Information, Computer Software, and the Evolution of Relations of Production

THE INCREASING IMPORTANCE OF INFORMATION

If public goods are defined as the products of high overhead, low marginal cost industries, then information is indeed a prototypical public good. Its marginal cost is virtually zero. If the popular wisdom, that we are becoming more of an information economy, is correct, then the tension between the existing system of social and property relations and optimal economic performance should be severe in the market for information.

How important is information in our economy? According to a widely cited estimate of Marc Uri Porat, in 1967, 25.1 per cent of the US Gross National Product originated with the production, processing, and distribution of information goods and services sold on the market. In addition, the purely informational requirements of planning, coordinating, and managing the rest of the economy consumed another 21.1 per cent. In other words, workers whose tasks are predominately informational account for almost one-half of the total US labour income (see Porat, 1976, p. 1).

Some researchers find this estimate a bit excessive. The bulk of the estimates for the size of the information sector in the advanced capitalist countries runs from around 25 per cent to 40 per cent of the total economy (see Jussawalla, 1988, p. 23). Given the magnitude of these estimates, many have come to see modern capitalist economies as evolving toward information economies.

The reaction of the American Express Corporation in 1982, when it was first included in the Dow Jones Industrial Index, symbolized this trend toward an increasing role for information. The company issued a statement that read, 'Our product is information . . . . Information
that charges airline tickets, hotel rooms, dining out, the newest fashions, and even figures mailing costs for a travel magazine; information that grows money funds, buys and sells equities and manages mergers; information that pays life insurance annuities . . . ’ (Schiller, 1988, p. 27).

Kenneth Arrow once proposed, ‘The meaning of information is precisely a reduction in uncertainty’ (Arrow, 1979, p. 306). According to this perspective, some activities that are normally counted as information producing should be excluded. For example, estimates of the information sector include advertising and marketing activities as information producing. Some advertising is designed to confuse people in order to get an edge on competitors without serving consumers’ needs in any way. Such activities should better be treated as disinformation. This information may charitably be called, ‘local information’. It may reduce uncertainty for the firm that benefits from the information, but it may create more uncertainty for other agents.

The fastest-growing major sector of the US economy is sometimes known as FIRE, an acronym referring to Finance, Insurance, Real Estate (see Niggle, 1988). A good deal of the work in this sector produces outcomes that are of dubious or even negative outcomes. Deducting such activities from the information sector would substantially diminish the estimates of the importance of information in our society.

In addition, some of the apparent growth of the information sector is an illusion that is due to changes in the social division of labour. Jagdish Bhagwati has made much of this effect in his analysis of services. He wrote of the ‘continuous process during which services splinter off from goods and goods, in turn, splinter off from services’ (Bhagwati, 1984, p. 134).

Bhagwati’s discussion of splintering has obvious implications for the social division of labour although he appears to be unaware of the existing literature on this subject (see Chapter 2). As we suggested in Chapter 2, virtually all work involves the processing of information, but we only tend to take notice of the informational aspects of work when it becomes a specialized occupation. For example today, instead of employing a carpenter to build a house, we first employ an architect to design it. Architects are part of the information sector, but carpenters have never been treated that way, even when they performed design work.

We might be misled by this example since modern housing requires a much broader range of materials and functions than earlier housing