In the Feiwel interview, Arrow (1987a, p. 213) took the view that the usual general equilibrium theory tends to predict convergence, noting that convergence might be very slow because all countries have very different capital structures. Elsewhere, he mentioned ‘an inextricable mixture of individual differences and productivity effects’ and warned against the assumption of homogeneous agents: ‘If agents are all alike, there is really no room for trade’ (Arrow, 1987b, p. 205). This mind-set leads towards a stable future in which new information is unwanted: towards a vision of a ‘world [that] has been made safe for optimisation, and hostile to innovation’ (Davies, 1967, p. 320). To counter this, we need to look closely at the homogeneity assumption and consider carefully what is included in capital structures.

**Diversity: a necessary condition**

The ‘tides among nations’ are diverse. International communication is the international dimension of the information economy: letters, phone calls and e-mail messages; the flow of goods and services with associated transport activities; movements of money and capital; the movement of people as visitors, guest workers and migrants; relocations of head offices. In all such cases, information flows are involved along with complementary efforts to modify the state of readiness of those who might wish to make use of the information (Lamberton, 1998a).

It is, of course, easy to marvel at the changes that have occurred in the underlying technologies, especially in recent decades, and to focus on the speed of satellites circling the globe and the growth rate of the number of Internet messages being transmitted. However, to do so is misleading in several ways. We are offered reassurance that these new technologies are benign and encouraged to focus on their enabling potential, but the enabling effects are offset, to an unknown extent. First, while we should
take account of the diffusion of Internet access, we should not ignore the Internet dropouts (Katz and Aspden, 1998). Second, information and information technology facilitate control, but the ways in which control is exercised will depend upon the objectives being pursued. Private versus public gain issues arise; and as Veblen pointed out long ago, profit can be made by hindering as well as aiding production – an early OECD report labelled some of the actors on the economic stage as ‘embezzlers of knowledge’ (OECD, 1971). This can range from simple industrial espionage (Harris, 1997) to activity on a much grander scale as in CoCom, the US effort over many years to deny the Soviet Union access to technology of supposed military significance (Macdonald, 1998). Or it can be interwoven with organizational change. A recent paper investigates information concealment in the theory of vertical integration (Choi, 1998).

A third kind of offset arises when it turns out that needed inputs, coordination or behaviour patterns are not available or not operative. Babbage’s computer was long-delayed. The market is an enormous information system but information is never complete and always costly. Furthermore, the wishes of many economists notwithstanding, there are awkward attitudes, with associated outcomes, such as those captured through such concepts as organizational obsolescence, lock-in and cognitive dissonance; attitudes that cause relevant information to be ignored.

The seemingly easy way out, the path indicated by ‘rational expectations and all the rest of that devil’s trap’ (Arrow, 1987a, p. 231) has to be rejected. Arrow is correct when he argues that you cannot really have rational expectations – they can only be rational given the information at hand, and not taking account of all one might know. In practical terms, cost effectiveness is the best that might be achieved and optimization remains a mirage. This knowledge gap opens up a wide range of possibilities as additional information – discrete pieces, batches or flows – becomes available with the passage of time or through deliberate action (Lamberton, 1999). Here is a major source of diversity, amongst different contemplated futures, that can even work as a stabilizing influence.

The information intensity of the dynamic reality leads some commentators to try to set aside considerations of scale and scope that have been so important in mainstream thinking. They tend to reason that both small and large firms have access to the new technologies and to infer that small firms will have the same chances of survival as the large ones. Presumably, the world is safe for those who think ‘small is beautiful’ and an era of