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**Science, Technology and Society**

**By**

**Dr. Sambit Mallick**

**Department of Humanities and Social Sciences  
Indian Institute of Technology Guwahati**

Now let us come to the major themes of the information society there are three major themes one is information workers in an information society, or information workers in an information economy, political and global aspects and an information culture okay. Now let us see information workers in an information economy. It is clear it from job advertisements at least since the 1980s ones chances of obtaining employment are enhanced by the position of qualifications in microelectronics, computing, systems analysis, telecommunications, operational research, software design, fiber optics, expert systems and so on.

But what does this proliferation of the new job mean, what does it mean, who are these information operatives, I am using Tom's Tanya here, information operatives what contributes, what contributions do their activities make to the pattern of such social relationships okay. First one is very important what does this proliferation of new job description mean, secondly what are these information operatives for terms using the term coined by, I mean information operatives coined by Tom's Tanya.

What contributions do their activities make to the pattern of social relations, central to central too much information society discourse is the contention that information workers are rising to a majority within the labour forces of the advanced societies. But just who are these I mean, it is interesting to see and that who are these information workers if we say information workers in an information economy or information society then who are these information workers unfortunately.

Because they do not actually explain what information is okay, the categories are broad. We can only define them as data which has been which have been organized and communicated, judges rent collectors, they find themselves in this sector. But doctors for instance have an ambiguous of the occupation straddling self-service as well as information centers. Few studies of information war comment on its purpose, function or content.

Without this however we cannot know who makes decisions this is important. What are the parameters which explain information one, what is the purpose function and content of the information, and what is the relationship between information knowledge and power with regard to the social significance of research and development, and who makes such decisions, and on what basis or with what effect.

Masses of computer-generated information confers no power whatsoever on those who use it. Whereas at certain points within organizations it may be crucial to the maintenance of power as it happens post installation also glossed over questions of information knowledge and power, especially with regard to the social significance of R&D. The sheer amount of R&D in any given society does not tell us about these questions.

I mean we learn nothing about the social role of scientific and technical knowledge the price put on it and the power of those who manipulate it, who control it. The fact that R&D is often financed for political rather than social reasons and developed for military rather than economic purposes pulls the rug from beneath the bell inspired idea that universities are crucibles of power in the modern world. The current squeezed on university funding and the politicizing of technology policy makes the idea laughable okay.

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Themes of information society:  
Political and global aspects

- Political choice and participation
  - Instant referendum
  - More informed-decision making
- Accessibility and surveillance
  - More secure society
  - Or, The threat of an Orwellian society?
- Relocation of workers and technology-transfer
  - 'North-South' divide
  - Second silicon revolution

That said having said these changes are occurring and in the occupational structure of the advanced societies, while the relabeling process I mean noted in recent Kumar's reflection on you know post-industrial societies I mean Christian Kumar was a critique of post-industrialism and I mean it still occurs though today these programmers becoming software architects rather than plumber's becoming heating engineers. There is expansion at managerial, professional and technical level okay.

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### Themes of information society: Information workers in an information society

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- What are the parameters which explain 'information'?
  - What is the purpose, function, or content of the information?
  - What is the relationship between information, knowledge and power with regard to the social significance of research and development?
  - And, who makes decisions, on what basis, or with what effect?
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Then two major questions are raised, I mean before coming to those two major questions let us see a strong link between innovation and economic growth. Hence the frequently exposed British worries about the lack of domestic R&D funding relative to other countries, David line argues this. David line poses two major questions which are raised by the discovery information work and an information sector in the economy.

First are the apparently new categories of work and occupation leading to shifts in power is there an emerging information technocracy which is resting power from previously dominant classes. What opportunities for women are opened by the spread of IT, what is the likely effect of IT on industrial relations okay. When British Rail computerized its Fred system for instance many middle managers found their positions were simply redundant and personally in subordinate positions actually discovered that they had new powers of control over the work process.

The second question is how accurate is the idea of an information sector and is there a historical march through the sectors as was examined as was drafted by Alvin Toffler that agrarianism gives way to industrialism and industrialism to information society. This point, this point affects

not only the advanced societies but also those to which the promise is enduringly held out that they may be able to jump straight from a non industrial to an information society.

Is this really possible or does infirmity regime depend upon an already advanced situation when you talk about informatizing, I mean information society does it not depend on an already advanced social setup, economic setup okay. If IT is universal, then whatever kind of IT that you find in US you will also find in Indian, that the IT is also context specific okay, it is also culturally mediated, socially mediated, economical mediated, politically and manual mediated and so on okay.

Then from information workers to an information economy now information workers in an information economy or information society to political and global aspects okay, this is another theme of this is another major theme of the information society okay, that echoes of post-industrialism are again hold with respect to the political and global aspects of the information society.

A common feature of each is that opportunities for political choice and participation will increase okay. The difference however is that the means of implementing this is now visible particularly in the possibilities of two-way interactive electronic networks, the extreme case is that the extreme case is that of an instant referendum in which voters views are converge to canvassed via cable television which allows people to receive as well as transmit signals from their living rooms more soberly IT is seen as a means of enabling an electorate to be more informed or for decision making to be more decentralized.

Those committed to ideals of democratic participation on both the right and the left of the political spectrum may advocate the harnessing of new technologies to such ends, without adequate access to modern means of communication any idea of a just political communities needed is indeed which you may know. But a number of important questions are raised by this not least how the necessary telecommunications infrastructure is to be set up okay.

This is important in the absence of and the policy is also important to examine this to run this in the absence of a coherent policy which is intended to ensure equal access of all to such a communications network it is difficult to imagine how dreams of electronic democracy could be translated into realities. The prominent source of anxiety however is a trait that David Lang suggests that threat which he anticipates that does the widespread political and administrative use of extensive databases which allow for the easy storage retrieval and transmission of personal information portent of future fraught with the dangers of electronic eavesdropping.

On the one hand police, defense, social security and other personnel reassured the public that no inertial person need have any worries about improper prying into their private lives on the other cases of wrongful dismissal or arrests which are traced to erroneous computer files served to quell fears that in fact ordinary citizens may well be at risk but are these computerized forms of surveillance okay.

An intrinsically new departure or do they rather represent an extension of state gardening of information on citizens which has been occurring for many decades is it merely the use of these databases by law and order agencies which creates potential perils for citizens or is a deeper process at work in which more generalized forces of social control achieve more power by computerization and what exactly are the risks involved against which data protection laws and policies are directed is wrongful arrestor the tip of an iceberg the submerged portion of which conceals a fundamental issue of invaded privacy and impound integrity this of course is only one aspect of the state and IT connects okay.

The connections between government activity and economic technological developments are numerous and significant we has bell insisted that the relatively independent operation of economic and political spheres this position is exceedingly hard to justify for what David Lyne it is quite clear that the whole quality and economy are interdependent and the relationship between the two is far from simple.

Bringing the global situation into focus however other connections between the political and economic become clear according to bell I mean there are there are many cases where you will

find as you have already discussed about political choice and participation I mean in the context of instant referendum and more informed decision-making in the context of accessibility and surveillance I mean more secured society or the trait of an Orwellian society I mean in that term.

The prominent source of anxiety that we discussed that the widespread political and administrative views of extensive databases which allow for the EG storage retrieval transmission of personal information or tender future fraught with the dangers of electronic topic or will concept okay or the relocation of workers and technology transfer north-south divide that is called digital divide digital divide what is the digital divide.

I mean the it is the gulf between I mean gulf so far as the accessibility to IT between the developed countries and the developing countries is concerned then you may say one my only developed and developing countries you may say more resourceful regions less resourceful regions you may say in the context of color in the context of class even the gulf between the gulf in the in the accessibility of technologies or IT between the rich and the poor okay.

Between the blacks and the whites between the men and women digital divide it discusses the gulf the gap in the accessibility of accessibility to IT between developed and developing nations okay and it is not totally.

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It is not only the national sovereignty of the of the larger and more powerful countries which is challenged by the power of transnational corporations the phenomenon of the industry alleges and for example of you in the northern hemisphere in terms of the sinking proportion of the labor force involved in manufacturing may be equally well understood as the partial relocation of workers to offshore plants in the south the information society is not inaccurately depicted as a global phenomenon the current expansion.

And development of micro electronics related industries require world market there is no doubt there is no doubt that the technological potential for beneficial change is tremendous and nothing in I mean I mean for example stonyold, Stonier Alph and Toffler and others they make a lot of this angle Stonier reports great gains made in the Upper Volta village of Tonga you know solar photovoltaic empowered grain mill and water pump were installed this is an example what he of what he calls the second silicon revolution.

Such advances he stonyold states correctly are dependent on technology and information transfer that that such changes will take place and that the post-industrial economy will produce the wealth of information to make it all happen is rather more to question okay no as a matter of fact



things are somewhat different despite dreams of poorer countries catching up with richer ones and lived wrong in the industrial era the situation is overwhelmingly not just one of interdependence but of dependence.

While the advanced societies produced silicon chips comprising hundreds of thousands of elements in Africa only one person in 1880 this is the north-south divide this is how the gulf between the rich and poor lessons so far as accessibility to IT is concerned okay far from narrowing the north south divide the evidence suggests that IT helps IT helps to widen it IT in fact has widened the gap between the region for lessons as you want radar observes technological fixes of whatever nature are whatever technological fixes of whatever nature.

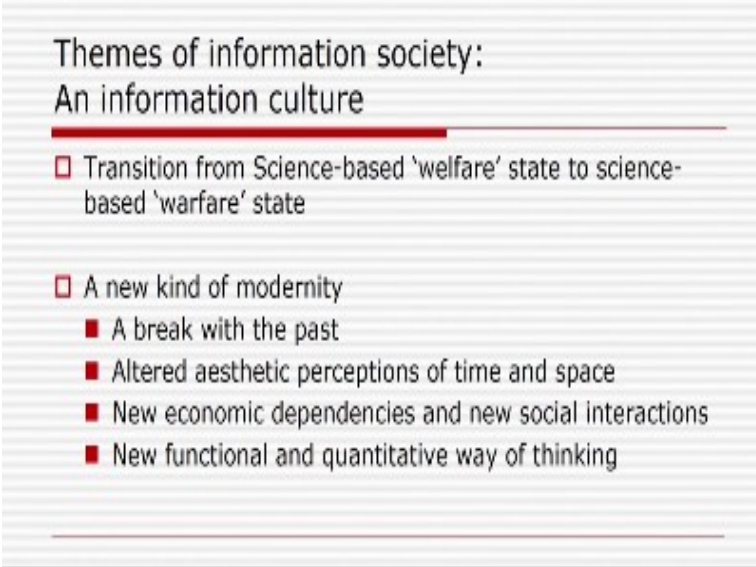
Now are nothing but a drop of water in the sea of reality no treatment of the political in global aspects of IT can afford to ignore the connections between new technology in the continuing I mean new technology and the kind of war like situation which we have been witnessing for more than a century including the two world wars as well as the cold or even the post-soviet debacle okay.

At war like situation okay is created it may be created for oil it may be created for IT, it may be created for a religion it may be created for region it may be created for imperialist expansive okay and like earlier posting astonished on yours focuses on the wealth of information which spells unprecedented affluence both at the private level as well as at the public sector but as Christen Kumar and laconically notes that that the that the science-based welfare state can be rapidly reclassified as the science-based warfare state and we and with greater respect for the the actual history of the last 70 years.

Okay since independent India's independence know whether we I mean it is your science-based welfare state to science-based warfare state has been witnessed okay this has to be examined properly this has to be understood properly okay having dispersed information you know workers in an information economy and political and global effects let us now discuss an information culture as a part of as a major theme of the information society okay as it they this

we have we have already discussed that science-based welfare state to a science-based war fare state.

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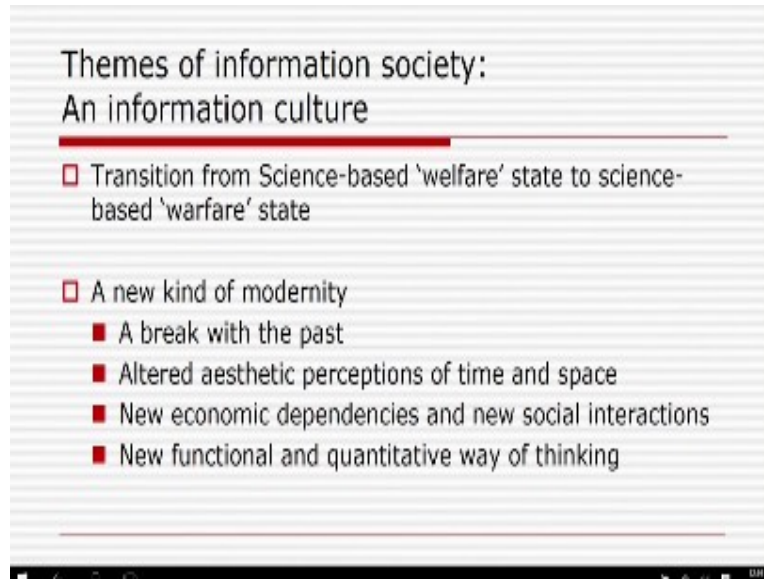


Themes of information society:  
An information culture

- Transition from Science-based 'welfare' state to science-based 'warfare' state
- A new kind of modernity
  - A break with the past
  - Altered aesthetic perceptions of time and space
  - New economic dependencies and new social interactions
  - New functional and quantitative way of thinking

Okay in an information culture we notice a new kind of modernity a break with the past altered aesthetic perceptions of time and space new economic dependencies and new social interactions new functional quantitative way of thinking okay.

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We will discuss this in detail the notional for 5<sup>th</sup> generation of computers okay raises another set of questions besides those of military prowess unlike previous technological artifacts which typically have augmented human energy with improved sources of power though spawned by IT argument and according to some terms seemed the human capacity to think and to reason okay it must be said that though that a while debate over the workplace and employment aspects of IT is widespread and awareness of the political and global dimensions is beginning to make itself felt the cultural questions have not yet have not as yet received the attention they deserve.

Once again Belle's on starts postmodern post-industrial culture make a suitable starting point for Belle a new kind of modernity has been created by the revolutions in transport and communication that have banded together the world economy okay it represents a break with the past okay thus replacing continuity with variety tradition with secret in ship its agent is technology what is it is agent is technology which is which by introducing a new metric and enlarging our control over nature has transformed our social relationships and our ways of looking at the world.

They maintains that technology has been the chief engine off raised standards of living and reduced inequalities created a new class of engineers and technicians who plan work tasks rather than actually performing them brought about a new functional and quantitative way of thinking created in new economic dependencies and new social interactions and altered aesthetic perceptions of time and space.

While Bell believes that cultural issues are of utmost importance he partially disconnects according to the David Line he partially disconnects analysis of them from political or social life each sphere as a different axial principle that of contemporary culture being the desire for fulfillment and enhancement of the self of course while writing or about host industrialism in the 1960sand 70s bell could have had little clearer idea of the rapidity with which the technologies of computing and telecommunications would move to center stage okay.

Consideration of the consideration of the so called culture of information is incomplete without reference to different aspects do human beings remake themselves in the image of their technology if so then there are obvious implications for philosophical debates about the unique place of human beings in the cosmos furthermore there is a scope for critique along ideological lines along different political lines economic lines ethical lines legal lines and it also brings us back finally to the overriding question of this study does IT Anuran acerous into a new kind of society and at this point of further query is highlighted what is the social meaning of the information society is it better understood as a kind of myth or utopia then the social forecast it is more frequently taken to me.

Now let us before starting with new economy new classes let us have a brief critique of the information society for the sake of clarity there are two kinds of information society these is each of which makes two kinds of claims the view popularized in many media and policy accounts stresses the major social changes for the better that follow in the wake of IT information technology this popular version may well be but rest by the findings of social science the other use the other use of the information society concept is more cautious and open-ended here it is a problematic rather than a descriptive term.

The two images of information society overlap the claims made are both analytical and evaluative and the two kinds of claim are interrelated thus both kinds of information society this is argument attempt to anticipate the sorts of social change which can be expected as IT is diffused through different economic political and cultural spheres and both also provide at least strong clues as to whether such social changes are desirable.

This the here the objectives of foregrounding a critique to the information society draws together evidence from a wide range of sources in an attempt to assess both the analytical as well as evaluative claims of each information society theme or thesis the information society idea has both utopian and ideological aspects okay let us see now certain things I mean some of the dangers associated with using the information society concept that is it is ideological aspects okay.

Three are prominent number one it obscures vested interests that are involved in IP and that in fact do much to shape it Is overall direction I mean the when we when I said it obscures vested interests which are involved in IT and that in fact much to shape its overall direction I mean the concept yields no clues as to who wields power who owns I who control cycling who wields power it is it is not no I mean it is it is not repeatedly for instance the popular rated assures us that everyone can own information or the real revolution is personal computer ownership.

But information is not steadily diffused in a general way through all social relations all social strata okay so I mean intellectual and managerial skills are required to exploit information economically and these are unevenly distributed in society advanced hardware and software for information processing are expensive and therefore the few who can afford them are scarcely challenged by others using inferior missiles okay.

I mean the first one is who wields power and the second one the inequalities and conflicts discernible in the surface and often related to underlying contradictions I mean you know conflicting interests between labor and capital such inequalities are felt globally between north and south northern hemisphere and southern hemisphere in the theatre of transnational corporations and military interests and locally whether with the word processor operators lack of

control over her work or the suspected criminals difficulty in gaining access to information held about him or her.

Information power is only a reality when the when exists to the means of collecting storing retrieving and communicating the inference and the second one as we are discussing the inequalities and conflicts discernible on the surface are often related to underlying contradictions I mean these two may be disguised by the information society concept and within capitalism private gain is constantly set against efforts to social inch production in the late 20<sup>th</sup> century and early 21<sup>st</sup> century okay.

What I did what information society has done information society has tried to private edge profit and nationalize loss okay and then in the late 20<sup>th</sup> century and the early 21<sup>st</sup> century the latent potential for trade in information for this entry to become for this entity to become a commodity is being realized while many undoubtedly in from this process others note public libraries and private service broadcasting are both time on it is concepts which public status is under straight as information has a price put on it okay.

If you look at new integrated services digital networks what do they mean they mean more efficient information services but higher costs for ordinary telephone subscribers okay another discordant element which may not qualify as a contradiction in the same sense is the collusion of military with microelectronic interests in the modern world the same technologies who is award purposes and actual achievement in many cases are to reduce drudgery increase efficiency conserve resources.

And promote mutual communication are also dedicated to hostile destructive and electrolytes the regardless of any justifications which may legitimately be presented for expanding electronically an essence defense capabilities most discussions of on the information society comes still in the background the huge military impetus to IT research and development ideally then the first one we have discussed who will spout and a second one the inequalities and conflicts discernible on the surface are often related to underling contradictions.

Okay and these two may be discouraged by the information society concept yeah within capitalism you know what we find that loss each nationalized whereas profit is privatized and thirdly the arrival of the information society appears as an entirely natural event the outcome of progressive tendencies within Western industrial societies it may be revolutionary in its consequences such that it represents a new era in human history but it is simultaneously the obvious and logical way forward witness.

Let us let us witness the posture struck against any who bear questioned the ways in which IT is implemented okay by arguing that the information society has significant ideological aspects we do not want to suggest that it is some kind of dominant ideology accepted by the masses for any given population of any given population on the contrary there is plenty of evidence of coolness fear and resignation towards as well as sober and realistic acceptance of the new technologies likewise.

It should be stretched that using the term ideological does not mean that there is a deliberate conspiracy to deceive the general public by using the information society slogan okay if this is correct then the however they the effect of using it is to disguise the reality of powerful interests and beliefs at work within it on the other hand it is clear that notions like the information society have become working reality for many educational institutions neatly fall in line with pleas for closer ties with industries businesses computerized some most successfully some soon discovering.

They are encumbered with encumbered with digital white elephants the kind of critique to which this section on the critique to information society aspire sketches both the sense of potential for socially appropriate development of information technology without pretending that it can occur without considerable struggle on several fronts and the sober realism of the died without succumbing to see are negativism or pessimism what is a lie to critique liberal critique if some questions will come up then we will address I mean but we must try to place them in the context of a normative and critical social analysis okay.

You know in order to so both the enormity of the obstacles to be overcome and possible groups to their realization the young credibility gap between the futuristic forecasters and fantasies on the one hand and the hard realities of government transnational and military involvement in information technology demands the sense of urgency within the information society problematic it also points up two points a vital role for serious social analysis within the social making process analysis which is not simply set up within either optimistic or pessimistic scenario from here onward what we are going to do we are going to discuss a marriage of convergence okay.

I mean what may be the possible social impacts of okay what are the what are the factors which impact which influence I okay what are the factors as we discussed the military factor the commercial factor and the government factor okay these three factors okay they influence the decisions within IT the power relations with the United the social relationships that IT has been able to forge okay.

The in quickly very quickly we will discuss these factors because it is well known that that is why I gave you the example my atom bomb was created I mean it is in the interest reform it was a part of military technology I mean there is a part of war technology it was also aimed towards imperialist colonialist expensive okay and military factors commercial factors and the government factors they very much influence the shaping of IT okay.

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