

TOOLS FOR CONVIVIALITY

'...his thoughts make the reader more alive because they open the door that leads out of the prison of routinized, sterile, preconceived notions.' Erich Fromm

Ivan Illich has aroused worldwide attention as a formidable critic of some of society's most cherished institutions—organized religion, the medical profession, compulsory education for all.

In **Tools for Conviviality** he carries further his profound questioning of modern industrial society by showing how mass-production technologies are turning people into the accessories of bureaucracies and machines.

'Society can be destroyed when further growth of mass production renders the milieu hostile, when it extinguishes the free use of the natural abilities of society's members, when it isolates people from each other and locks them into a man-made shell, when it undermines the texture of community by promoting extreme social polarization and splintering specialization.'

'I don't see how anyone can afford not to read this book.'
Martin Lucas,
Guardian

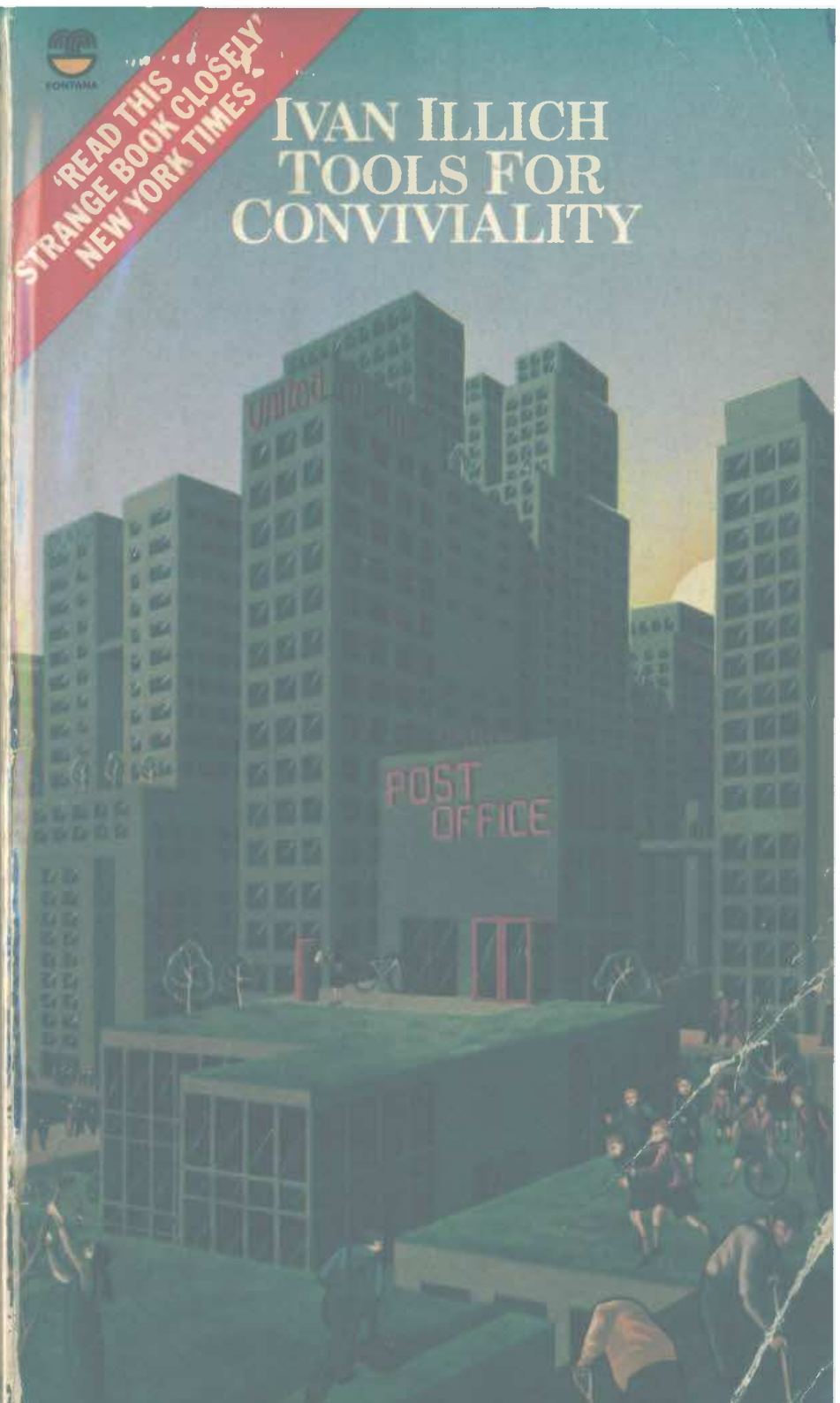
'Illich's arguments are shrewd, open and passionate.'
Raymond Williams

'Dr Illich's analysis is powered by a passionate devotion to his understanding of liberty, equality and justice.'
Times Literary Supplement

Cover illustration by Peter Goodfellow

U.K. 60p
Australia \$1.75*
New Zealand \$1.75*
Canada \$2.25
*recommended price

Sociology and Politics
0 00 633621 3



TOOLS FOR CONVIVIALITY

Ivan Illich

Fontana/Collins

First published in the U.S.A. by Harper & Row in their World
Perspective Series, edited by Ruth Nanda Anshen, 1973
Published in Great Britain by Calder & Boyars 1973
First issued in Fontana 1975

Copyright © Ivan Illich 1973

Portions of this book appeared in the March/April 1973 issue
of *Social Policy Magazine*

Made and printed in Great Britain by
William Collins Sons & Co Ltd Glasgow

CONDITIONS OF SALE:

This book is sold subject to the condition
that it shall not, by way of trade or otherwise,
be lent, re-sold, hired out or otherwise circulated
without the publisher's prior consent in any form of
binding or cover other than that in which it is
published and without a similar condition
including this condition being imposed
on the subsequent purchaser

Contents

Acknowledgements	7
Introduction	9
I Two Watersheds	14
II Convivial Reconstruction	23
III The Multiple Balance	60
1. <i>Biological Degradation</i>	62
2. <i>Radical Monopoly</i>	65
3. <i>Overprogramming</i>	71
4. <i>Polarization</i>	82
5. <i>Obsolescence</i>	88
6. <i>Frustration</i>	91
IV Recovery	99
1. <i>The Demythologization of Science</i>	100
2. <i>The Rediscovery of Language</i>	103
3. <i>The Recovery of Legal Procedure</i>	107
V Political Inversion	115
1. <i>Myths and Majorities</i>	116
2. <i>From Breakdown to Chaos</i>	117
3. <i>Insight into Crisis</i>	120
4. <i>Sudden Change</i>	122

Acknowledgements

The multidimensional analysis of ceilings for industrial growth was first formulated in a Spanish document co-authored by Valentina Borremans and myself and submitted as a guideline for a meeting of two dozen Chilean socialists and other Latin Americans at CIDOC (the Center for Intercultural Documentation) in Cuernavaca, Mexico. The next version was presented at the Zeno Symposium organized by Professor Richard Wollheim in Cyprus. It was published in *Esprit*, Paris, March 1972, with criticisms by Th. Adam, Pierre Caussat, J. P. Chevenement, Paul Fraisse, Yves Goussault, Pierre Kende, J. W. Lapierre, Michel Panoff, Henri Pequignot, Jean Marie Domenach, and Paul Thibaud. A third version served me and my deceased friend Greer Taylor as the basis for our participation in the Canadian Conference on the Law in January 1972 in Ottawa. Comments by David Weisstub, Nils Christie, Allen M. Linden, J. G. Castel, H. W. Arthurs, José Antonio Viera-Gallo, J. C. Smith, and Bonaventura de Sousa Santos, and other critical papers by jurists, will be published in mid-1973 in Toronto. During the summer of 1972, participants in my CIDOC seminar contributed very helpful papers. I'm especially grateful for the assistance of John Bradley, John Brewer, José María and Veronica Bulnes, Martin Cohen, Irene Curbelo de Diaz, Dennis Detzel, Joseph Fitzpatrick, Amnon Goldworth, Conrad Johnson, Hartmut von Hentig, John MacKnight, Michael Maccoby, Leslie Marcus, Francisco Miró Quesada, Marie-Noëlle Monteil, William Ophuls, Marta H. Reed, Everett Reimer, Francisco Varela, Etienne Verne, Jacques Vidal and German Zabala. Dennis Sullivan has patiently and critically assisted me in editing the final version. After I had delivered this manuscript to the publisher, I received valu-

able suggestions from J. P. Naik and his friends in India. These have seeped into the text to the extent this can happen in the correction of proofs. Second only to Valentina Borremans and Greer Taylor, Heinz von Foerster, Erich Fromm, Hermann Schwember and Abrahán Diaz Gonzales have exerted the most decisive influence on the formulation of my ideas.

Introduction

During the next several years I intend to work on an epilogue to the industrial age. I want to trace the changes in language, myth, ritual and law, which took place in the current epoch of packaging and of schooling. I want to describe the fading monopoly of the industrial mode of production and the vanishing of the industrially generated professions this mode of production serves.

Above all I want to show that two-thirds of mankind still can avoid passing through the industrial age, by choosing right now a postindustrial balance in their mode of production which the hyperindustrial nations will be forced to adopt as an alternative to chaos. To prepare for this task I submit this essay for critical comment.

In its present form this book is the result of conversations at CIDOC in Cuernavaca during the summer of 1972. Participants in my seminar will recognize their ideas, and often their words. I ask my collaborators to accept my sincere thanks, especially for their written contributions.

This essay has become too long to appear as an article and too intricate to be read in several instalments. It is a progress report. I respectfully thank Ruth Nanda Anshen for issuing this tract as a volume, in *World Perspectives*, published by Harper & Row.

For several years at CIDOC in Cuernavaca we have conducted critical research on the monopoly of the industrial mode of production and have tried to define conceptually alternative modes that would fit a postindustrial age. During the late sixties this research centred on educational devices. By 1970 we had found that:

1. Universal education through compulsory schooling is not possible.

2. Alternative devices for the production and marketing of mass education are technically more feasible and ethically less tolerable than compulsory graded schools. Such new educational arrangements are now on the verge of replacing traditional school systems in rich and in poor countries. They are potentially more effective in the conditioning of job-holders and consumers in an industrial economy. They are therefore more attractive for the management of present societies, more seductive for the people, and insidiously destructive of fundamental values.
3. A society committed to high levels of shared learning and critical personal intercourse must set pedagogical limits on industrial growth.

I have published the results of this research in a previous volume of *World Perspectives*, entitled *Deschooling Society*. I clarified some of the points left ill defined in that book by writing an article published in the *Saturday Review* of April 19, 1971.

Our analysis of schooling has led us to recognize the mass production of education as a paradigm for other industrial enterprises, each producing a service commodity, each organized as a public utility, and each defining its output as a basic necessity. At first our attention was drawn to the compulsory insurance of professional health care, and to systems of public transport, which tend to become compulsory once traffic rolls above a certain speed. We found that the industrialization of any service agency leads to destructive side effects analogous to the unwanted secondary results well known from the overproduction of goods. We had to face a set of limits to growth in the service sector of any society as inescapable as the limits inherent in the industrial production of artifacts. We concluded that a set of limits to industrial growth is well formulated only if these limits apply both to goods and to services which are produced in an industrial mode. So we set out to clarify these limits.

I here submit the concept of a multidimensional balance of human life which can serve as a framework for evaluating man's relation to his tools. In each of several dimensions of

this balance it is possible to identify a natural scale. When an enterprise grows beyond a certain point on this scale, it first frustrates the end for which it was originally designed, and then rapidly becomes a threat to society itself. These scales must be identified and the parameters of human endeavours within which human life remains viable must be explored.

Society can be destroyed when further growth of mass production renders the milieu hostile, when it extinguishes the free use of the natural abilities of society's members, when it isolates people from each other and locks them into a man-made shell, when it undermines the texture of community by promoting extreme social polarization and splintering specialization, or when cancerous acceleration enforces social change at a rate that rules out legal, cultural, and political precedents as formal guidelines to present behaviour. Corporate endeavours which thus threaten society cannot be tolerated. At this point it becomes irrelevant whether an enterprise is nominally owned by individuals, corporations, or the state, because no form of management can make such fundamental destruction serve a social purpose.

Our present ideologies are useful to clarify the contradictions which appear in a society which relies on the capitalist control of industrial production; they do not, however, provide the necessary framework for analysing the crisis in the industrial mode of production itself. I hope that one day a general theory of industrialization will be stated with precision, that it will be formulated in terms compelling enough to withstand the test of criticism. Its concepts ought to provide a common language for people in opposing parties who need to engage in the assessment of social programmes or technologies, and who want to restrain the power of man's tools when they tend to overwhelm man and his goals. Such a theory should help people invert the present structure of major institutions. I hope that this essay will enhance the formulation of such a theory.

It is now difficult to imagine a modern society in which industrial growth is balanced and kept in check by several complementary, distinct, and equally scientific modes of produc-

tion. Our vision of the possible and the feasible is so restricted by industrial expectations that any alternative to more mass production sounds like a return to past oppression or like a Utopian design for noble savages. In fact, however, the vision of new possibilities requires only the recognition that scientific discoveries can be used in at least two opposite ways. The first leads to specialization of functions, institutionalization of values and centralization of power and turns people into the accessories of bureaucracies or machines. The second enlarges the range of each person's competence, control, and initiative, limited only by other individuals' claims to an equal range of power and freedom.

To formulate a theory about a future society both very modern and not dominated by industry, it will be necessary to recognize natural scales and limits. We must come to admit that only within limits can machines take the place of slaves; beyond these limits they lead to a new kind of serfdom. Only within limits can education fit people into a man-made environment: beyond these limits lies the universal schoolhouse, hospital ward, or prison. Only within limits ought politics to be concerned with the distribution of maximum industrial outputs, rather than with equal inputs of either energy or information. Once these limits are recognized, it becomes possible to articulate the triadic relationship between persons, tools, and a new collectivity. *Such a society, in which modern technologies serve politically interrelated individuals rather than managers, I will call 'convivial'.*

After many doubts, and against the advice of friends whom I respect, *I have chosen 'convivial' as a technical term to designate a modern society of responsibly limited tools.* In part this choice was conditioned by the desire to continue a discourse which had started with its Spanish cognate. The French cognate has been given technical meaning (for the kitchen) by Brillat-Savarin in his *Physiology of Taste: Meditations on Transcendental Gastronomy*. This specialized use of the term in French might explain why it has already proven effective in the unmistakably different and equally specialized context in which it will appear in this essay. I am aware that in English 'convivial' now seeks the

company of tipsy jolliness, which is distinct from that indicated by the OED and opposite to the austere meaning of modern 'eutrapelia,' which I intend. By applying the term 'convivial' to tools rather than to people, I hope to forestall confusion.

'Austerity,' which says something about people, has also been degraded and has acquired a bitter taste, while for Aristotle or Aquinas it marked the foundation of friendship. In the *Summa Theologica* II, II, in the 186th question, article 5, Thomas deals with disciplined and creative playfulness. In his third response he defines 'austerity' as a virtue which does not exclude all enjoyments, but only those which are distracting from or destructive of personal relatedness. For Thomas 'austerity' is a complementary part of a more embracing virtue, which he calls friendship or joyfulness. It is the fruit of an apprehension that things or tools could destroy rather than enhance *eutrapelia* (or graceful playfulness) in personal relations.*

*Hugo v. Rahner, *Man at Play*, New York, 1972.

then concerned with the discovery of general systems of institutional structure which optimize convivial production. This kind of research meets psychological resistance. Growth has become addictive. Like heroin addiction, the habit distorts basic value judgements. Addicts of any kind are willing to pay increasing amounts for declining satisfactions. They have become tolerant to escalating marginal disutility. They are blind to deeper frustration because they are absorbed in playing for always mounting stakes. Minds accustomed to thinking that transportation ought to provide speedy motion rather than reduction of the time and effort spent moving are boggled by this contrary hypothesis. Man is inherently mobile, and speeds higher than those he can achieve by the use of his limbs must be proven to be of great social value to warrant support by public sacrifice.

Counterfoil research must clarify and dramatize the relationship of people to their tools. It ought to hold constantly before the public the resources that are available and the consequences of their use in various ways. It should impress on people the existence of any trend that threatens one of the major balances on which life depends. Counterfoil research leads to the identification of those classes of people most immediately hurt by such trends and helps people to identify themselves as members of such classes. It points out how a particular freedom can be jeopardized for the members of various groups which have otherwise conflicting interests. Counterfoil research involves the public by showing that the demands for freedom of any group or alliance can be identified with the implicit interest of all.

Withdrawal from growth mania will be painful, but mostly for members of the generation which has to experience the transition and above all for those most disabled by consumption. If their plight could be vividly remembered, it might help the next generation avoid what they know would enslave them.

IV

Recovery

I have discussed five dimensions on which the balance of life depends. In each I have indicated tendencies that must be kept in equilibrium to maintain the homeostasis which constitutes human life. I have argued that the control of natural forces is functional only if the use of nature does not make nature useless for man. I have argued that institutions are functional when they promote a delicate balance between what people can do for themselves and what tools at the service of anonymous institutions can do for them. Formal instruction also depends on a balance. Special arrangements must never outweigh opportunities for independent learning. An increase in social mobility can render society more human, but only if at the same time there is a narrowing of the difference in power which separates the few from the many. Finally, an increase in the rate of innovation is of value only when with its rootedness in tradition, fullness of meaning, and security are also strengthened.

A tool can grow out of man's control, first to become his master and finally to become his executioner. Tools can rule men sooner than they expect: the plough makes man the lord of a garden but also the refugee from a dust bowl. Nature's revenge can produce children less fit for life than their fathers, and born into a world less fit for them. *Homo faber* can be turned into a sorcerer's apprentice. Specialization can make his every day so complicated that it becomes estranged from his activity. Addiction to progress can enslave all men to a race in which none ever reaches the goal.

There are two ranges in the growth of tools: the range within which machines are used to extend human capability and the range in which they are used to contract, eliminate, or replace human functions. In the first, man as an individual

can exercise authority on his own behalf and therefore assume responsibility. In the second, the machine takes over – first reducing the range of choice and motivation in both the operator and the client, and second imposing its own logic and demand on both. Survival depends on establishing procedures which permit ordinary people to recognize these ranges and to opt for survival in freedom, to evaluate the structure built into tools and institutions so they can exclude those which by their structure are destructive, and control those which are useful. Exclusion of the malignant tool and control of the expedient tool are the two major priorities for politics today. Multiple limits to overefficiency must be expressed in language that is simple and politically effective. This urgent task is faced, however, with three formidable obstacles: the idolatry of science, the corruption of ordinary language, and loss of respect for the formal process by which social decisions are made.

1. THE DEMYTHOLOGIZATION OF SCIENCE

Above all, political discussion is stunned by a delusion about science. This term has come to mean an institutional enterprise rather than a personal activity, the solving of puzzles rather than the unpredictably creative activity of individual people. Science is now used to label a spectral production agency which turns out better knowledge just as medicine produces better health. The damage done by this misunderstanding about the nature of knowledge is even more fundamental than the damage done to the conceptions of health, education, or mobility by their identification with institutional outputs. False expectations of better health corrupt society, but they do so in only one particular sense. They foster a declining concern with healthful environments, healthy life styles, and competence in the personal care of one's neighbour. Deceptions about health are circumstantial. The institutionalization of knowledge leads to a more general and degrading delusion. It makes people dependent on having their knowledge produced for them. It leads to a paralysis of the moral and political imagination.

This cognitive disorder rests on the illusion that the know-

ledge of the individual citizen is of less value than the 'knowledge' of science. The former is the opinion of individuals. It is merely subjective and is excluded from policies. The latter is 'objective' – defined by science and promulgated by expert spokesmen. This objective knowledge is viewed as a commodity which can be refined, constantly improved, accumulated and fed into a process, now called 'decision-making'. This new mythology of governance by the manipulation of knowledge-stock inevitably erodes reliance on government by people.

The world does not contain any information. It is as it is. Information about it is created in the organism through its interaction with the world. To speak about storage of information outside the human body is to fall into a semantic trap. Books or computers are part of the world. They can yield information when they are looked upon. We move the problem of learning and of cognition nicely into the blind spot of our intellectual vision if we confuse vehicles for potential information with information itself. We do the same when we confuse data for potential decision with decision itself.

Overconfidence in 'better knowledge' becomes a self-fulfilling prophecy. People first cease to trust their own judgement and then want to be told the truth about what they know. Overconfidence in 'better decision-making' first hampers people's ability to decide for themselves and then undermines their belief that they can decide.

The growing impotence of people to decide for themselves affects the structure of their expectations. People are transformed from contenders for scarce resources into competitors for abundant promises. Adjudication by ordeal is replaced by recourse to secular rituals. These rituals are organized as frenzied consumption of the offerings of some menu: a curriculum, a therapy, or a court case. The promise that science will provide affluence for all and for each according to his objectively verified merits deprives personal conflict of its creative legitimacy. People who have unlearned how to decide about their own rights on their own evidence become pawns in a world game operated by mega-machines. No longer can each person make his or her own contribution to the constant

renewal of society. Recourse to better knowledge produced by science not only voids personal decisions of the power to contribute to an ongoing historical and social process, it also destroys the rules of evidence by which experience is traditionally shared. The knowledge-consumer depends on getting packaged programmes funnelled into him. He finds security in the expectation that his neighbour and his boss have seen the same programmes and read the same columns. The procedure by which personal certainties are honestly exchanged is eroded by the increasing recourse to exceptionally qualified knowledge produced by a science, profession, or political party. Mothers poison their children on the adman's or the M.D.'s advice. Even in the courtroom and in parliament, scientific hearsay – well hidden under the veil of expert testimony – biases juridical and political decisions. Judges, governments, and voters abdicate their own evidence about the necessity of resolving conflicts in a situation of defined and permanent scarcity and opt for further growth on the basis of data which they admittedly cannot fully understand.

When communities have grown overconfident in science, they leave it to experts to set the upper limits on growth. This mandate rests on a fallacy. Experts can define standards at levels slightly below those at which people complain with too much force. They can keep the public sullen and forestall mutiny. But closed peer groups cannot be entrusted with self-restraint in furthering their expert knowledge. Nor can we expect them to be representative of the common man. Scientific expertise cannot define what people will tolerate. No person can abdicate the right to decide on this for himself. It is, of course, *possible* to experiment on humans. Nazi doctors explored what the organism can endure. They found out how long the average person can survive torture, but this did not tell them anything about what someone can tolerate. These doctors were condemned under a statute signed in Nuremberg two days after Hiroshima and the day before the bomb was dropped on Nagasaki.

What a population will endure remains beyond experiment. We can tell what happens to particular groups of people under extreme circumstances – in prison, on an expedition,

or in an experiment. Such precedents cannot serve as measures for the privations which a society will tolerate as a result of tools or rules made for its service. Scientific measurements may suggest that a certain endeavour threatens a major balance of life. Only the informed judgement of a majority of prudent men who act on the much more complex basis of everyday evidence can determine how to limit individual and social goals. Science can clarify the dimensions of man's realm in the universe. Only a political community can dialectically choose the dimensions of the roof under which its members will live.

2. THE REDISCOVERY OF LANGUAGE

Between 1830 and 1850 a dozen inventors formulated the law of the conservation of energy. Most of them were engineers, and independently from each other they redefined the floating life force of the universe in terms of work machines could perform. Measurements that could be taken in the laboratory became the scale by which the mysterious cosmic nexus – called *vis viva* for centuries – could henceforth be defined.

During the same period industry successfully competed with other modes of production for the first time. Industrial performance became the scale according to which human effectiveness in the entire economy was now measured. Housework, farming, handicraft, and subsistence activities ranging from the making of preserves to the self-building of a home began to be viewed as subsidiary or second-rate forms of production. The industrial mode first degraded and later paralysed the nexus of productive relationship which coexisted in society.

This monopoly of one mode of production over all social relations is much more profound than the competition of firms which overshadows it. In the surface competition the winner is easily recognized as the more capital-intensive factory, the better-organized business, the more exploitative and better-protected branch of industry, the corporation that sheds diseconomies the most unobtrusively or produces for war. On a broad scale this race takes the form of a competition among multinational corporations and industrializing

nation-states. But this deadly game among giants diverts attention from the ritual service which the game itself renders to the contestants. As the arena of the contest expands, an industrial structure is imposed on world society. The mode of corporate production establishes a radical monopoly not only over resources and tools but also over the imagination and motivational structure of people. Political systems compete to baptize the same expanding industrial structure into opposing creeds, without recognizing that it is beyond their control. The convergence of corporate monopolies on the deep structural level of society can be called the industrialization of man. This trend must be inverted if people are to be free. But the industrial corruption of language itself makes this issue terribly difficult to formulate.

Language reflects the monopoly of the industrial mode of production over perception and motivation. The tongues of industrial nations identify the fruits of creative work and of human labour with the outputs of industry. The materialization of consciousness is reflected in Western languages. Schools operate by the slogan 'education!' while ordinary language asks what children 'learn'. The functional shift from verb to noun highlights the corresponding impoverishment of the social imagination. People who speak a nominalist language habitually express proprietary relationships to *work* which they *have*. All over Latin America only the salaried employees, whether workers or bureaucrats, say that they *have* work; peasants say that they *do* it: '*Van a trabajar, pero no tienen trabajo.*' Those who have been modernized and unionized expect industries to produce not only more goods but also more work for more people. Not only what men do but also what men want is designated by a noun. 'Housing' designates a commodity rather than an activity. People acquire knowledge, mobility, even sensitivity or health. They *have* not only work or fun but even sex.

This shift from verb to noun reflects a transformation in the idea of ownership. 'Possessing,' 'holding,' and 'seizing' no longer describe the relationships people can have to corporations, such as systems of schools or highways. Possessive statements made about tools come to mean the ability to

command their outputs, interest from capital, or merchandise, or some kind of prestige connected with their operation. Fully industrialized man calls his own principally what has been made for him. He says 'my education,' 'my transportation,' 'my entertainment,' 'my health' about the commodities he gets from school, car, show business, or doctor. Western languages, and above all English, become almost inseparable from industrial production. Western men might have to learn from other languages that ownership relations can be restructured in a convivial way. For instance, in Micronesian tongues there exist entirely distinct devices to express the relationship I have to my acts (which can no longer be separated from me), to my nose (which can be cut off), to my relatives (who were inflicted on me), to my canoe (without which I could not be a full man), to a drink (which I serve you), or to the same drink (which I intend to swallow).

In a society whose language has undergone this shift, predicates come to be stated in terms of a commodity and claims in terms of competition for a scarce resource. 'I want to learn' is translated into 'I want to get an education.' The decision to do something is turned into the demand for a stake in the gamble of schooling. 'I want to walk' is restated as 'I need transportation.' The subject in the first case designates himself as an actor, and in the second as a consumer. Linguistic change supports the expansion of the industrial arena: competition for institutionalized values is reflected in the use of nominal language. This competition for shares inevitably takes the form of a game. People gamble for what they perceive as nouns. Of course, that competition can be organized either as a zero-sum game, in which one wins when another loses, or as a non-zero-sum game, in which both competitors get more than if either had lost. Compulsory school could be construed as an extreme example of a zero-sum game: there are only winners and losers; by definition school bestows privilege on fewer people than it degrades. An example of the second would be the transition from private to public transport: at least for the time being, more commuters could get faster wherever they want to go.

Conflict does not have to be a competition for scarce com-

modities. It could also manifest disagreement about which conditions would best remove restraints on autonomous action. Conflict can lead to the creation of a new freedom; but this possibility has been obscured by nominalist language. It can create for both parties the right to do, and to do things which by definition are neither commodities nor scarce. Conflict which leads to the right to walk, to participate in shaping society, to speak and communicate equally, to live in clean air or to use convivial tools deprives both adversaries of some affluence for the sake of an incommensurable gain – new liberty.

In some societies the corruption of language has crippled the political fantasy to the point where the difference between a claim to commodities and a right to convivial tools cannot be understood. Limits on tools cannot be publicly discussed. Public blindness to urgent issues is not a new phenomenon. People for decades refused to open their eyes to the urgency of population control, for example. Limiting tools for the sake of freedom and conviviality is now such an issue that cannot be raised. A limit on vehicular velocity as a major election issue seems an implausible idea to the rich and an irrelevant idea to the poor. People who are born next to highways cannot imagine a world without speed, and the peasant in the Andes cannot grasp why anyone should travel that fast. A slowdown as the condition for good transportation sounds shocking. To recommend limits on tools sounds as deeply obscene today as the recommendation for greater sexual frankness and freedom as a condition for a good marriage law would have sounded a generation ago.

The operating code of industrial tools encroaches on everyday language and reduces the poetic self-affirmation of men to a barely tolerated and marginal protest. The consequent industrialization of man can be inverted only if the convivial function of language is recuperated, but with a new level of consciousness. Language which is used by people jointly claiming and asserting each person's right to share in the shaping of the community becomes, so to speak, a second-order tool to clarify the relationships of a people to engineered instrumentalities.

3. THE RECOVERY OF LEGAL PROCEDURE
Support of an ever-expanding productive society has become the overwhelmingly dominant purpose of the existing structure of politics and law. The procedure by which people decide what ought to be done has become subservient to the ideology that corporations ought to produce more: more knowledge and decisions, more goods and services. This perversion constitutes the third obstacle to the translation of the need for a bounded society into actual social process.

Political parties, legislatures, and the juridical system have been consistently used to foster and protect the growth of schools, unions, hospitals, and road systems, not to speak of industries. Gradually, not only the police but even the courts and the legal system itself have come to be thought of as tools made for the service of an industrial state. That they sometimes protect individuals against industrial claims has become an alibi for their habitual service of legitimizing the further concentration of power. Along with the idolatory of scientific method and the corruption of language, this progressive loss of confidence in political and legal processes is a major obstacle to retooling society.

People come to understand that an alternative society is possible by using clear language. They can bring it about by recovering consciousness of the deep structure by which, in their society, decisions are made. Such a structure exists wherever people form a community. Contradictory decisions can be the outcome of the same process because the structure can be used to define personal values and also to shore up institutional behaviour. But the existence of such conflicting results does not contradict the existence of a consistent structure which generates them. People can decide to *get* an education in school even though they have decided that it would be better to learn something on their own. They can let themselves be taken to a hospital, though they have decided to die at home. Just as cognitive dissonance is a foundation for dialectics, so the simultaneous acceptance of contradictory norms proves the existence of normative procedures.

Public confidence in the existence of shared procedures has

been shaken because these procedures are constantly misused. They have become tools to support unlimited production through converging arguments that alternately take a moral, a political, or a legal character. Christian churches preach meekness, charity, and austerity but finance industrial programmes; socialists enforce a Stalinist mode of production, and the common law has come to favour the firm over the individual. Soon the computer will be used to define at every juncture what should be done for the growth of tools, unless people rediscover that they share a deep commitment to formal procedures by which they can decide how their present major institutions ought to be turned around.

Unless people agree on a process that can be continuously, convivially, and effectively used to control society's tools, the inversion of the present institutional structure cannot be either enacted or, what is more important, precariously maintained. Managers will always re-emerge to increase institutional productivity and capture public support for the better service they promise.

Three objections are usually made whenever law is proposed as a tool for the inversion of society. One of them is rather superficial: not everybody can be a lawyer, and so not everybody can operate the law on his own. This, of course, is true only to some degree. Parajudicial systems could be set up in particular communities and incorporated into the overall structure. Much wider scope could be given to alternative mechanisms to allow for greater participation by the non-professional, such as mediation, conciliation, and arbitration. But insofar as this objection is valid, it is also irrelevant to my point. The law, as it deals with the regulation of large-scale production agencies, can surely be decentralized, demystified and debureaucratized. But even then some social concerns are, and could for a long time remain, complex and of vast range, demanding corresponding legal tools. Precisely if it is to be used for the negotiating of world-wide proscriptions among large communities, each with its own centuries-old traditions, the law will remain a tool requiring some experts to operate it. But this does not mean that such experts have to be graduates of a law school, or that they must be

members of a closed profession.

The second objection is completely relevant and much more profound: persons who now operate the law as a social tool are deeply infected with the myths that pervade a growth society. Their imagination of the possible and of the feasible is determined by the lore of industry. It would be folly to expect the present corporations of social engineers of a utilitarian society to turn into the guardians of a convivial one. The critical importance of this observation is complemented and underlined by a third objection. The juristic system is not simply a set of written laws; it is a continuing process by which those laws are made and then applied to actual situations. The law is used to impose a given mind-set on all participants. The resulting content of the law embodies the ideologies of lawmakers and judges. How they experience the ideology inherent in a culture becomes established mythology in the laws they make and apply. The body of laws that regulates an industrial society inevitably reflects and reinforces its ideology, social character, and class structure. 'More' is always in the common good – more power to firms, professions, and parties.

While this objection does indicate a fundamental difficulty against the use of law in an inversion of society, it also misses the point. I carefully distinguish between a body of laws and the purely formal structure by which it is made, just as I have distinguished the use of slogans by which our institutions operate from the use of ordinary language, and as I will later distinguish between policies and formal political process. It is the latter and not the former which are the second order of tools we need, can share, and have to use.

It is almost impossible to insist strongly enough on the distinction between means and ends in an epoch in which purposes have been reduced to operations, in an epoch in which people 'raise' consciousness, movements pretend to provide 'liberation,' languages rather than persons are said to 'speak,' and politicians 'make' revolutions. The law can again serve to highlight the general difference between substance and what might be called not 'due process' but rather 'due procedure'.

Two major complementary features of the common law make its formal structure particularly applicable to the needs which arise in a profound crisis. One is the inherent continuity of the system, and the other is its adversary nature. Analogous features can be found in other law systems; I here choose the Anglo-American system of law as an illustration of my more general point.

The continuity built into the lawmaking process does in one sense conserve the substance of a body of laws. This is less obvious in the legislative stage. Legislators are free to innovate at their own discretion, as long as they stay within a constitutional framework. But they do also have to fit any new law into the context of existing legislation, and this tends to ensure that new legislation will not vary too widely from the over-all tradition of existing law.

The function of the courts in providing continuity to the substance of the law is more obvious. A court applies existing law to actual situations. Like cases are decided alike, or the facts are found to be of a different significance today. The law represents the sovereign authority of the past over the present controversy, the continuity of a dialectic process. The court recognizes the controversy as a social concern and incorporates its resolutions into the body of the law. In the process the social experience of the past is readapted to present needs. The present decision will in turn serve as reference in future cases.

The continuity of the formal structure used in this process is of a different order from the continuous embodiment of one set of prejudices in a set of laws. Considered in this formal sense, the system of continuity is not designed to preserve the content of any existing set of laws. It could even be used to preserve the continuous development of a set of laws that fit an inverted society. There is nothing in most constitutions that prevents the passage of laws setting upper limits to productivity, privilege, professional monopoly, or efficiency. In principle, the existing process of legislatures and courts can, with a reversal of its focus, make and apply such law.

The adversary nature of the common law is equally im-

portant. The common law is not formally concerned with what is ethically or technically good. It is a tool for the understanding of mutualities that surface as actual conflicts. It leaves to those directly concerned with a social interest the task of insisting on the protection of their rights or the pursuit of their claims to what they consider to be good. This works in both legislation and jurisprudence; the decision is an act of balancing conflicting interests in a way that is theoretically best for all.

It is obvious that during the last few generations this balance has been wholly distorted in favour of a production-orientated society. But the current misuse of the juristic structure is not a valid argument against its use for precisely the opposite purpose. Interests wholly opposed to such a society, free from illusion that growth can overcome injustice, and concerned with limits, can in principle use the same tool. It is not, of course, sufficient that new types of plaintiffs appear; it is equally true that the growth illusions of legislators must fade, and that parties must be brought forward to represent their interest in a reassessment of what are now taken as facts.

Not only the legislative but also the juridical process depends on the presentation of conflicting social interests by interested parties for settlement by disinterested tribunals. These tribunals operate in a continuous way. Ideally, judges are ordinary, prudent men or women indifferent to the substance of the issue they are expected to reconcile, and experts in the application of process. In practice, however, tribunals have also come to serve the concentration of power and the increase of industrial production. Not only do judges, like legislators, perceive that a conflict is best balanced when the balance is tipped in favour of the over-all interest of corporations, but society has also conditioned the plaintiffs always to demand more. A larger share of institutional output constitutes the substance of a claim much more frequently than protection against an institution which limits a person's freedom to do something on his own. But this abuse of the formal structure of common law does not corrupt the structure itself.

An objection is frequently raised when adversary procedures are presented as a major tool to oppose industrial growth. Society already relies heavily on such proceedings. Their extension to new areas is continually recommended. Legal reformers tend to provide new weapons to all classes of disadvantaged: blacks, Indians, women, employees, cripples. As a result proceedings have become cumbersome, costly, and only a few of the interested parties can come forward. Decisions are often delayed until they have lost their relevance. Role-playing is encouraged, and this often creates new tensions between artificial groups. In going out of the way to create structures so that adversary processes may be used, decisions are made scarce.

This objection is very relevant if it opposes the proliferation of adversary proceedings in the resolution of conflicts between people. But neither the conflict between individuals nor the competition between groups is the substance of our issue. The fundamental conflict in society is about acts, facts, and things on which people are opposed to corporations. Formal adversary procedure is the paradigmatic tool for citizens to oppose the threat of industry to their basic liberties. This is the process suited to the opposition of two partners whom the law has rendered equal, in which the aggrieved party is interested in disputing one fact or a relevant law or principle, and considers this issue the only continuing interest he has in common with the other. A group of citizens interested in retooling society is not concerned with negotiations or mediation but with direct opposition to the industrial mode of production and its undue expansion in a specific instance.

Like ordinary English, formal process is a convivial tool. Undoubtedly, industrial institutions have entrenched themselves by corrupting the habitual use of these tools by individuals and communities. Yet language and formal process remain intrinsically distinct from the purposes for which they are used. People can defend language and legal procedures as inherently theirs; they can find in their inalienable natures the confidence to use their unchanged formal structures to express contents entirely opposed to those tools for which they were taught to use them in their childhood. The formal

structure of the law still offers a process by which the ordinary citizen can present to society his own practical interest in conflict with the interest of a corporation, even when this corporation is an agency of the state, and even if this interest favours or opposes any functioning or proposed programme.

It would be absurd to expect that professionals who are experts in the corrupt use of language or of law could suddenly think clearly and proceed rightly. Educators who are aware of the breakdown of schools usually engage in a frantic search for advice that permits them to teach more people about more things. Doctors tend to believe that at least some of the generally useful knowledge they hold cannot be expressed outside their hieratic code. It is useless to expect the American Medical Association, the National Education Association, or the association of traffic engineers to explain in ordinary language the professional gangsterism of their colleagues. It would be equally fruitless to count on present legislators, lawyers, and judges to recognize the independence of what is right from the preconceived good, which for them is identical with the higher output of goods by corporations. They are trained to adjust any conflict in favour of over-all industrial growth. But just as an exceptional doctor here and there helps people live responsibly, to suffer as a matter of fact, and to face death, so an exceptional lawyer can help people use the formal structure of the law to represent their interest in a convivial society. Even though he will probably be frustrated in his claims, he can use the courtroom drama to make his point.

Legal procedure applied to a society filled by optimism about its expanding tools has turned into the most effective instrument for the social control of people at the service of these tools. To advance an industrial society, the law is systematically used for social engineering and the continually more complete and effective elimination of waste and friction in the mega-machine. Anglo-American industry has consistently been more successful, in the long run, than the industry of socialist countries. Law is more effective than centralized planning in bringing and keeping people under the rule of

machines. Yet the current misuse of the juristic structure is not a valid argument against its use for precisely the opposite purpose, though it suggests caution against overly optimistic hopes for such an inverted use.

Most of the present laws and present legislators, most of the present courts and their decisions, most of the claimants and their demands are deeply corrupted by an overarching industrial consensus: that more is better, and that corporations serve the public interest better than men. But this entrenched consensus does not invalidate my thesis that any revolution which neglects the use of formal legal and political procedures will fail. Only an active majority in which all individuals and groups insist for their own reasons on their own rights, and whose members share the same convivial procedure, can recover the rights of men against corporations.

The use of procedure for the purpose of hampering, stopping, and inverting our major institutions will appear to their managers and addicts as a misuse of the law and as subversion of the only order which they recognize. The use of due convivial procedure appears corrupt and criminal to the bureaucrat, even one who calls himself a judge.

V

Political Inversion

If within the very near future man cannot set limits to the interference of his tools with the environment and practise effective birth control, the next generations will experience the gruesome apocalypse predicted by many ecologists. Faced with these impending disasters, society can stand in wait of survival within limits set and enforced by bureaucratic dictatorship. Or it can engage in a political process by the use of legal and political procedures. Ideologically biased interpretations of the past have made the recognition of political process increasingly difficult. Liberty has been interpreted as a right to power tools, a right claimed without reasonable limitation by individuals and private associations in capitalist countries and by the state in socialist societies. Recovery becomes feasible only if the fundamental structure of Western societies is clearly recognized and reclaimed. Analogous efforts to recover entirely different formal structures will become necessary when former political or cultural colonies shake off the Western mode of production.

The bureaucratic management of human survival is unacceptable on both ethical and political grounds. It would also be as futile as former attempts at mass therapy. This does not, of course, mean that a majority might not at first submit to it. People could be so frightened by the increasing evidence of growing population and dwindling resources that they would voluntarily put their destiny into the hands of Big Brothers. Technocratic caretakers could be mandated to set limits on growth in every dimension, and to set them just at the point beyond which further production would mean utter destruction. Such a *kakotopia* could maintain the industrial age at the highest endurable level of output.

Man would live in a plastic bubble that would protect his