandhi, though, conceived nonviolent action as a method of conversion, of "melting the heart" of the opponent. When the oppressors saw the suffering that was willingly accepted by the

nonviolent activists—known as satyagrahis—they would recognise the satyagrahis' commitment to their cause and be converted to it.[32]

This was Gandhi's theory, but his campaigns did not always work this way in practice. Thomas Weber analysed the 1930 "salt satyagraha" to see if suffering led to conversion as Gandhi claimed.[33] In this campaign, Indians challenged the British colonial regime's monopoly on salt manufacture by marching to Dharasana to take possession of the salt works there. As they approached the salt works and attempted to enter, they were arrested or beaten. Over a period of days, hundreds of nonviolent activists approached the salt works, and were met by force. The beatings were so bad that hundreds were taken to the hospital, most with serious injuries. Far from softening the hearts of the lathi-wielding police, the brutality became worse. However, the colonial government denied any violence by the police, saying that the protesters were faking their injuries. Weber concludes that direct conversion of opponents was a failure.

Nevertheless, the campaign was a success because of a different process of conversion. Observing the operation was a journalist for the United Press in the US, Webb Miller. His moving reports reached an enormous international audience, challenging the disinformation of the official reports. Public opinion in many countries was turned against the British role in India. It was this conversion process that helped achieve India's independence.

Johan Galtung's idea of a "great chain of nonviolence" is quite relevant in this connection,[34] as noted by Weber. Galtung argues that nonviolence can work to persuade opponents via intermediaries: a chain of people, each similar enough in social location, who communicate the social concerns. In the case of the salt satyagraha, Webb Miller provided a link between the satyagrahis and white westerners; in turn, some of the latter had links with British colonial decision-makers.

An interesting connection can be made between Gandhi's idea of satyagraha and Jürgen Habermas's theory of communicative action, in particular his "ideal speech situation."[35] Habermas's ideal speech situation builds on the capacity of all humans to communicate, to enter dialogue and reach intersubjective agreement (rather than individually find truth in nature). In other words, truth for Habermas is obtained through rational discussion in the absence of domination. This theory, though, provides little guidance for

communication in situations of unequal power. The confrontation between the satyagrahis and the police at Dharasana in 1930 was very far from an ideal speech situation.

However, the relationship between the satyagrahis and Webb Miller was closer to an ideal speech situation: neither had significant power over the other. The cultural gap between Miller and his western readers was far less than between the satyagrahis and the British colonial rulers. So it might be said that Galtung's great chain of nonviolence operates in practice like a chain of "reasonable speech situations" which, while certainly not ideal, provide better prospects for the sharing and creating of truths than the two end points of the chain.

Thus, Gandhi's idea that the willing suffering of nonviolent activists can communicate direct to the hearts of oppressors requires considerable modification. Communication of truth works better when there is no power imbalance, and this means that communication via intermediaries is often more effective than direct communication between unequals.

Assessment of communication technologies

These considerations suggest that communication technologies that foster or enable dialogue are more useful for the purposes of nonviolent action than those that inhibit dialogue. If one side in a dispute controls television and radio stations, there is no dialogue. Even if a substantial proportion of the population refuses to listen, the communication imbalance continues. There is little or no opportunity for listeners to present their points of view. It is not surprising, therefore, that dictatorships normally exercise complete control over one-directional electronic communication media. The value of radio and television to oppressors is highlighted by the fact that they are often the first targets in military coups.

The same considerations apply to communication among those who resist an oppressor. With a one-directional means of communication, resistance leaders can certainly get their messages to supporters with minimum effort—but these leaders become quite vulnerable to both repression and cooption. Even more importantly, without dialogue, the resistance cannot take into account the views of current and possible supporters, and cannot foster the capacities of others to use skills and take initiatives.

If the only means of communication in a society were interactive, network systems—face-to-face discussion, telephone, short-wave and CB radio, and computer networks—then an aggressor or oppressor would have the greatest difficulty in controlling the population. Network communication technologies do not by themselves eliminate hierarchy and exploitation, but they do aid resistance. The telephone can be used to issue orders, but it is far too labour-intensive for controlling large populations. Also, the subordinate can always talk back.

James C. Scott's idea of public and hidden transcripts is relevant here.[36] In situations of domination, such as slavery, aristocrat-peasant relations and landlord-tenant relations, the public record or transcript tells the story of the dominators. There is also a hidden transcript in which the side of the oppressed is revealed. According to Scott, the oppressed are well aware of their oppression: the concept of false consciousness is false. The hidden transcript can be a rehearsal for a challenge to powerholders, a challenge that can develop quickly when the mechanisms holding back resistance are weakened.

In the modern world, mass media are a form of public transcript. The mass media under dictatorships omit the perspective of the oppressed, who therefore must use other media—covert discussions, graffiti, leaflets and clandestine radio, as well as symbolic communication at funerals, concerts and other "legitimate" events—to share experiences. This also applies to some aspects of life in societies with representative government: for example, police treatment of stigmatised minorities, or oppression and alienation in working life, are seldom portrayed in the mass media. Thus, mass media are useful tools for dominators, whereas network media are useful for developing the voices of the weak.

Galtung's "great chain of nonviolence" provides another way to explain the advantage of network media for nonviolent resistance. With mass media, the chance of a chain of reasonable speech situations between the oppressed and the oppressors is limited. With network media, the chance is increased, and the denser the inter-linkings of the communication network, the greater the ease of dialogical communication.

Several of the examples given in this chapter support the conclusion that mass media are selectively useful for oppressors. For example, control over the mass media was crucial to government and

military control in the shutting down and censoring of the press during the Emergency in India, in the cutting off of electronic communication during the military coup in Poland and throughout the continuing occupation of East Timor. Similarly, control over the mass media was a crucial factor in the Fiji coups and in the Shah's Iran. But in these two cases the opposition had access to alternative sources of information, via short-wave radio in Fiji and cassette tapes in Iran.

On the other hand, some of the cases seem to contradict the idea that mass media are selectively useful for oppressors. Radio broadcasts were vital to nonviolent resistance in the Algerian generals' revolt, the Czechoslovak resistance to the Warsaw Pact invasion, and the collapse of the East German communist regime. In each of these cases, a one-directional medium served a nonviolent resistance to repression. What made this possible was a short-term congruence between those who controlled the medium and a dialogue-based mass movement. French conscripts in Algeria, through their own experiences and interactions, were already predisposed to refuse cooperation. De Gaulle's broadcast made them aware that they were supported by the French government and the French people.

In the case of Czechoslovakia, the liberalisation of communist rule during 1968 was a mass-based process that challenged the normal control—including control of the media—by those following the Soviet line. The Czechoslovak radio system was temporarily a powerful force for the nonviolent resisters, in a situation where there was a high intensity of face-to-face dialogue, both among the population and between Czechoslovaks and invading soldiers. It is also worth noting that capture of the radio network by the Soviet army decisively ended the active phase of the resistance.

In East Germany in 1989, the Communist Party retained control over the local mass media. West German radio and television provided a window into alternative views, including news of events in East Germany itself, that fed into the protest by East Germans, which itself was based on a commonality of experience.

These cases suggest that one-directional media can sometimes be useful to a nonviolent movement against repression, but only under certain conditions. There must be a strong underlying unity of purpose, itself the outgrowth of common experience and dialogue. Also, the one-directional media are used in a challenging mode,

against an even more pervasive or powerful system of persuasion or control.

This conclusion can be summarised by saying that one-directional media are selectively useful for oppression and network media are selectively useful for resistance to oppression.[37] Technologies are not neutral, but nor are they tied to certain uses only. Technologies are stamped by the social groups and goals involved in their creation and application. But the uses of technologies are not fixed by their creators: users can adapt them to some extent. For example, the US military originally set up the computer network that later evolved into the Internet which has become one of the most participatory media available.

Generally speaking, the greater the opportunity for users to choose, use and modify the technology, the greater its potential for fostering popular participation and the more likely it is to be useful for nonviolent action against repression. Interactive network media can aid nonviolent action most of all when they are generally accessible, easy to use, difficult for dominators to control, and when they encourage widespread development of appropriate skills.

Notes

1. Andreas Speck notes that this same list of values—decentralised, interactive, cooperative—can also be obtained by starting from the values of a just society.

2. T. E. Finer, *The Man on Horseback: The Role of the Military in Politics* (London: Pall Mall Press, 1962); D. J. Goodspeed, *The Conspirators: A Study in the Coup d'État* (London: Macmillan, 1962); Edward Luttwak, *Coup d'État: A Practical Handbook* (London: Allen Lane The Penguin Press, 1968), pp. 111-116.

3. Roland Bleiker, *Nonviolent Struggle and the Revolution in East Germany* (Cambridge, MA: Albert Einstein Institution, 1993). Andreas Speck points out that there was also a negative side to the role of West German television. Many leading East German activists wanted to turn East German into a democracy, even a genuine people's democracy (as opposed to a dictatorship calling itself a people's democracy). However, West German television did not broadcast the ideas of this East German opposition, instead pushing for German unification under the West German model.

4. Tony Dowmunt (ed.), *Channels of Resistance: Global Television and Local Empowerment* (London: British Film Institute in association with Channel Four Television, 1993) provides a number of useful case studies.

5. Adam Roberts, "Civil resistance to military coups," *Journal of Peace Research*, Vol. 12, 1975, pp. 19-36.

6. Royal D. Hutchinson, *Czechoslovakia 1968: The Radio and the Resistance* (Copenhagen: Institute for Peace and Conflict Research, 1969); H. Gordon Skilling, *Czechoslovakia's Interrupted Revolution* (Princeton, NJ: Princeton University Press, 1976); Joseph Wechsberg, *The Voices* (Garden City, NY: Doubleday, 1969); Philip Windsor and Adam Roberts, *Czechoslovakia 1968: Reform, Repression and Resistance* (London: Chatto and Windus, 1969).

7. Lawrence C. Soley and John S. Nichols, *Clandestine Radio Broadcasting: A Study of Revolutionary and Counterrevolutionary Electronic Communication* (New York: Praeger, 1987).

8. Bruce Girard (ed.), *A Passion for Radio: Radio Waves and Community* (Montreal: Black Rose Books, 1992); Ron Sakolsky and Stephen Dunifer (eds.), *Seizing the Airwaves: A Free Radio Handbook* (Edinburgh: AK Press, 1998); Lawrence Soley, *Free Radio: Electronic Civil Disobedience* (Boulder, CO: Westview, 1999).

9. Brian Martin, "Lessons in nonviolence from the Fiji coups," *Gandhi Marg*, Vol. 10, No. 6, September 1988, pp. 326-339.

10. On micropower radio, see Ron Sakolsky and Stephen Dunifer (eds.), *Seizing the Airwaves: A Free Radio Handbook* (Edinburgh: AK Press, 1998); Lawrence Soley, *Free Radio: Electronic Civil Disobedience* (Boulder, CO: Westview, 1999).

11. Victor Papanek, *Design for the Real World: Human Ecology and Social Change* (London: Thames and Hudson, 1985, second edition), pp. 224-227.

12. David H. Albert (ed.), *Tell the American People: Perspectives on the Iranian Revolution* (Philadelphia: Movement for a New Society, 1980); F. Hoveyda, *The Fall of the Shah* (London: Weidenfeld and Nicolson, 1980).

13. Andrew McMillan, *Death in Dili* (Sydney: Hodder and Stoughton, 1992), pp. 163-164, 230-232. On the role of nonviolent action in the East Timorese struggle, see Chisako M. Fukuda, "Peace through nonviolent action: the East Timorese resistance movement's strategy for engagement," *Pacifica Review,* Vol. 12, No. 1, 2000, pp. 16-31.

14. Michael Henderson, *Experiment with Untruth: India under Emergency* (Delhi: Macmillan, 1977).

15. Jacques Semelin, *Unarmed against Hitler: Civilian Resistance in Europe, 1939-1943* (Westport, CT: Praeger, 1993), p. 85.

16. Patrick Fitzgerald and Mark Leopold, *Stranger on the Line: The Secret History of Phone Tapping* (London: Bodley Head, 1987).

17. Thomas Icom, "Cellular interception techniques," *2600*, Vol. 12, No. 1, Spring 1995, pp. 23-27.

18. Caller number identification also raises issues concerning protection of personal data. Thus, it is possible that there could be friction between priorities on privacy and on nonviolent resistance. For a discussion of potential problems with surveillance in a social defence system, see Brian Martin, "Possible pathologies of future social defence systems," *Pacifica Review,* Vol. 7, No. 1, 1995, pp. 61-68.

19. On the early history of the British post office, including attempts to shut down alternative posts, see Herbert Joyce, *The History of the Post Office from its Establishment down to 1836* (London: Richard Bentley and Son, 1893). On postal worker struggles in Britain, see H. G. Swift, *A History of Postal Agitation from Fifty Years Ago till the Present Day* (London: C. Arthur Pearson, 1900). For a comprehensive history of disputes in the US Congress over what things should be allowed to be mailed, censorship and wartime controls, see Dorothy Ganfield Fowler, *Unmailable: Congress and the Post Office* (Athens: University of Georgia Press, 1977). On government attempts to monopolise the post, see Carl Watner, "'Plunderers of the public revenue': voluntaryism and the mails," *The Voluntaryist*, No. 76, October 1995, pp. 1-7. A pilot study of the post in relation to social defence is reported in Alison Rawling, Lisa Schofield, Terry Darling and Brian Martin, "The Australian Post Office and social defence," *Nonviolence Today*, No. 14, April/May 1990, pp. 6-8.

20. See, among others, Ann Cavoukian and Don Tapscott, *Who Knows: Safeguarding Your Privacy in a Networked World* (New York: McGraw-Hill, 1997); Simon Davies, *Monitor: Extinguishing Privacy on the Information Superhighway* (Sydney: Pan Macmillan, 1996); David H. Flaherty, *Protecting Privacy in Surveillance Societies: The Federal Republic of Germany, Sweden, France, Canada, and the United States* (Chapel Hill: University of North Carolina Press, 1989); Oscar H. Gandy, Jr., *The Panoptic Sort: A Political Economy of Personal Information* (Boulder, CO: Westview, 1993); Simson Garfinkel, *Database Nation: The Death of Privacy in the 21st Century* (Sebastopol, CA: O'Reilly & Associates, 2000); David Lyon, *The Electronic Eye: The Rise of Surveillance Society* (Cambridge: Polity Press, 1994); Gary T. Marx, *Undercover: Police Surveillance in America* (Berkeley: University of California Press, 1988).

21. There is a vast body of writing about the net. Useful treatments of net culture include Wendy M. Grossman, *Net.wars* (New York: New York University Press, 1997); Howard Rheingold, *The Virtual Community: Finding Connection in a Computerized World* (London: Secker and Warburg, 1994).

22. David S. Bennahum, "The Internet revolution," *Wired,* Vol. 5, No. 4, April 1997, pp. 122-129 and 168-173.

23. Bob Travica and Matthew Hogan, "Computer networks in the x-USSR: technology, uses and social effects," in Debora Shaw (ed.), *ASIS '92: Proceedings of the 55th ASIS Annual Meeting,* Vol. 29 (Medford, NJ: Learned Information, 1992), pp. 120-135.

24. On hacking see the magazine *2600* and The Knightmare, *Secrets of a Super Hacker* (Port Townsend, WA: Loompanics, 1994).

25. For the dabate over government-sponsored encryption, see Whitfield Diffie and Susan Landau, *Privaacy on the Line: The Politics of Wiretapping and Encryption* (Cambridge, MA: MIT Press, 1998) and Lance J. Hoffman (ed.), *Building in Big Brother: The Cryptographic Policy Debate* (New York: Springer-Verlag, 1995).

26. See for example Simson Garfinkel, *PGP: Pretty Good Privacy* (Sebastopol, CA: O'Reilly & Associates, 1995).

27. Richard B. Gregg, *The Power of Nonviolence* (New York: Schocken Books, 1966); Krishnalal Shridharani, *War without Violence: A Study of Gandhi's Method and its Accomplishments* (London: Victor Gollancz, 1939).

28. M. K. Gandhi, *An Autobiography or the Story of my Experiments with Truth* (Ahmedabad: Navajivan Press, 1927).

29. According to a constructivist perspective, "truth" is always based on human interests rather than objective reality, and hence is more problematical than Gandhi believed. But for this outline of his ideas, "truth" is used without quotes.

30. See V. V. Ramana Murti, "Buber's dialogue and Gandhi's satyagraha," *Journal of the History of Ideas*, Vol. 29, No. 4, 1968, pp. 605-613. I thank Tom Weber for pointing out this reference.

31. Robert A. Bode, "Gandhi's theory of nonviolent communication," *Gandhi Marg,* Vol. 16, No. 1, April-June 1994, pp. 5-30.

32. Note that feminists have criticised the Gandhian emphasis on suffering by nonviolent activists.

33. Thomas Weber, "'The marchers simply walked forward until struck down': nonviolent suffering and conversion," *Peace & Change*, Vol. 18, No. 3, 1993, pp. 267-289.

34. Johan Galtung, *Nonviolence and Israel/Palestine* (Honolulu: University of Hawaii Institute for Peace, 1989).

35. Jürgen Habermas, *The Theory of Communicative Action, Vol. 1. Reason and the Rationalization of Society* (Boston: Beacon Press, 1984); Jürgen Habermas, *The Theory of Communicative Action, Vol. 2. Lifeworld and System: A Critique of Functionalist Reason* (Boston: Beacon Press, 1987).

36. James C. Scott, *Domination and the Arts of Resistance: Hidden Transcripts* (New Haven, CT: Yale University Press, 1990).

37. In the appendix, this terminology is explained in the context of theories of technology.