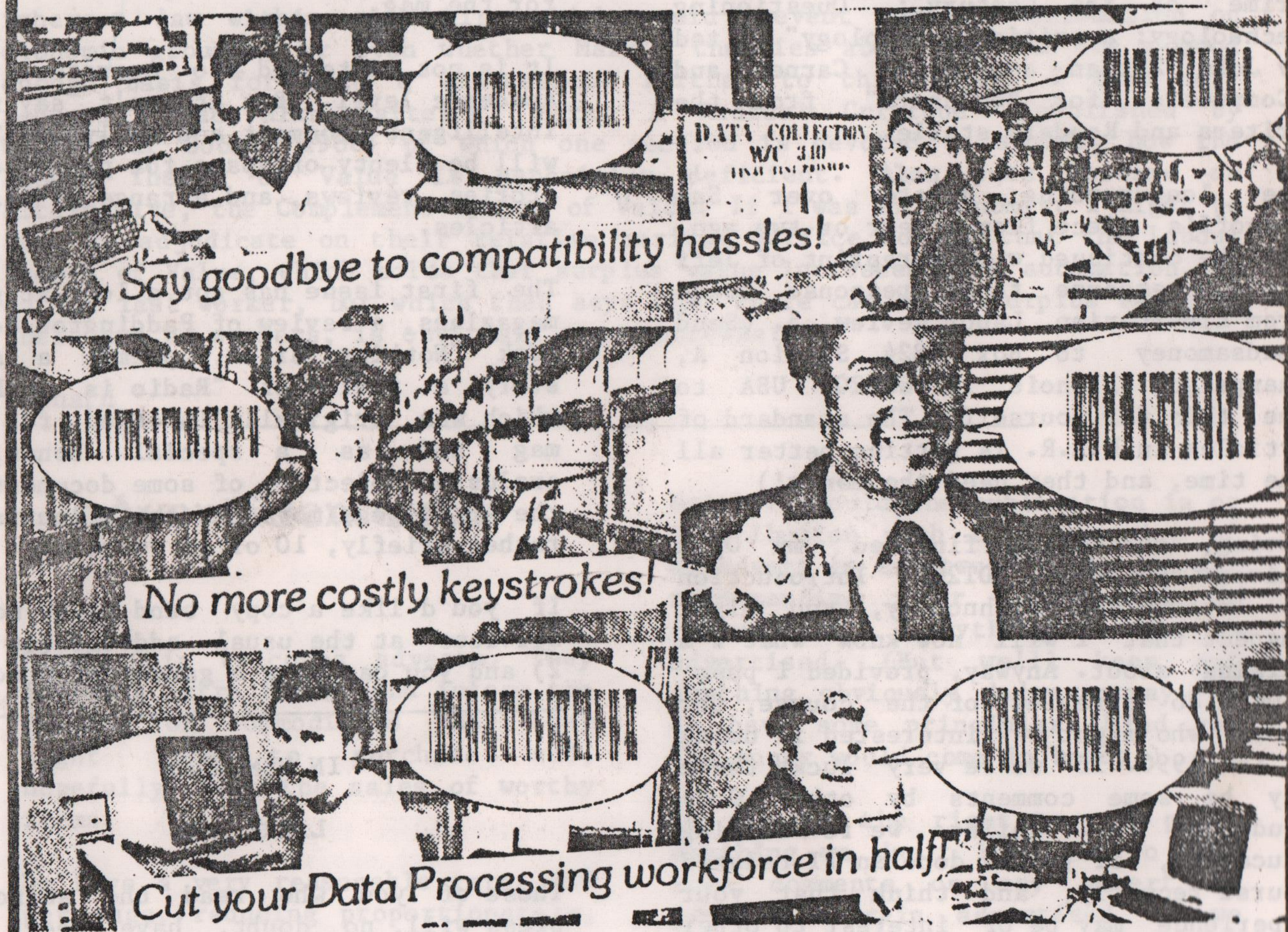


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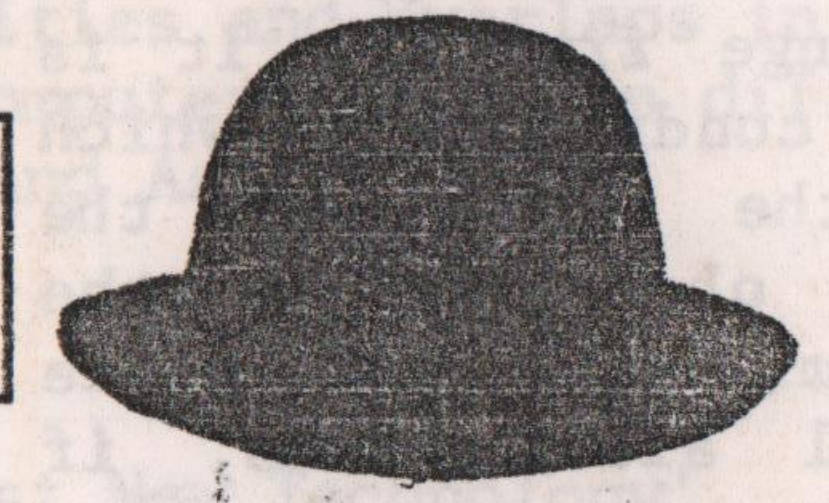
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BLACK CHIP

A CRITICAL JOURNAL OF NEW TECHNOLOGY

NEW SERIES

ISSUE 1



90p



The barbarism of modern times is
still enslavement to technology.

Editorial

Welcome to the first in a new series of Black Chip, now published by CGH Services. Those of you fearing a capitalist take-over can rest assured that this is not the case. CGH Services is my trading name as a self-employed person and Black Chip is but part of my trading business.

For those of our readers for whom this is their first issue of Black Chip, the magazine is devoted to a critical perspective on the world of new/information technology. That critique can range from how it is produced to the conditions in which it is used; the nature of the hardware or the obsessions of the software; the military and state use, to radical alternatives, if any. This magazine questions everything to do with information technology. But that doesn't mean we reject everything just for the sake of it.

Getting this issue out to you has been delayed by a variety of personal and technical problems. These, I hope, have now been resolved, until the photocopier breaks down again. I'm hoping for a regular quarterly publication from now, but for the time being, the subscription will be for four issues.

If you'd like to contribute, please send in items in hard copy. We print with no reduction or enlargement so you can tell by looking at a page in this issue what size to do your submissions. Alternatively you can send items in on disk (5.25" PC or QL) or 3.5" (ST). Please check that your word processor's files are compatible with ours! This will allow us to sub-edit your masterpieces. In the last resort we can even transcribe your handwritten missives.

Anything articles that you send in that need to be returned to you, or any correspondence that needs a reply, must be accompanied by an s.a.e. (or I.R.C. if outside UK). Correspondence not for publication should be clearly marked as such.

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SUBSCRIPTIONS

Black Chip depends on subscriptions to keep going. The reason is simple. Every copy sold through shops costs you 90p, of which we get less than half (if this is distributed through one of the distribution agencies). It's nobody's fault, that's just how the system works, and if we had to depend on it for our revenue we'd have to increase the price to £1.50 or more.

So, send us your money. The label on your wrapper should indicate when your subscription runs out. If there are any queries please write to the Subscriptions Manager at our usual address.

The rates for subscriptions are:

UK: £4.00 for 4 issues.
Everywhere else £6.00 for 4 issues.

(The difference being due to the difference in postal rates, even when using printed paper rates.)

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(Please note that Cymru is not part of England.)

Richard Alexander, editor and publisher.

unions and the new technology

UNIONS AND NEW TECHNOLOGY INTERNATIONALLY (UNTI): an information exchange and referral service

Unions and New technology Internationally (UNTI) is a small initiative in the making to help trade unionists, labour researchers, resource centres and projects working on the deployment of new technology, to communicate with each other.

UNTI is concerned with the disparities and overlaps in the working conditions of workforces faced with computerisation in different parts of the world - particularly in Europe and Asia.

AIMS:

'Democratic Struggles Inside and Against New Technology'

The aim is to help trade unionists challenge the monopoly over the development and deployment of new technology; UNTI addresses itself fundamentally to the formulation of practical strategies of resistance to new technologies. It wishes to promote solidaristic links between computer programmers, systems and software designers, and those groups of workers (users) who are today facing computerisation with no control over the design of their tools or the work process as a whole. These links we feel can considerably enhance the bargaining capacities of workers on an area which has exclusively been a management prerogative. Counterplanning and democratic control over computer work as a labour movement strategy is one of our key aims. And in keeping with these aims, we feel that grass roots oriented 'alternative' computing practices (open access databases, worker computer clubs, shopfloor computer networking nationally and internationally) both within unions and outside (e.g. among unemployed and community) will help in developing parts of an overall alternative new technology strategy for the labour movement.

UNTI understands the deployment of new technologies, project of Capital and the State to fragment, divide, and police the working classes and other social subjects. A major objective is therefore networking between permanent workers on the one hand & unorganised casual/contract/home based office workers and others. These attempts would be to create a solidaristic exchange of information on working conditions and to stimulate new ways of thinking within the union movement and those beyond the reach of unions, about new forms of collective organisation, since the workplace is being fragmented and diffused both locally, nationally and internationally.

Services to be offered:

1. Information about different types of worker/union responses to New Technology, more specifically about bargaining at the work place (e.g. model agreements, examples of demands made on Health & Safety issues etc.);

2. Information about trade union or other educational courses on

unions and the new technology

new tech.;

3. Production of an occasional information pack consisting of reproductions and abstracts from articles and documents, plus news etc.

4. Providing news about training courses for unionists and workers on computer use.

5. Register of Resources: films, videos, audio tapes, publications and abstracts on on-going new technology research, bibliographies, material on worker- or community- controlled experiments in computer use and listing services from the radical computing community.

* Materials distributed would also be available on Floppy-Discs, recorded in machine-readable <ASCII> form.

Current Resources:

Presently we are running this operation on a voluntary and part-time basis, through a small research unit called 'Computerwork' (based in France). On an APPLE IIplus computer we are developing two separate databases which are, the Worker-Friendly Database 1, (an extensive address file) and The Grassroots Computing Register (a resource index...). If and when financial support becomes available these databases will be electronically accessible through the Geonet Electronic Mailbox or a similar service.

Needs:

UNTI is in its embryonic stages and can only survive with help and support from unionists, researchers, and existing networks. We would like to see UNTI transformed from its present form (run by a single organisation) to a more general open ended service (in future) that could be absorbed by existing organisations and networks in different parts of the world. In the first place it needs your response, plus any suggestions and ideas. Secondly it needs associates or collaborators - preferably experienced on new tech. and/or in alternative information and communication services. Thirdly, of course it needs finance. Minimally this means donations to cover postage, telephone and computer costs.

For further information write to: COMPUTERWORK c/o Harsh Kapoor, 34980 Combaillaux (par St. Gely du Fesc), FRANCE.
*Tel.: (33) 67842759

Supported by:

'Terminal' (a radical computing journal in France), the Union Research Group (Bombay), International Labour Education Research and Information Foundation (The Hague).

MICROS IN DEVELOPMENT



IIA INTERVIEWS VITA

-Analysis by Gary Garriot of
VITA (Volunteers in Technical Assistance)

IIA: What are some of the most exciting projects using micros in development?

GARRIOT: I'm going to take a little license with this one because it begs a question that I've been feeling strongly about for some time. In my work at VITA, I have had the opportunity to experience the process of computerization within our own office as well as in our overseas projects. I've also participated in innumerable meetings and conferences, nationally and internationally, and I have come away from it all with the belief that the framework is wrongly formulated, i.e., what we should be concerned about is not "micros in development" but rather "the problems of development that might employ microcomputers as tools towards finding solutions."

There seems to be a natural inclination — perhaps it is only human nature — to place our trust in technological progress as the source of solutions to development problems. A difficulty with technological determinism is that it is very easy to confuse ends with means; in other words, to start with technology looking for problems to solve instead of vice versa. This phenomenon is often characteristic of those who are somehow involved with the efficient application of information technology and dissemination of its benefits. Users, however, frequently have a more realistic picture.

A couple of years ago, VITA polled hundreds of development-related organizations and individuals on applications of microcomputers to their operations. The results indicated that computers were being used in the Third World for pretty much the same purposes for which they are utilized in industrial countries, i.e., accounting, inventory control, administration, word processing, statistical analysis, banking and information management. There is not anything particularly glamorous about these applications! While the wide versatility of micros means that new uses in health and communications, just to mention a couple of other fields, are

possible, most are just replacing human "grunt work" by number crunching and generating reports on searched databases or word processing that otherwise consumes a lot of manual human energy. Designing and making computers work in these applications certainly requires a great deal of creativity. But as projects they would hardly appear "exciting" (except perhaps to the applications programmer or administrative assistant).

So with all due respect to the nature of the question, I am going to defer more comment on specificity since I think it takes away from the need to deal with problems first and technology second. Readers can get a flavor for some sophisticated applications through such books as *Microcomputers and Their Applications for Developing Countries* (Westview Press-Boulder/London, Board on Science and Technology for International Development), *Managing A Nation: The Software Source Book* (Global Studies Center, Arlington, VA) and *The Guide to Software for Developing Countries* (IBM Area South, Neuilly sur Seine, France).

IIA: How does information technology impact traditional societies, their cultures, values and daily lives?

GARRIOT: There really is not a whole lot known about what effect information technology has on traditional values and cultures. I am not aware of definitive research and evaluation at the present time. This may change, however, and meetings such as this (IIA'87 Conference) could help focus such research. Only recently has a new international journal *Information Technology for Development* appeared, published by the UK Council for Computing Development, Oxford.

In designing some studies, I believe some note should be made of a past era (1950's-1960's) when another set of technologies, mass media (basically radio and television), were touted as means of changing traditional psychological values seen as archaic and detrimental to "modernization." After a decade of pushing development communications

projects, the results were disappointing, and by the mid 1970's some researchers were starting to focus on the structural causes of development, i.e., built-in inequities in the international information and economic order which tended to keep the poor sectors of LDCs poor, despite the best efforts of "developmentalists." The current glamour of computers and communication satellites seems to overshadow this experience, but hopefully it will not be lost on those who hope to design meaningful evaluations of IT and its effects.

IIA: Many people think that computers and informatics is high technology, and IT is not relevant to the needs of the poorest people in a country. What is your point of view?

GARRIOT: Well, IT is high tech; there is no doubt about that. But appropriately used, it certainly can benefit people through making organizations operate more efficiently. One of the maxims we have learned in the years since "appropriate technology" became the 'Holy Grail' of development is that it takes a great deal of skill and engineering to make technologies work at the village level. Technologies that appear "simple", i.e. internal combustion engines, represent enormous effort in their design and construction. Yet very few people — anywhere — really care about what goes on under the hood of a car, and basically the same is true of computers. We want to use them as tools to solve an existing problem that overtaxes an existing manual system of some kind. I suspect that history will indicate that much of the super-interest in IT as yet another panacea was misplaced. As computers are increasingly seen as adjuncts to a learning process which includes making systems run better, IT will probably be viewed as sophisticated "jeeps" which to be sure require human resources and money as inputs to use them effectively, but are nevertheless no more than tools.

MICROS IN DEVELOPMENT

Now whether the poorest of the poor will benefit from IT is still an open question. IT does represent powerful technology and one can, I guess, always assume that new technology that empowers the poor at the expense of the already powerful will be resisted. However, I know of no empirical studies that show this to be true, and certainly everyone I know is struggling to make IT relevant to a multitude of development projects which will hopefully result in more and better services being delivered to the poor. We need to guard against the tendency to be enamored of the technology for its own sake (the classical "technological fix") as well as "technologically dumping" whereby certain companies tend to make their older or obsolete models available to LDCs. Only the ability to do good needs assessments, i.e., the capability of becoming "intelligent shoppers," will mitigate against possible detrimental results from the marketplace.

IIA: Do you think that informatics will widen or close the development gap between the richest and poorest countries?

GARRIOT: This question is related to the last, and I can only reiterate that the jury is still out. I hope that the appropriate use of IT will narrow the development gap. If I did not think there is a substantial chance for this to happen, I would not find the area very rewarding to work in. The major caution is to ensure that IT does not promote the traditional forms of dependencies, i.e. as national governments and supporting economic groups become more "hooked" on foreign technology, that they in turn do not become more powerful at the expense of those who already marginized. This phenomenon is well known and should, I think, be studied carefully regarding IT. Certainly microcomputers in this country have been a tool for empowering groups that have a social cause of some kind, but it is naive to expect the same effect in a lot of other countries.

IIA: Do you think that the development organizations (NGOs and governmental) give enough emphasis to informatics for development? What organizations are using informatics?

GARRIOT: Again, my perception is that there has been a tendency to overemphasize the importance of informatics in the sense of meeting development objectives (except perhaps for a handful of countries in which electronics exports form a major share of national revenue). Since most countries will be in the aggregate IT users rather than IT producers, it is very important to be clear on what the national objectives for development are and then to select and develop, if necessary, the tools, including IT, that meet those needs. But this is the ideal situation. In reality, both NGOs and governments must usually depend on external sources of financing or outright donations of hardware and software, so, in fact, choice is limited and it is often a situation of "use it" (the opportunity) or "lose it."

IIA: How much of VITA's assistance is in the informatics sector (percentage)?

GARRIOT: VITA's projects all use IT for project support as well as data collection in the field. All of our home office functions are automated, including bibliographic databases on documents and our volunteer skills bank. Most of the documents collection is microfiched and we use electronic mail and online database searching when appropriate to supplement in-house document searches.

IIA: What are VITA's overall short-term and long-term goals in the area of using micros for development in Third World countries?

GARRIOT: Again, we see micros as very useful tools as long as the needs are carefully understood and appropriate training, and logistical and maintenance support provided. In the short-term, we will continue to train others in information management as well as improving our own capability to apply the technology to appropriate management and communications

requirements. We plan to install a LAN in our headquarters office during 1987.

And we hope that further experimentation and demonstration of packet radio techniques will help relief and development officials decide whether and how to use this exciting, new and inexpensive technology. Long-term, we are simply hopeful that micros along with other technologies — hard and soft — will assist in solving the problems of development. However, we are mindful that most of the seemingly intractable problems of development have political, not technological, roots. So while we do not have much to do with policies and political decisions, we are not naive enough to suppose that technological solutions operate in a vacuum.

IIA: What role does VITA play in development within the United States?

GARRIOT: VITA's work is exclusively on behalf of development efforts in Asia-Pacific, Africa and Latin America. For a few years during the 1970's, VITA did have a domestic program under the Equal Employment Opportunity Commission.

IIA: What specific achievements has VITA accomplished in 1986 (including the satellite project)?

GARRIOT: In terms of working with information technologies, VITA's main accomplishments during 1986 included the establishment of a ground station at headquarters for making digital contact with UoSAT-2, a digital store-and-forward satellite in low earth orbit which is itself a prototype of the PACSAT project conceived as a serious communications system for rural and isolated areas of the world. We have been in almost daily contact with UoSAT-2, and through it communicating via packet radio technology with a limited number of radio amateurs worldwide. Receiving error-free messages from a satellite on a computer connected to low-cost radio equipment is a fascinating, almost magical experience. We also

(continued on page 7)

demonstrated the benefits of packet radio technology in Ethiopia earlier in the year when two of our volunteers successfully retrofitted inexpensive computers and digital communications "black boxes" onto an existing high-frequency radio link. Both CARE and the Ethiopian Relief and Rehabilitation Commission were favorably impressed with the technology as providing an alternative to voice communication which is prone to errors and transmission repeats.

IIA: What countries has VITA assisted and how?

GARRIOT: VITA's technical information service is available to individuals or groups in any developing country. We also staff and manage field projects in the Central African Republic, Chad, China, Djibouti, Guinea, Haiti, Honduras, Mali, Somalia and Thailand.

IIA: Has VITA encountered any unique problems introducing modern technology into the culture of developing countries?

GARRIOT: Every case is unique and it is difficult and usually dangerous to make sweeping generalizations. Personally, I believe that the term "technology transfer" puts the wrong emphasis on what is usually a complex process of group or individual preparation with a successful transfer coming at the end of that process. Also, almost all technologies change as they diffuse, which is why an experience in one part of the world is rarely directly transferable to somewhere else. There are many social, cultural, political, environmental, cost, and material factors to consider. This is why VITA always tries to customize its technical information service to the specific needs of the requester.

IIA: What suggestions do you have for standards in technology sharing between developed and developing countries?

GARRIOT: This is a difficult question to answer. I am not quite comfortable with the word "standards." Certainly we all should strive for more cooperation so that technology which is transferred is meeting real needs. I really think it is a question of disparate groups and classes of people in developing countries receiving enough training and knowledge so that they, not us in the developed countries, can make appropriate technological choices and decisions. Becoming "intelligent shoppers" is a slow and painstaking process. But I believe the emphasis should be on how to do good technology assessments based on need and not simply on what the technology is capable of from a hardware/software point of view. □

-Dr. Gary Garriot is the Technical Advisor for Volunteers in Technical Assistance, a private non-profit international development organization. VITA makes available to individuals and groups in developing countries a variety of information and technical resources aimed at fostering self sufficiency.

CREATIVE SCIENCE

SCIENCE FOR PEACE, LIBERATION FROM OPPRESSION, PRESERVATION OF THE NATURAL ENVIRONMENT, AND EXPANDED LIFE OPPORTUNITIES.

CONTACT: Mark Ackary. 36 Mayfield Road, London N8 9LP. 01-341 2048.

The need for a "creative science."

Abundant food production, greatly expanded communications, longer, more varied lives; these and much more have been the benefits for many of the modern technological revolution. The destruction of the very basis of existence for many others, pervasive pollution, the threat of total annihilation, the disruption of the world's biological system, have been some of the ill-effects of this same revolution.

Science and technology pervade our lives. To make things around us serve as tools for our purposes is a hallmark of being human. In the modern world, our whole way of life depends upon a plethora of technological systems. Despite this, the crucial role which science must play in solving the vast problems we face, and in bringing even more benefits, does not receive sufficient attention.

The meeting on 11th April will discuss the formation of a network of people concerned about the present march of technology and science, and wanting to promote in the political arena the idea that

science and technology should, and can, be directed towards beneficial and non-destructive objectives.

The fundamental starting point of this network will be that science today is dominated by the production of weapons and military systems. The pre-eminent role which soldiers, and the contractors who profit from supplying their demands, have in the political agenda and the economic structure of the western industrialised economies means that a lamentably small amount of research work is directed towards areas which might yield some results in improving people's quality of life. Side-by-side with destructive weapons technology stand the other inappropriate high technologies produced by companies concerned solely with profit and not with conserving the environment or assisting people in poor countries who wrestle with basic survival problems.

Faced with this behemoth of technological irresponsibility, progressive people wanting to divert the course of events in

constructive directions have largely tended to reject high technology and ignore science as inhuman and too coldly rational. They accept that sophisticated modern technologies, notably in computers, can yield beneficial and liberating results, but the huge extent of the ill-effects of science has caused them to fail to embrace the positive potential of constructive, creative, science.

The green movement has tended to reject elaborate science and technology altogether, at least notionally. It believes that anything big must necessarily be bad, that simple technologies are always preferable, that working close to the earth is always desirable, and that economic growth is unavoidably damaging to the environment. Unfortunately, some basic inconsistencies in this position have made it appear increasingly untenable, but it has influenced others to have reservations about taking on a positive approach to the immense potential for good that properly guided science and technology could have.

The purpose of this new network is to cut this gordian knot and make a creative way forward, countering the senseless technocratic right by combining the nurturing approach of the greens with a commitment to material well-being and ecologically sensitive growth. It will proceed from the premise that technology always operates in a political context. Technology can be directed to solving problems and enhancing people's lives as much as to doing the opposite. No strategy to improve the lot of the unfortunate in the world, and to conserve the natural environment, can ignore the economic engine, built around particular technologies, which enables social progress or prevents

it. Any plan for progressive action must take on the need to restructure the entrenched technological, and therefore economic, apparatus. This can only be done if the incessant urge of scientists and engineers to discover new things and invent new applications for them is channelled towards what is useful and life-enhancing. This will mean encouraging not only work of some immediately apparent use, but also fundamental science, with a view to opening new horizons. In seeking to work out such a strategy, it will be important to look not just at solving problems but at expanding possibilities. This will contribute crucially to the forward-looking character of the network.

The initial project, it is envisaged, will be a series of talks on themes and subjects relevant to the overall goals of the network. People proficient in a particular area would discuss it in the context of its potential contribution to a humane technological apparatus. Not just subjects in science and engineering, but also questions of economic management, political issues, educational aspects, and other topics, might be included. The talks would be publicised as widely as possible. Audiences would be encouraged to actively participate in discussions. It is hoped that the series of talks would form the nucleus of a permanent organisation to encourage discussion through publications, conferences and political lobbying.

Out of this programme I would hope that there would emerge a high profile organisation devoted to actively promoting science for peaceful, life-enhancing purposes.

Mark Ackary.

(Personal note: I have become interested in these issues as a result of working on unemployment and the future of work, and campaigning for safe energy policies.)

DATA PROTECTION

Dr Charles Oppenheim

INTRODUCTION

The purpose of this article is to introduce you to a piece of legislation which was passed in 1984, but only really began to have a significant effect a few weeks ago - the Data Protection Act. The paper is split into two parts. In the first part, I will define a few terms, describe the so-called Data Protection Principles, and discuss the Data Protection Registrar and his duties. In the second part, I will discuss some of the problems and limitations of the Act as it presently stands.

So let us begin with Some definitions, and the major principles. First of all, some definitions. The Data Protection Act, which was passed in 1984, really started to take effect on 11th November 1987. This is because since that date any individual has had the right to inspect computerised records pertaining to them on computer files, and has the right to have errors corrected - and can claim for damages for any errors or omissions. It is worth stressing something right away - computer users - and these include anyone with their own PC as well as large corporations with mainframes or minicomputers - should by now have registered under the Act. Certain types of use - for example for home and recreational use ONLY, are exempt, but these exemptions are small in number and tightly defined. Failure to register means that any computer operations involving personal data will then be running illegally. The Registrar can close down any such illegal operations, and the people involved can be fined. So you can see, this is not a trivial matter, and it is important to know whether one ought to register or not. As it happens, the Registrar, an amiable man called Eric Howe, has not - so far - been rushing around prosecuting people left right and centre for failure to register, despite the many hundreds of thousands of computer operations in the UK that should be registered, but are not; but I have no doubt sooner or later he will pick on a target pour encourager les autres. It is worth stressing that Howe is a genuinely helpful man who is anxious to see the Act work as best

DATA PROTECTION

it can, and his reports to Parliament are a model of clarity and some humour.

Essentially, you must register if you process personal data using automatic processing equipment. The Act is careful to define what it means by 'personal data' and what it means by 'automatic equipment'. Essentially, personal data is ANY data about ANY living identifiable individual wherever he or she happens to live. The term used in the Act for such individuals is **Data Subject**, and that is the term I shall use from now on. Notice that the person - the Data Subject - must be living, and must be identifiable - so overall statistics would not qualify if you could not identify the individuals. However, the Data Subject need not be named - his or her National Insurance Number or other code or mnemonic makes him identifiable. To give an example, the term "The Pope" is a living identifiable individual even though a full name is not provided. Certain types of personal data - in particular, the Data User's **Intentions** towards the Data Subject - for example "I intend to give this man a 5% pay rise" - is exempt from the provisions of the Act.

There are some other terms used throughout the Act that are worth noting:

Data User An organisation or individual who controls the content or use of a collection of personal data that is processed, or is intended to be processed, automatically. A Data User is not a particularly helpful term, and the term "Data Owner" is more descriptive and accurate. However, "Data User" it is.

Computer Bureau An organisation or individual who processes personal data for Data Users, or allows Data Users to process personal data on its equipment.

Automatically Processed Employing equipment operating automatically in response to instructions given for that purpose. This includes all computers, and automated microfilm retrieval systems. It does cover punch card systems, paper tape, videodiscs, and paper in a form suitable for OCR (optical character recognition) equipment. Curiously, this feature of the Act will broaden the scope of the Act as time goes on, as improvements in OCR equipment will eventually include ALL paper records, as all will

DATA PROTECTION

eventually be capable of being automatically processed by OCR hardware.

An organisation, or an individual can in theory be a Data User, or a Computer Bureau, or both.

In general, manual records - items on paper, or card other than punched cards, and so on - are not covered by the Act unless they have links to computerised records, e.g. by means of a common Accession Number.

It cannot be stressed too strongly that it makes no difference if the data are in the public domain. All such data fall under the scope of the Act. One of the more controversial aspects of the Act, is, of course, the wide exemptions that the Government can impose on data required for national security, the prevention or prosecutions for crime, or indeed, because of the requirements of "any other enactment". "Any other enactment", of course includes the Official Secrets Act, and as a result, the Government has the right to exempt ALL Government information from the provisions of the Data Protection Act. Whether it chooses to invoke this particular Clause of the Data Protection Act remains to be seen, but its current approach to official secrets does not give cause for optimism.

WHAT IS THE EFFECT OF THE ACT?

The Act establishes a **legal right for individuals to seek compensation** for damage caused by the loss, destruction, or unauthorised disclosure of data, or for damage caused by inaccurate data. This feature of the Act is one of the major benefits of the Act for individuals. Should it be proven that you have suffered damage because of inaccurate data - for example, you fail to get credit because of inaccurate comments about your payment record, and you have to get a loan at a higher than necessary interest rate, you can retrieve any excess costs you incurred; or if you should be on a list of consultants, and you are not on it when you should be, or your address is given incorrectly, then you can sue for loss of business. This latter feature is not commonly recognised by most computer operations. So, one should not just think of the Act in terms of credit ratings; if you are in a business and feel you should be on a computerised list of professionals, you can use the Act to get yourself on that list.

DATA PROTECTION

The Act further establishes the right for individuals to apply for **rectification or erasure of inaccurate data**. It also gives an individual the right to **inspect data** of which he or she is a subject. The Data User must comply with such a request within 40 days, but has the right to make a charge up to a specified maximum fee (£10) for this service. Of course, if you ask a Data User for your records, and the Data User looks at your record and thinks "My God! We should never have said these things about him!", promptly deletes or sanitises the record, and then gives you a copy of the revised record, you have no proof that there was ever anything wrong with your record. The Act has, of course, heavy penalties for such an action by a Data User but since proof is virtually impossible, in real terms this part of the Act is meaningless.

The Act obliges Data Users and Computer Bureaux to **register their use of personal data with the Data Protection Registrar**. Data Users must register the personal data they hold, the purposes for which they use such data, where the data is obtained from, who is allowed access to it and the countries to which it may be transferred. Initial registration lasts for a maximum of three years, then must be renewed.

Data Users and Computer Bureaux must **abide by the Data Protection Principles**. These are as follows:

1. The information to be contained in personal data shall be obtained, and personal data shall be processed, fairly and lawfully.
2. Personal data shall be held only for one or more specified purposes.
3. Personal data held for any purpose or purposes shall not be used or disclosed in any manner incompatible with that purpose or those purposes.
4. Personal data held for any purpose or purposes shall be adequate, relevant and not excessive in relation to that purpose or those purposes.
5. Personal data shall be accurate and, where necessary, kept up to date.
6. Personal data held for any purpose or purposes shall not be kept for longer than is necessary for that purpose or those purposes.

DATA PROTECTION

7. An individual shall be entitled -
 - (a) at reasonable intervals and without undue delay or expense -
 - (i) to be informed by any data user whether he holds personal data of which that individual is the subject; and
 - (ii) to access to any such data held by the data user; and
 - (b) where appropriate, to have such data corrected or erased.

8. Appropriate security measures shall be taken against unauthorised access to, or alteration, disclosure or destruction of, personal data and against accidental loss or destruction of personal data.

The first seven principles apply to Data Users; the eighth to Computer Bureaux.

The Act also establishes a number of offences for non-compliance with the Act, and creates the office of the Data Protection Registrar, who is responsible for implementing the Act.

THE TIMETABLE

Some of the provisions of the Act have already in force for some time. The main features of the timetable have been as follows:

- | | |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nov 11 1985 | Registration commences - Data Users and Computer Bureaux had six months to submit registration forms. |
| 10 May 1986 | Closing date for registration. It was an offence to hold personal data after this date if registration had not been applied for; it was an offence to carry on as a Computer Bureau if registration had not been applied for. Also, Data Users became liable to pay compensation if they hold inaccurate data. Courts could order rectification or erasure of inaccurate data. |
| Nov 1987 | Data Subjects finally have the right to inspect their records. |

DATA PROTECTION

OTHER POINTS

There is no question that many computerised activities fall within the Act, and must be registered - it is an offence not to do so which renders employees personally liable in law, and also could lead to the destruction of the records in question by a Court.

It makes no difference how public or private the information is (unless, of course, you are the Government); how important or how trivial it is; and it makes no difference as to whether the individuals' names are important to the database or not - all must be registered.

There is another point for which I offer no solution at all. I already know of organisations where staff have expressed willingness to Register, only to be told by the Management of the organisation that they are not going to register. Typically ignorant comments such as "the information is public anyway" are given. This, as I say, is not uncommon, and poses real difficulties for the staff involved.

THE POLITICAL CONTEXT OF THE ACT

The Act has been widely criticised on many grounds - it encompasses all sorts of innocent information (for example, an internal telephone directory of a company has to be registered if produced by computer) and thereby causes a lot of bother and cost for all companies that use computers; secondly, the really juicy data - that held by the Government on all of its citizens - is largely exempt and could at a moment's notice be made entirely exempt from the Act's provisions; thirdly, it fails to cover manual records, and a lot of the most sensitive records, such as those held by doctors and by educational establishments, are frequently manual; finally, it lacks any real teeth - the Government has no genuine interest in protecting its citizens from computer record abuse, and passed the bare minimum legislation to satisfy international obligations and to protect British interests in the increasingly lucrative information distribution business. As an example of the lack of teeth, an

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individual cannot go to Court to sue a computer operation for errors unless he or she can **prove** actual monetary damage; not if it simply has caused him or her acute embarrassment or simply has the potential to cause monetary damage; and a user has no rights to track to whom inaccurate information has been passed in the past.

Another problem with the Act is the sheer difficulty of finding out what is held about you. In order to use the Act, you go to a major Public Library (your local one will tell you where the nearest suitable one is) and look up the microfiche records of companies and individuals who have registered under the Act. So you must **guess** which companies may have records on you. You then note their addresses down, write to them, ask if they have data on you and if so what and what they charge (if anything - some people make no charge). Quite properly, the Data User in turn may require you to prove that you are who you say you are - otherwise anyone could write in asking for information held about a third party.

The problem with this procedure is that there is no realistic way to find out which people hold data on you; you have to guess; you can't try everyone - there are hundreds of thousands of outfits registered. So in real terms, you are likely to select only the obvious candidates - banks, credit ratings agencies (there are several, such as CCN, who almost certainly have credit ratings on you), credit card companies, etc. An awful lot of inaccurate, biased, damaging information may go on being used, unnoticed by you.

It would be sensible if the companies who registered were classified into the uses for the information, so you could check on all those companies in the business of giving credit ratings, or criminal records, etc. Sooner or later, I suspect this will be offered to the public; but for the moment the Act remains virtually impossible to use.

CONCLUSIONS

It is difficult not to be cynical about this Act. It is a half hearted piece of legislation, a nuisance to many companies, little help to the people whom it is meant to help, easily evaded by Government, limited in scope. You still cannot find what the police think about you, or what many of your doctors or schools and universities say about you. When the time finally arrives that all information (other than some obvious exemptions that people would agree were realistic) held about individuals shall

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be available as of right to those individuals and that the individuals shall have their attention drawn to the fact that information is held on them - in other words the onus is on the Registrar to tell us, not for us to look for needles in a haystack - then Data Protection really will have arrived.

I would be interested in hearing from readers of any experiences they have had in dealings with the Registrar or in using the Act's provisions.

BYTES AND P.C.'S

If you are wondering what should be the right level or tone in your writings should be. Please note that we don't expect writers or readers to have a degree. On the other hand the level of complexity of the subject area means that superficial analyses will get people nowhere fast. So we need to be able to tackle technical aspects of IT and, if necessary, explain those aspects to those people less familiar with them. Therefore, if you are using technical terms in your text, please include a glossary. References to other texts quoted, or referred to, is also to be welcomed.

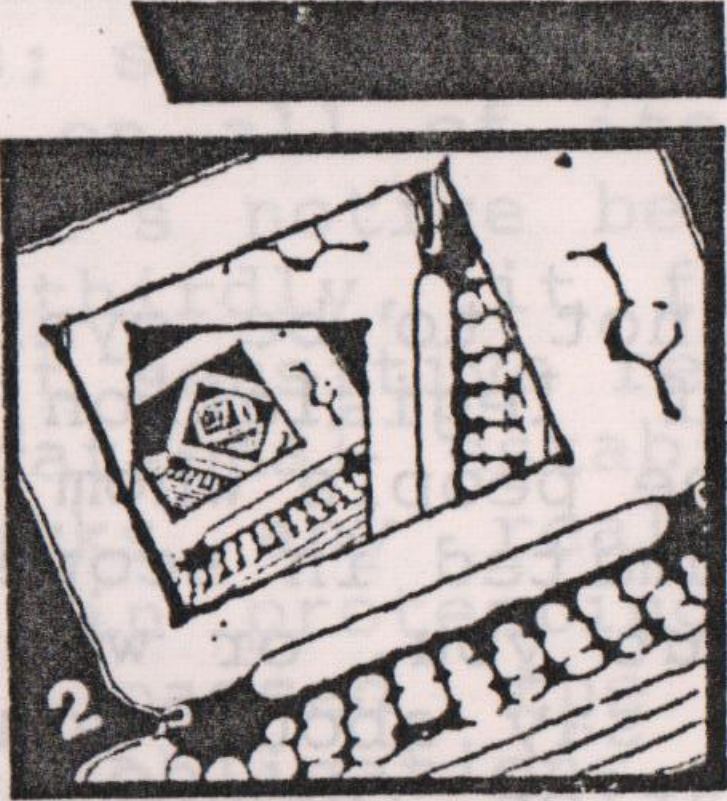
I'd like to thank everyone who has continued to send exchange copies of the mag during our enforced absence from the market-place. Your support has been and continues to be vital, and we hope you like the new style Black Chip. At least it will be readable!

Most magazines can be improved, and we're well aware that this is one of them. To grow means to increase sales, and readers can help by taking a bundle to sell locally or to friends. If you take 5 or 10 to sell locally, you can have 30p per copy sold.

To grow also means to spread the net wider, to draw in new writers and engage with new ideas. The political "line" of Black Chip is currently agnostic. We're dubious of most creeds and beliefs including those of the techno-bureaucrats. We are living in a transitional era. The outcome of the struggles over informational technology are intimately linked to all other struggles. Any separation is doomed to failure or irrelevance.

Richard Alexander, publisher and editor.

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New Scientist

The ideology of the computer is a mass of contradictions. Everywhere, imbeciles shout as loud as they can, to add their tuppence worth. Scientists lay claim to being "informed", knowing only the technical side and nothing of the social impact. And every fool who has read Aldous Huxley's "Brave New World" feels obliged to preach constantly about the menace of the machine.

Someone here says that the dawn of a new era of leisure is here, over there someone says that our brains will be fried and language will be replaced by logical commands, yet another says that computers will control us in microscopic detail. This essay is a start on debunking this mythology, and attempts to place it in its true light. And it is only a start; New Technology will still be new for a long time to come.

First some definitions. The "New Technology" is basically "Computer Technology". The latter has evolved over the decades, the principle component now being the microscopic integrated circuit - the famed microchip. With the invention of the microchip, and its continuing improvement, the computer came of age. Unwieldy, slow, clumsy systems were replaced by smaller, quicker and far more powerful computers, and from here on human capabilities couldn't keep up. New Tech is microchip technology applied, to production lines, information processing, arcade games, or whatever. Automation is New technology that replaces human labour and/or skills.

By and large, the predominant attitude is luddite. Machines are "evil" (verging on devilry), crippling; alienation issues forth from a mystical source within, ushering in the home office and home shopping thus obliterating human contact and becoming the universal mediation.

The new technology is better suited for information retrieval than powering a locomotive, but it is nonetheless machinery. If you're going to be a luddite, you can't get out of smashing all machinery, all being "evil" and all causing death somewhere, somehow. Perhaps the needle of the loom has put them to sleep a la sleeping beauty.

There is undoubtedly reason to be worried about the effect of a VDU upon health, but whether this justifies never using one is very doubtful. Limits must be put on uninterrupted use, and this will become a focal point of office-workers struggles. But to use this argument for the wholesale elimination of technology, placing it in taboo, uses fear to perpetuate ignorance.

The worries about the end of direct human contact can be taken slightly more seriously. The boom in the human computer market of a few years back put units into an astonishing number of homes, sometimes providing each member of the family with their own console (sic). Even though the main use for these machines was game-playing, the potential for home-shopping and home-working was obvious and tentatively realized.

The end of human contact is not in sight, however; or rather, human contact will be conducted along the same dismal lines as now. With home working and home shopping, the family unit will be kept intact, probably reinforced due to a proportional increase in time spent with family compared with time spent with friends. And whether holidays and trips to concerts and performances will move entirely into the realm of televisual representation is doubtful - won't there be an urge to escape from the house you've spent the day labouring in?

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(It should also be noted that the home office resembles in some ways the cottage industries so beloved by the back-to-feudalism crowd, but with far more communication.)

What can be assured, is that human relations won't improve of their own accord. The new technology offers opportunities to increase the fragmentation so blatantly evident in, for example, traffic jams, every motorist in their own little box. Now, with the boom in the telecommunications market, which microchip technology made possible, every motorist can be trapped in their own little office, a printer on the back seat. This colonisation of time has been gathering momentum for a long time, and although these latest developments may nauseate us, it won't stop here.

What the luddites virtually refuse to comprehend, is that it isn't machines any more than it is the moon that is to blame for our present conditions. Alienation is the result of capitalist relations, not a mysterious side-product of inhuman cogs and circuits. The machines are alienating in the context of capitalism, neither inherently bad or passively neutral. Although the application of new tech may oppress us, this is not a fault of the component micro-chips, but of the use made of them, a use decided upon by those in power. And so, simple rejection is not the answer - luddites need a sense of the social, and then sabotage begins in earnest.

The next most vociferous ideologues are the paranoiacs. These see a totalitarian state watching us constantly, 24 hour surveillance, control on a scale never even imagined before. A camera in every room, plastic ID cards needed for every act, privacy an impossibility. Every financial deal is monitored, every drop of information stored and filed, even seemingly innocuous details are kept and computerised. Nothing is possible outside of circuits, everything is mediated through one centralised state computer.

Information retrieval having been revolutionised by computer technology, this is not quite as neurotic a proposition as might first be thought. Computer technology is especially applicable for this area as it is able to hold vast quantities of information and sort and access it with great speed.

However, the paranoiacs, justly worried by these developments, see only state "responsibility" as a possible response. They want laws passed to safeguard "freedoms". They don't understand two things: one, that computers aren't invulnerable, that they can be used for subverting and can be subverted, and that absolutely watertight programs are an impossibility; and two, that we are made accomplices to our own oppression in this society, that there can be subtlety in oppression.

The damage done through hacking is incalculable, but the "Computer Crimes" squad of Scotland Yard have every reason to be worried, not just about their success rate (low). Stories about hacking are legion: Satellites shifted around in space, Prince Phillip's mail read, bank accounts created, filled and drained, etc. The spread of this activity is difficult to ascertain - hackers can't admit to it. (In the case of Prince Phillip's mail, a prosecution was brought, but the lack of relevant legislation gave the perpetrators no worries.)

New Scientist

Although many of the early home computers were quite primitive, now obsolete, the newer models are as powerful as the expensive mainframe computers bought by companies five to ten years ago, which were so costly in price, peripherals, training and maintenance, that companies can't afford to replace them. Individuals with a thousand pounds can get instant parity, or even superiority, to many companies. This is causing something of a crisis in certain boardrooms. (1). A further mistake made by the paranoiacs is that the state will be sufficiently unified in one supercomputer, which presupposes a minimum of conflicting interests.

Computer technology itself isn't perfected. "Electronic smog" has been found to be the culprit for robots going berserk, radar blanking out and heart pacemakers switching off. This pollution is the profusion of electromagnetic waves being emitted at many different frequencies by an ever increasing number of gadgets - burglar alarms, radio hams and especially personal computers. Although generally the result is little more than TV interference, it poses a serious threat to computerised factories in highly populated areas, and more seriously, the workers there. (In Japan 10 workers have been killed by malfunctioning robots, thought to be due to "electronic smog.") (2)

And, of course, computer designers and programmers are only human. Bugs, some quite major, slip in, some with immediate effect, some dormant, and some problems, such as the storage of fractions, haven't yet been overcome. And as programmers always know more than their employers, quirks and games can easily be slipped in. Computers are only as good as their inventors.

Not understanding the subtlety of control already present in this society (certain newspapers boasted of Thatcher's 1984 as being free of Orwell's nightmare), oppression is seen as something quite alien - even those who see certain measures being introduced consider them alien, intrusions into an otherwise fine system of government. This liberal smugness, as it deals only in possible threats and not in realised menaces, proves itself inconsequential.

Most debate about new technology revolves around work. At last, this is the crux of the matter. What is generally accepted is that high unemployment will be a permanent feature of "computer-capitalism", and that the new technology is the historical reason for this. Appended to this are either the belief in the imminent leisure society and the peculiar joys of round the clock consumption, or a bemoaning of declining standards and the necessity of hard graft.

But! The effect of technology is not limited to destroying jobs and making a predestined proportion unemployed. The inadequacy of such simple cause/effect equations is shown by the boom in the white-collar/secretarial market which is due, in part at least, to the increasing availability and power and decreasing cost of the word processor. The word processor has increased the range and productivity of the secretary enormously. Automation, that is, the technology that replaces manual labour with fully computerised machines (robots), can't be pulled out of a hat and applied instantaneously to wherever one might wish. Computer technology is not therefore simply automisation. Certain conditions must be satisfied - for example, the presence of machinery that can be controlled by microchip. Where the production is identical, pre-designed commodities, e.g. cars or tape-recorders, automation can take place. For word-processors the machinery, typewriters, is being replaced. Certain functions of the typewriter can be automated, like the printing of a letter, but the writing and editing of the letter cannot, as yet, be.

New technology in certain sectors will mean an increase in the quantity of jobs, and each workers' productivity. Some skills will be replaced by others, and there will be both redundancies and vacancies. Where new technology will result in fewer jobs - and has already done so - is in the factories. Robots are efficient, accurate, require neither wages nor tea-breaks and can up production enormously. In automated factories, "overseeing" may become a job in its own right. The computer industry itself will continue expanding rapidly, especially in maintenance roles.

Some jobs in the manufacturing industries, although not automated, will be deskilled by this technology. Skilled workers will find their talents made obsolete, and their privileges (due to the necessity of their particular skills) will be ended, and they will join the mass of unskilled labour.

This is not some sudden turn of the market. This is a deliberate policy to lower wages and inflict some reverses upon the troublesome proletariat, using new technology to compete with factory workers, to replace labour considered too costly, and to reorganise the production process to afford greater control. This is a continuation of capitalist policy in its struggle against workers, which has previously taken the form of assembly line production and containerisation of docks, for example.

There are obstacles to the spread of new technology. In some cases, it isn't economically viable to apply it, the cost of introducing new technology outweighs the cost of labour - in West Germany wages are relatively high, and manufacturers must bring in robots to remain competitive (3), but in Britain, wages being comparatively low, the approach tends to be to try to increase productivity by other means. In other cases, the industry is not of assembly line production, and new technology has less scope for introduction (e.g. ships, aeroplanes, houses).

There is also another problem, one of economics. Profit can only be made on variable capital, that is labour, and not on constant capital, which robots are. In a society based on exchange, value is determined by the only common characteristic of all products, that is labour, measured by time. Each increase in productivity reduces the amount of labour in each product, so that to realise the same amount of value more products have to be sold. This greatly increases competition for markets, between companies and between states. The resulting trade wars (tending towards military continuation) show that capital can't cope with its own increasing productivity. As value tends to diminish, the organisation of society based on it becomes increasingly fragile and barbarous. With profit being made only on labour, Capital's tendency towards complete automation would appear quite unviable.

The net effect of the introduction of new technology is the intensification of the labour market. If wages are considered too high, the management can introduce new tech to increase productivity. Although new tech used in this manner predominantly squeezes industrial workers, the effect is felt throughout the market. The result of industrial high tech is to create a boom in the service sector, as it lowers wages but isn't applied there (there is little scope for its application in cleaning roads and making hotel beds). Not only competition lowers wages - as the productivity is increased, the cost of the means of our subsistence is decreased. Our standard of living may not decrease, but the cost of wages would, making employment more economical again.

While at one end of the market there is large scale capital that can afford new technology, at the other is small capital (family business, enterprise allowance, etc) and intense labour competition. This competition depresses wages and paradoxically, sweat shops thrive. An entrepreneur can hire and fire at will, the threat of unemployment deterring resistance. Small scale capital is constantly being recreated, and is constantly seeking ways of profitably exploiting the pool of labour created by changes at the other end of the market. From the black market, to sweat shops, to hotel slavery, the free market does create jobs, but jobs so bad that unemployment benefit is preferable. Hence Restart.

Automation, due to its enormous potential, effects the global jobs market. Industries that become deskilled and thus require an untrained workforce, can be moved to where there is a bountiful supply of ultracheap labour, the third world, with parent company transporting and installing the technology. Other unskilled jobs can't be moved - the service industries especially (but internationally, the workforce itself is becoming increasingly mobile, getting on their bikes when the mountain won't come to them). Indeed by very dint of the inapplicability of new tech, the service sector has and will continue to expand in the West.

The mistaken belief that technology reduces work, per se, taken to its obvious conclusion, suggests that an age of leisure is dawning. No one will do all those dirty but necessary jobs, and everyone will be able to partake in constant pleasure. Although, as this view's proponents admit, this is a long way off, they see the seeds of it in contemporary decadence and unemployment. The three million, they are the first of the new aristocracy! Work's for suckers! The most striking aspect of "capitalism without work" is the astounding lack of imagination. The "decadence" is merely exaggerated consumption; the leisure society is described in terms of round the clock television; enough to make Fourier turn in his grave. In many ways, these bougeois are merely wishing they could do without the proletariat, whom one day may bury them. Wishing, however, will not save them.

The obvious possibilities for reducing work through the introduction of new technology are tempered by the work found for idle hands, and machines to do. As profit is derived from human labour, and as the aim of the game is the accumulation of profit, this is going to be so. Capitalism simply cannot afford to miss chances to extract more from its subjects, and so its promised consumption utopia rings hollow.

This time is one of transition. The labour market is going through great changes, in the skills required, the places of employment, the geopolitical distribution, the organisation of the working day. Futurology is idle speculation; what can be studied now is the crisis that new technology is part of. Certain symptoms offer many possibilities. The rapid advances made by scientists are making today's computers obsolete, and will inevitably make tomorrow's too. Quite aside from the pure cost of keeping up with the Joneses Ltd, the cost of up-to-date software (especially security software), training staff to use the new system, and the marketing techniques of the computer companies (aiming to "lock-in" customers and milk them like cash cows) is going to be crippling. The computer market is a hive of contradictory activity.

Thousands of questions are thrown up by these developments. We have no answers to these questions, but then, neither does capitalism.

NOTES

- 1) Guardian 21/8/86
- 2) Economist 27/6/87
- 3) re Volkswagen in West Germany, Sunday Times 28/11/82

EDITORIAL COMMENT

The piece printed above came from a magazine called "Modern Times", costing 60p. Their contact addresses are: BM-CRL, London, WC1N 3XX or Box 14, 136 Kingsland High Street.

Like all pieces printed in Black Chip I would welcome responses to the above essay. Personally would like to see a debate on whether there is any inherent law within capitalism which would prevent complete automation on economic grounds, or even whether Marx's theories about Capital are a good enough basis for such a discussion. Further to this point, I have very recently read Alan Carter's "Marx: A Radical Critique" (published by Wheatsheaf Books, 1988) of which one section is devoted to showing how the Labour Theory of Value is especially deficient. Alan puts forward an alternative, the Complement Theory of Value. If I was an economist I might be able to adjudicate on their relative merits. Suffice to say that the Labour Theory of Value, which holds that surplus value increases with automation, up to the last worker, but which then says that there can be no surplus value if there are no workers, is obviously wrong somewhere.

Richard

advertisements

Black Chip welcomes adverts. They generate extra income and inform the readers of commodities that they might like to purchase and, hopefully, help the sales of worthy items.

We have a very reasonable rate: £20 per page, reducing proportionately, i.e. quarter of a page is £5.00. Simple and cheap. "Small ads" will be carried free of charge for personal ads, but we will charge a minimum of £2.50 for commercial ads. Alternatively you can have us insert a flyer for you. The cost will depend on the number of copies we are mailing out, so it's best to write first to confirm the price.

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We reserve the right to not print anything we don't like and to make rude comments on any advert or product therein advertised if we feel like it.

Money should not be sent with the advert, advertisers will be advised of any money owing after publication of the advert. Anyone who doesn't pay promptly or who fails to honour any order or who distributes dodgy items will get a nasty little comment written about them in the following issue.

You have been warned.

The Advertising Manager

what's in the next issue ?

The next issue of Black Chip is already being prepared, you'll be pleased to hear.

Already to go in is an article from Pan, on Aspects of Programming Languages, which would have been in this issue if there had been enough space.

There are several books that should have been reviewed for this issue, including Joel Cayford's "Computer Media: Living with Computers", John Chesterman & Andy Lipman's "The Electronic Pirates: DIY Crime of the Century"; "Questioning Technology: a critical anthology" edited by John Zerzan and Alice Carnes and "Computers for Beginners" from the Writers and Readers stable.

The long-running debate over Sam Dolgoff's piece from a year or two ago, will be continued with a reprint of Jeff Stein's response to my response, taken from Libertarian Labor Review 5. (Send loadsamoney to Box 2824 Station A, Champaign, Illinois, IL 61820, USA to see this for yourself. The standard of articles in L.L.R. is getting better all the time, and they need the money!)

Having, at last, finished my Open University course, DT200, Introduction to Information Technology, you might suspect that I will now know what I'm talking about. Anyway, provided I pass, I will do a review of the course, for those who might be interested in doing IT in 1990. If we're very lucky there may be some comments by other O.U. students too. Whilst we're talking education, if you've done an IT related course recently, and think that your experience may be of interest to other people, then do write in.

Well that should give you an idea of what is in store for you next time. Some of it is sorted out, but there's plenty of room for more articles, reviews etc. So send them in.

Back Issues

All back issues of Black Chip are now out of print, and due to various problems, not to mention the general out-of-dateness of many of the pieces, they will not be reprinted. And now the bad news. I will be putting together, over the next month or two, a series of pamphlets featuring "the best of Black Chip". Details will be given in the next issue.

SCANNERS: A NEW JOURNAL FROM CGH SERVICES

Besides putting together this issue of Black Chip, I have also been putting together another journal called "Scanners".

Scanners (named variously after David Cronenberg's film, various scanning devices and a term for readers/viewers) is aimed to cover aspects of Culture, Technology, Media, Language, and stuff like that. There is not, as yet, a clearly defined "line" that it is following, so contributors to the first few issues will be setting the agenda for the mag.

It is not intended to operate at an academic level. But it won't say no to intelligent comment and analysis. There will be plenty of space for poems, short stories, reviews, and a range of feature articles.

The first issue has got a look at games magazines, a review of Paddington Bear's book "Nothing Hill", poems, a short story, a review of "Radio is My Bomb" which was originally intended for this mag and, as a special bonus, an exclusive selection of some documents of the Art Degage movement that flourished, rather briefly, 10 or so years ago.

If you'd like a copy send £1.00 to CGH Services at the usual address (on page 2) and you can have a gander at a copy.

IN MEMORIAM

LARRY LAW

Those of you who read the anarchist press will, no doubt, have seen that Larry Law, publisher and writer of the Spectacular Times books, has recently died.

I'd like to publicly put on record my appreciation of Larry's help in getting Black Chip out to a wider circle of people, and for sending in many useful graphics and cuttings. Without his assistance Black Chip would not have achieved the little it has so far.

Although I only met him a few times, he seemed "a good bloke", was always very friendly and principled. A rare combination. I will miss him greatly.

Cheers Larry.