

## 2. Social and Organizational Consequences of the Information Revolution

**Speaker: Francis Fukuyama**

**Rapporteur: C. Richard Neu**

The first substantive session of the conference was devoted to a discussion of the social and organizational consequences of the transition into the information age.

The speaker suggested that something we might reasonably call the information revolution has in fact been underway (at least in the industrialized world) for more than thirty years. He noted the declining share of populations in the industrialized world engaged in manufacturing and the rising “information content” of total economic output. As a consequence of this rising information content, the returns to education are increasing, widening the income and social gaps between more- and less-educated workers. As the advantages of education have become increasingly apparent, the overall level of education in most industrial countries has risen to unprecedented levels. The discussion leader noted that these higher levels of education might create new social and political dynamics. And as work has become more mental and less physical, many new opportunities have been created for women.

The information age has allowed and required changes in organizational structures. The rationale for centralized, hierarchical structures--in firms, in governmental agencies, and in other institutions--is passing. When communication was slow, costly, or cumbersome, vertical structures were efficient because they minimized the necessary flow of information and the associated transaction costs. Much cheaper and easier communication is giving rise to flatter structures characterized by much more horizontal communication. Moreover, hierarchies have a way of slowing and distorting information flows. The direct exchange of information through a flat, networked structure that are facilitated by advancing information technology today provides an important efficiency advantage for organizations that can create the right structures.

Flatter organizational structures place a higher value on social networks and on informal communication than did older hierarchical structures. The somewhat ironic result is that advances in information technology have increased the importance of face-to-face communication, and with it the importance of regional concentrations of effort.

Economic and organizational changes can have important social consequences, this speaker noted. He pointed, for example, to the “displacement” of male blue-collar workers from the central positions they occupied in the old, manufacturing-dominated economy. He went on to speculate that the disruption of these traditional economic roles had led to changes in family life--more divorce, less cohesion within the family, etc.

This speaker dismissed claims that the information revolution has weakened social connections in the United States and in other industrialized countries. What has changed, he argued is not the number or the strength of social connections, but their radius. That is, the information revolution has allowed individuals to form social connections with like-minded folk who are not part of the same physically local community. Freed from the restrictions imposed by geography, each of us can now have multiple identities, arising from the different “communities” with which we are able to interact.

The ultimate social consequences of these developments remain to be seen. Will the growing ease of communication lead benignly to improved access to information tailored to individual needs? Or will it create a more fractionated society with few shared cultural values? Perhaps both.

In the political realm, the speaker noted, the information revolution seems to have provided a boost for democracy. It seems also, however, to be leading to more social stratification, although it is not clear that this reflects the rise of information technology per se or the increasing returns to education. (But are the two really different?)

Easier communications have also increased the effectiveness of non-governmental organizations (NGOs). With improved access to information, NGOs are more independent of governments. Sometimes this can cause problems for governments, but we also observe governments “offloading” traditionally governmental functions to NGOs. A problem arises, though, in finding ways to make NGOs accountable for their actions.

Among the hierarchical institutions that have been weakened by the information revolution, the argued, have been traditional political parties. This is reflected in the increased prominence of “celebrity candidates” and “media politics.”

Advances in information technology have, of course, contributed to the processes widely recognized as globalization, the speaker noted. Although it is true that trade and investment flows are not a lot greater (in relation to the global economy) than they were in 1900, the speaker argued that harder-to-measure flows of ideas, people, cultural attitudes, etc. are much greater today than they have ever been. He expressed doubts about the significance of the “clashing civilizations” suggested by Samuel Huntington, arguing that the important divisions in the future will be between nations, societies, and groups that accept and adapt to globalization and those that do not.

International competition, he asserted, requires national governments to push their citizens to ever-higher levels of human capital. In this regard, he contrasted the recent experience of East Asia, where the educational attainments of non-elites have been notable, and much of Latin America, where education remains confined to the social and political elite. In conclusion, he noted falling birthrates in a number of industrialized countries and the consequent need in some of these countries for imported labor. An increasingly important characteristic of advanced nations and societies, he suggested, would be their ability to deal with the social implications of rising numbers of foreign workers.

### *Discussion*

In the general discussion that followed these remarks, several participants took issue with a number of the speaker’s assertions.

- Questions were raised, for example, about the meaningfulness of statements concerning the “information content” of economic output; information has always been essential to production and at all levels of development. A more sophisticated set of concepts and measurement techniques may be required to capture the true character and extent of changes that are being brought by the information revolution.
- Others participants doubted that the alleged non-accountability of NGOs is a serious problem. Why not stress, they asked, the non-accountability of large private-sector firms?
- Yet others argued that, although the importance of informal communication in networked organizations cannot be doubted, this does not necessarily imply a need for physical proximity. The whole point of improved communication, they argued, is to allow distant individuals to approximate the relationship shared by people meeting face to face.

One participant called for more consideration of how improved communications is changing the way that individuals spend their time and what the social consequences of these changes might be. He argued that a key characteristic of these changes is that today, to a larger degree than previously, people can truly choose how to do their work, live their lives, and spend their time. This participant also asked for more thinking about the degree to which the information revolution has increased the transparency of government operations and about the consequences of this increased transparency.

By the end of the discussion a general consensus had arisen that, although the information revolution has been enabled by technology, its course and its consequences will not be fundamentally determined by technological developments. The course of the information revolution will be driven primarily by social factors.