12. The ‘knowledge economy’: a critical view

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1. INTRODUCTION

The last decade has seen a remarkable amplification of voices within urban and regional studies literature that places information, knowledge, learning, technology, innovation and institutions at the forefront of their conceptual framework (see Malecki, 2000, for a recent review). Powerful concepts such as ‘intelligent region’ (Cooke and Morgan, 1994), ‘learning region’ (Florida, 1995; Asheim, 1996; Morgan, 1997; Boekema et al., 2000), ‘innovative cluster’ (Porter, 1990; OECD, 2001), ‘informational city’ (Castells, 1989), ‘competitive city’ (Simmie, 2002) or ‘knowledge-based city’ (Simmie and Lever, 2002) have proliferated and dominated urban and regional debate. At the heart of these concepts lies a conviction that knowledge is now the fundamental economic resource, and learning is the most important economic process (Lundvall and Johnson, 1994). More broadly, there is widespread acceptance that society and economy are being transformed into some sort of ‘information society’ or ‘knowledge-driven economy’ (Castells, 1996; Giddens, 2000; Leadbeater, 2000; Cooke, 2002). Some commentators go as far as to suggest that the new society emerging from this transformation could be ‘post-capitalist’ (Drucker, 1993; Leadbeater, 2000; but see also Hodgson, 1999). This, in turn, raises the hopes that within such a society, the old socio-spatial divisions and contradictions of industrial capitalism will fade away as the emerging new ‘knowledge age’ sets in. Indeed some optimistic voices in economic geography suggest that the new ‘knowledge age’ offers better prospects for more balanced social and regional development. Morgan (1997), for instance, has argued that within the new economic paradigm, less-favoured regions have better chances to close the gap with the advanced regions. Meanwhile, Florida (1995) suggests that firms are being transformed into ‘knowledge-intensive organizations’ where teams of R&D scientists, engineers and factory workers are becoming ‘collective agents of innovation’, and the ‘lines between the factory and the laboratory blur’ (ibid., 529).
While more harmonious social and regional development could be seen as desirable, the optimism is not universally shared. Indeed, there are doubts whether such goals can be easily achievable within the framework of the ‘knowledge economy’. This chapter raises some critical points about the nature of the ongoing socioeconomic transformation and its implications for social and economic cohesion.

2. TRANSFORMATION TO THE ‘KNOWLEDGE-DRIVEN ECONOMY’?

Before embarking on a critical analysis of the ‘knowledge-driven economy’, it is worth noting that the concept appears in literature under various names and guises. The four most influential versions could be identified as the ‘post-industrial society’, the ‘information society’, the ‘knowledge economy’ and the ‘learning economy’. While these four concepts could be seen as just the ‘tip of the iceberg’ of a large and diverse body of literature (see Sokol, 2003a, for a detailed discussion), they encapsulate well the main arguments this literature offers in its various streams. In rather simple terms, the ‘post-industrial society’ thesis could be seen as an attempt to conceptualize the decline of manufacturing and the perceived growing weight of services in society and economy. It represents an ‘original’ version of the ‘knowledge society’ in which knowledge is the ‘axial’ principle (Bell, 1973). Under the heading of the ‘information society’, the prominence could be ascribed to Manuel Castells (1996) and his concept of the ‘Information Age’ that places emphasis on the perceived importance of information and information technology. Meanwhile, perhaps the most vivid and influential account of the ‘knowledge economy’ has been offered by Leadbeater (2000). Here, the ‘knowledge economy’ concept is seen to go beyond the preoccupation with ‘information’ and narrow technological concerns in favour of emphasizing the importance of wider social contexts and more broadly defined ‘knowledge’. As such, it nevertheless seems to ‘recycle’ many of the original ‘post-industrialist’ ideas. Finally, the notion of the ‘learning economy’ is associated mainly with the work of Lundvall and Johnson (1994) and represents an attempt to conceptualize the knowledge-intensive economy from the perspective of evolutionary economics.

What is becoming clear from more detailed reviews of these concepts (see Sokol, 2003a, 2003b) is that, despite important differences between them, they also display considerable overlaps. In particular they all seem to perpetuate a widely shared belief that industrial capitalism is undergoing a profound transition towards a new era organized around knowledge, information and technology. Because such an era is supposed to be radically different
from the previous forms of (industrial) capitalism, bold claims have been made about its implications for social welfare and regional cohesion. According to Bell (1973), the new ‘post-industrial society’ would be more prosperous and more equal, not least because technology becomes the engine of rising living standards and reducing inequalities (ibid., 188). For Bell, the ‘labour issue’ would be less important (ibid., 163–4) as the (industrial) working class would shrink if not disappear altogether in the ‘post-industrial society’ (see ibid., 40, 148–54). This has been echoed by Leadbeater (2000) who has argued that ‘[o]ne of the most powerful social groups created by the knowledge economy are so-called “knowledge workers”’ (ibid., 228). Leadbeater, like Bell, has not denied that the new society will be frictionless. However, he has maintained that new conflicts ‘will not be the class tensions of industrial society’ (Leadbeater, 2000, 228), because ‘[w]e are moving into a post-capitalist society’ (ibid., 228). Leadbeater also believes that the new global knowledge economy could be harnessed for greater social progress and inclusiveness (see ibid., 235–6) and the reduction of global poverty and inequalities (ibid., 238–9). According to Leadbeater, this can be achieved primarily through a widespread knowledge-sharing process (ibid., 222, 238–9; *inter alia*). Some optimistic voices within economic geography agree that the ‘emerging knowledge-based economy represents genuinely new and profound opportunities for endogenous economic development, even for the until now less developed regions and countries’ (Maskell et al., 1998, 188). And in a somewhat similar vein, Rutten et al. (2000, 257) suggest that ‘all the world’s regions have a chance of success in the global [knowledge] economy’.

There is no surprise then that various ‘knowledge economy’ approaches have gained a very prominent place in policy and strategy documents (see DTI, 1998a; 1998b; EC, 1996; 1997a; 1997b; EU, 2000; OECD, 1996; see also Rodrigues, 2002; *inter alia*). However, these policy documents often seem to overlook fundamental conceptual problems of such approaches.

**A Critique of the ‘Post-industrial Society’**

The critique of the ‘post-industrial’ thesis has concentrated on the alleged shift from a goods-producing industrial economy to a service-based post-industrial economy. An important challenge to the idea of such a shift was raised long ago by Cohen and Zysman (1987). Focusing on the production side of the economy, they maintained that not only was it the case that ‘manufacturing matters’; manufacturing is, they argued, *central* to competitiveness. Furthermore, services and manufacturing are ‘tightly linked’ and subsequently the succession of manufacturing by services is doubtful. Fundamentally, ‘[t]here is no such a thing as post-industrial economy’ (ibid., 261) insisted Cohen and Zysman. Instead, one could argue that much of the loss of
industrial jobs in advanced capitalist countries could be attributed to the ‘emigration’ of manufacturing to lower factor-cost countries – the process that represented a salient feature of economic restructuring of Western economies at least since the 1970s (see Dicken, 1998; Harvey, 1989, 165). Therefore, taking into consideration a wider global scale, the shift towards tertiarization of the advanced capitalist economies should be seen in conjunction with the emergence of ‘newly industrialized countries’. Consequently, the phenomenon has perhaps more to do with the continuing processes of redrawing the map of global divisions of labour (see below), than with a fundamental transformation towards a ‘post-industrial society’ (Sokol, 2002, 92). On the consumption side, a major problem of Bell’s account of the ‘post-industrial society’ is his failure to consider that people might satisfy their service requirements by investing in goods rather than in employing service workers (Webster, 1995, 44). Indeed, following a detailed analysis of consumption patterns, Gershuny (1978) argued that ‘[i]nstead of buying services, households seem increasingly to be buying…durable goods which allow final consumers to produce services for themselves’ (Gershuny, 1978, 8; cited in Webster, 1995, 45). Such a ‘self-service economy’ amounts to an antithesis of Bell’s ‘post-industrial service society’ (see Webster, 1995, 45).

Meanwhile, contrary to the expectations of the ‘post-industrial society’ enthusiasts, service employment that has been created in the advanced capitalist countries in recent decades is not necessarily of a high-wage, knowledge-intensive, business services or R&D nature (Cohen and Zysman, 1987, 10; Webster, 1995; Sassen, 1994). Quite the opposite, many new service jobs use unqualified/unskilled labour, earning poorer wages than those associated with the skilled labour of the old industrial economy (Sassen, 1994). This signals that the rising living standards posited by Bell (1973) may not be shared across society and that the expected reduction in social inequalities may prove chimerical (see also Castells, 1996; 1997). Further flaws in the ‘post-industrial society’ thesis were highlighted by Webster (1995) who, after a detailed review, launched an uncompromising attack on Bell’s version of such a society. He argued that the rejection of the post-industrial society thesis:

must be quite sweeping, dismissing everything from Bell’s anti-holistic mantra (societies are not radically disjuncted, but intricately connected) to his general account of social change as an evolution through stages towards a ‘service economy’. His explanation of the emergence of the [post-industrial society] is misconceived, his description of an emergent ‘caring’ society unconvincing, and his insistence that it is possible to identify separate employment sectors (which are yet causally connected, with services being dependent on the goods-producing level) is incorrect’ (ibid, 46).
Various attempts to reincarnate the idea of the ‘post-industrial society’ – for instance, in the form of the ‘information society’ – have also faced severe criticisms.

**Shortcomings of the ‘Information Society’ Thesis**

It could be pointed out that ‘information society’ theorists have tried to move beyond the service sector approach typical for writers of the ‘post-industrial society’ thesis and have focused instead on information and technology that supports the creation, processing and distribution of knowledge. This move, however, has proved to be the source of a major problem, most notably in the form of technological determinism (see critique by Webster and Robins, 1986; Webster, 1995; 1997; May, 2000). Castells’ opus on the ‘Information Age’ is a case in point. Indeed, despite being ‘a marvellous work of synthesis’ (Webster, 1997, 106) it also contains several fundamental problematic points. Importantly, Webster noted that the ‘Information Age’ was constructed ‘without a really clear idea of what the author means by information, so much so that quite varied information activities and processes were being conflated and confused’ (ibid., 120). The second major objection Webster highlighted is that Castells ‘shares totally the view that it is changes in the technological system that provide the basis of social advance’ (ibid., 109), which makes him ‘committed to a technocratic view of development, just as much as is Daniel Bell and, indeed, all other theorists of the “information age”’ (ibid., 109). The central belief of such a ‘technocratic view’ is that ‘a certain technological foundation is the prerequisite and determinant of all social and political life’ (ibid., 109) which in turn ‘subverts all ambitions to bring about profound social and economic change, since always, but always, there must be acknowledged a decisive, if imprecise, level of technological foundationalism to any dreamed of social system’ (ibid., 109).

Further critique of various other aspects of the ‘information society’ concept in general, and the implications of information and communication technology (ICT) in particular has been offered, *inter alia*, by Webster and Robins (1986), Lyon (1988), Tomaney (1994), Webster (1995) and May (2000); (see also Schiller, 1999; McChesney et al., 1998; in particular Hill, 1998; Meiksins, 1998; McChesney, 1998). Meanwhile, the ICT-producing sector (creating technology that is supposed to have benign social impact) is, ironically, itself characterized by a sharp division of labour (Henderson, 1989; Massey, 1995), thus perpetuating rather than mitigating social inequality. Various different versions of the ‘information society’ have aimed to overcome the obvious technological determinism and other conceptual shortcomings by embracing wider social contexts. These attempts, however, have
their own problems, as the subsequent critique of the ‘knowledge economy’ and ‘learning economy’ will demonstrate.

**Limits to the ‘Knowledge Economy’ and ‘Learning Economy’**

A sound critique of the ‘knowledge economy’ has been offered by Christopher May (2000, 2002). May disputes Leadbeater’s ‘tone of inevitability’ that ‘denies human agency to do anything but react to change’ (May, 2000, 147). He also challenges the invocation that the ‘knowledge economy’ is a ‘post-capitalist’ one (ibid., 147) and provides convincing arguments that the ‘logic’ of capitalism has not been disrupted by the emerging ‘new economy’ (cf. Leadbeater, 2000, 228). For May, new modes of economic activity exhibit ‘significant continuities’ (May, 2002, 1037) with the previous modes of capitalism, primarily because property rights remain a central element of society’s legal structure (ibid., 1037). Indeed, May argues, the main problem with Leadbeater’s account is its failure to recognize that ‘a key element of the knowledge economy has been the largely successful project to render knowledge as property’ (May, 2000, 146), not least through internationally enforced Intellectual Property Rights (ibid., 147–8). Intellectual Property Rights (IPRs) allow commercial exploitation of knowledge, while ensuring that in the ‘knowledge economy’ (contra Leadbeater) knowledge is not freely spread between people, firms, regions or nations. May argues that:

The rendering of knowledge as property through patents, copyrights, trademarks and other instruments, transforms knowledge that might be regarded as commonly available to everyone into property owned by the few… To enable a price to be taken by capitalists, knowledge must be rendered formally scarce and this is achieved by the legalised limitations of use owners can mandate by utilising IPRs over knowledge of information they wish to control (May, 2002, 1041–2).

For May, this represents a ‘continuing commodification’ (ibid., 1042) through which ‘capitalism has progressively deepened its penetration into previously non-commodified social relations inside and outside the workplace’ (ibid., 1043). The latter process includes ‘continuing moves to bring information and knowledge to the market as commodities’ (ibid., 1043). Following this critique, May moves on to discuss contradictions at the very heart of the ‘knowledge economy’ by examining the claims that ‘knowledge workers’ represent a new dramatically different and empowered form of work (cf. Leadbeater, 2000, 1–2, 228). Offering some vivid examples, May (2002) convincingly demonstrates that far from becoming an ‘axial principle’ in the ‘knowledge economy’ (as posited by Bell for instance), individual ‘knowledge workers’ may face ‘considerable barriers [in] profiting from the ideas and knowledge they originate’ (ibid., 1047). Consequently, more often than
not, inventors, creators or performers ‘need to be assigned to a large company, who then control those rights for exploitation’ (ibid., 1045). Alternatively, they may become ‘brains for hire’ (ibid., 1045), but in both cases, ‘knowledge-worker’s output belongs not to them but to their employers’ (ibid., 1046). In fact, IPRs can ensure that ‘even ideas you have outside the workplace may be owned by your employer’ (ibid., 1046). Typical knowledge workers thus cannot wrench themselves free of capitalist social relations. Even the small minority of high-profile knowledge workers with potentially generous contracts, ‘seldom retain control of the rights to their intellectual output’ (ibid., 1045). This is so, because the ‘underlying property relations – those between labour owning and capital owning groups – remain largely unaltered’ (ibid., 1044). While it is important to acknowledge that alternative arrangements do exist, it could be argued that the knowledge-related workplace represents a significant continuity in labour relations (ibid., 1047–8).

These points have been echoed by Ray Hudson (1999) in his critique of the ‘learning economy’. Hudson starts his critique by asserting that the emphasis on knowledge, learning and innovation is ‘hardly novel’ (ibid., 59) because ‘the creation of knowledge has been integral to the competitive dynamic of capitalist economies since they were first constituted as capitalist’ (ibid., 60). Importantly then, current economic transformations should be seen in ‘the context of continuities and changes within capitalism’ (ibid., 59; emphasis added). Consequently, contradictions of capitalist social relations, the class relations between capital and labour, ‘can be refashioned but not abolished’ (ibid., 66). In turn, these contradictions of capitalism can impose formidable limits to ‘learning’ that ‘learning economy’ theorists fail to appreciate. Likewise, the role of power in shaping production and the appropriation of knowledge is overlooked by the ‘learning economy’ literature. Thus, Hudson has doubts as to what extent the expected benign effects of the ‘learning economy’ can be realized as far as ‘the economy remains a capitalist one’ (ibid., 66). Instead he argues that some recent changes in production are in fact ‘reproducing in enhanced form the asymmetries of power between capital and labour’ (ibid., 66). Hudson (1999) then moves on to demonstrate that the concept of the networked ‘learning firm’, one of the basic building blocks of the ‘learning economy’ concept, seems problematic. Indeed, it fails to take into account ‘sharp asymmetries of power’ (ibid., 67) in inter-firm networks that are increasingly dominated by ‘massive transnational corporations’ emerging as ‘movers and shakers’ of the global economy (ibid., 67).

Critical points have also been raised by Jessop (2000) who assesses the globalizing ‘knowledge-driven economy’ from Regulation School positions. Importantly, he does not see the rise of such an economy as a shift beyond capitalism, but rather as a search for ‘spatio-temporal fixes’ of capitalist contradictions in the post-Fordist era. Jessop argues that far from overcoming
old contradictions of capitalist accumulation, the emergence of the ‘knowledge economy’ means that ‘some contradictions have increased in importance and/or acquired new forms’ (ibid., 68). He then goes on to argue that ‘[k]nowledge has always been important economically’ (ibid., 65) but that what is novel is ‘the increased importance of knowledge as fictitious commodity’ (ibid., 65). Transformation of knowledge into such a commodity lies at the very heart of the ‘knowledge economy’ and can take a form of intellectual property (for example patent, copyright), of wage-labour producing knowledge for the market, or third, of ‘the real subsumption of intellectual labour and its products under capitalist control through their commoditisation and integration into a networked, digitised production–consumption process that is controlled by capital’ (ibid., 65). A ‘fundamental contradiction’ arising from such commodification is between the knowledge as intellectual commons (collectively produced) and knowledge as intellectual property (privately appropriated) (see ibid., 65).

Further contradiction, according to Jessop, arises in the globalizing ‘knowledge-driven economy’ from the conflict between ‘hypermobile financial capital’ (operating in an abstract space of flows) and ‘industrial capital’ (still needing to be valorized in place) (ibid., 69). There is also a contradiction between ‘short-term economic calculation’ (especially in financial flows) and the long-term dynamic of ‘real competition’ rooted in resources that may take years to create, stabilize and reproduce (ibid., 69). One could add that in consequence, a happy and spontaneous reconciliation between ‘financial markets’ and ‘community’ as posited by Leadbeater (2000) may be unrealistic. According to Jessop, a new ‘site of problems’ also arises from the interaction between ‘time–space compression’ and ‘time–space distantiation’. The latter ‘stretches social relations over time and space’, the spatial side of which is ‘reflected in the growing spatial reach of divisions of labour’ (ibid., 70). Thus, instead of a shift towards a ‘post-capitalist society’ (cf. Drucker, 1993; Leadbeater, 2000), we may be witnessing the deepening of the capitalist logic (Castells, 1996, 19; Harvey, 1989, 188; May, 2000, 147).

Such a conclusion in turn casts a shadow not only over the desired outcomes of the transformation to a ‘knowledge age’, but also over the nature of the ‘knowledge-based’ or ‘knowledge-driven’ economy itself. Indeed, if we admit that (even the most advanced) economies have not moved beyond the capitalist market economy, it remains problematic to describe them as knowledge-driven. Rather it should be admitted that the market economy remains largely profit-driven (cf. Sokol and Tomaney, 2001). Within such an economy, the final goal is not knowledge but profit. In fact, the importance of the market imperative for profit is likely to increase with the advances of neoliberal globalization (see Harvey, 1989; Castells, 1998, 338, 342). This is not to say that knowledge does not play an important role; indeed, knowledge can
be a part of a profit-seeking process (and probably always was). But knowledge is neither the only, nor necessarily the most important part of such a process. This point is further emphasized through a critical examination of the knowledge–wealth relationship.

3. CAN AN ECONOMY BE ‘KNOWLEDGE-DRIVEN’?

The logic of the ‘knowledge economy’ is built on the assumption that knowledge is a ‘dynamo’ of economic growth, that is that there is a firm causal relation between knowledge and wealth in a direction that knowledge creates wealth. Knowledge is thus conceptualized as being central to economic success (as the most important if not the only factor of economic development) in virtually all versions of the ‘knowledge economy’ regardless of their theoretical background. Various approaches may have fundamentally different views on what form of knowledge is important for economic development; either tacit (Lundvall and Johnson, 1994; Burton-Jones, 1999) or codified/scientific (Bell, 1973; Leadbeater, 2000), embodied in technology (Castells, 1996) or institutions (Hodgson, 1998; 1999). Various authors may have also different views on how and where knowledge is produced; in R&D departments and universities (Bell, 1973; Leadbeater, 2000), in and between knowledge firms or knowledge corporations (Burton-Jones, 1999; Bell, 1973), through networks (Castells, 1996) or global trade (Leadbeater, 2000) or via ‘organised markets’ and government intervention (Lundvall and Johnson, 1994). However, regardless of these differences, the underlying argument firmly enshrined in them is rather clear: in the ‘knowledge-driven economy’, it is knowledge that drives economic development.

Even critics that question the alleged benign effects of the ‘knowledge’ or ‘learning economy’ seem to admit that it ‘would of course be futile to deny the significance of knowledge, innovation and learning to economic performance’ (Hudson, 1999, 59). Far from disputing this latter statement, it is nevertheless suggested here that the knowledge–wealth relationship needs to be examined in a critical light. The fundamental dilemma (Sokol, 2003a) is whether successful economies are prosperous because they are knowledge-intensive, or whether they are knowledge-intensive because they are prosperous. In other words, the question arises whether the economy is driven by knowledge or whether knowledge creation is driven by the economy.

The answer to this question is far from clear. Jacob Schmookler (1966) for instance studied the relationship between economic development and technological innovation, to conclude that the rates of innovation (considered by many as a vehicle for economic development) may in fact be positively linked to the demand of a given economy, that is, dependent on the economic
growth itself. In a similar way, Paterson (1999) challenges a conventional view regarding the relationship between education and economic development. He argues, building on Ashton and Green (1996), that ‘there is no convincing research evidence that higher overall levels of education and training really are the cause of more rapid economic growth’ (Paterson, 1999, 5). Subsequently, the critical question arises ‘whether education is a cause or an effect of national economic success’ (ibid., 5; emphasis added).

One way to resolve the above dilemma would be to argue that instead of a simple unidirectional relationship, knowledge and wealth are engaged in an interactive relationship in a sense that knowledge can create wealth, but also wealth is needed to produce knowledge (be it scientific discovery, technological innovation, or educated individual). Moreover, the relationship between knowledge and wealth may be mutually reinforcing and resulting in a ‘virtuous circle’ in which investment in knowledge may yield economic benefits that can be reinvested back into the knowledge-base generating further wealth. In other words, a possibility of increasing returns to investment in knowledge should be acknowledged (cf. Solow, 1956; 1957; Arrow, 1962; Kaldor, 1970; Markusen, 1985; Romer, 1986; 1990; Krugman, 1991a; 1991b). Thus, knowledge should be in fact seen as an integral part of wealth (capital) accumulation. This puts the proposition that an economy is, or could be, knowledge-driven in a very different light.

The second problem with the knowledge–wealth formula that features at the heart of the ‘knowledge-driven economy’ concept is its silence over power relations. This is rather disturbing because as Susan Strange puts it ‘[i]t is impossible to study political economy…without giving close attention to the role of power in economic life’ (Strange, 1994, 23). The absence of power in the knowledge–wealth equation thus represents the second fundamental ‘omission’ of the ‘knowledge economy’ concept. Indeed, by inserting power into the equation, the picture of a simple, one-directional relation between ‘knowledge’ and ‘wealth’ disintegrates, and a more complex (but also more accurate) matrix emerges. This emerging matrix sees ‘knowledge’, ‘wealth’ and ‘power’ as being mutually linked through a web of complex, multidirectional, direct and indirect relations. It is useful to acknowledge that the task of thoroughly defining knowledge, wealth and power and conceptualizing their relationship would be welcome here, but is beyond the scope of this chapter. What is important, however, is that the new emerging matrix (abstract and simplistic as it is) offers an alternative way of looking at economic and social processes. Such insights may be necessary when considering inequalities within and between socioeconomic systems.

Indeed, at the very abstract level, the interplay between knowledge, wealth and power is unlikely to result in a sort of equilibrium distribution within and between socioeconomic systems (cf. Cooke, 2002). On the contrary, there are
good reasons to expect that this interplay may be patterned by cumulative effects, leading to virtuous/vicious circles from which highly uneven patterns of ‘distribution’ of knowledge, wealth and power may emerge. On the ‘virtuous circle’ side, it is not difficult to imagine, for instance, how wealth (economic resources), power (political influence) and knowledge (education, skills, and so on), can reinforce each other to enhance success of individuals or whole social groups. On the adverse side of the process, a ‘vicious circle’ can develop, where people and social groups can find it difficult to break from poverty, lack of knowledge (education) and the absence of political voice. The likelihood of the virtuous/vicious scenarios resonates with the suggestions by Ferreira (2001) who has argued that initial educational, wealth and political inequalities within society tend to reinforce themselves. Similar conclusions have been drawn by Gunnar Myrdal (1957) a half century ago, advancing the idea of *circular and cumulative causation.* More broadly, such an approach resonates with the disequilibrium economics theories including Keynesianism (cf. Kaldor, 1970).

The possible negative effects of the *circular and cumulative causation* process can be enhanced in the profit-driven economy, in which the differences in power and wealth are further highlighted. Indeed, in the capitalist economy, the ownership of the means of production is in itself a source of considerable power. As seen in the previous section, this logic (typical for industrial capitalism) has not been disrupted in the emerging knowledge-intensive production, courtesy of continuing institution of property rights. Indeed, as May (2002) has demonstrated, even knowledge workers may find that their intellectual output still belongs to the owners of the Intellectual Property Rights. Thus knowledge, far from dramatically transforming the landscapes of capitalism, is itself subjected to the capitalist logic. Consequently, knowledge, in a variety of its forms, is likely to partake in the process of reproducing existing inequalities (Sokol, 2003a). Within such a process, knowledge distribution ‘remains patterned by wealth and ownership’ (May, 2000, 146).

4. CONCLUSIONS: TOWARDS AN ALTERNATIVE APPROACH

This highlights the need for an alternative conceptualization of the current socioeconomic transformation. Building partly on the strengths of ‘institutional/evolutionary’ and more ‘radical’ approaches, such an alternative could start by acknowledging that the economy should be conceptualized as an ‘institutionalized social process’. As such, the economy (or rather ‘socioeconomy’ or ‘political economy’) is shaped by institutions, which can be
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simultaneously seen as the objects, subjects and outcomes of social struggles over knowledge, wealth and power (Sokol, 2003a). The chapter supports the view that there are important continuities with the past in these struggles and that current socioeconomic transformations in the most advanced market economies are unfolding within the framework of the capitalist political economy. Consequently, the institutions of labour, state (local, regional, national, supranational) and capital (productive and financial), seem to have continuing salience in shaping socioeconomic transformations. However, in what appears to be an increasingly neoliberal profit-driven economy, it is global capital that is gaining momentum, supported by institutions of global economic governance (perhaps emerging as a category of institution in its own right). Indeed, global capital seems to play a pivotal role in shaping the emerging global ‘socio-spatial divisions of labour’ accompanied by global ‘socio-spatial value chains/networks’ (cf. Smith et al., 2002) – two concepts that seem to offer an alternative way of understanding what some observers see as the rise of the ‘knowledge economy’ (Sokol, 2003a).

Viewed within such an alternative approach, the role of knowledge in the economy is indeed changing in that it is increasingly commodified. Thus, rather than dramatically transforming the economic and social landscapes of capitalism, knowledge itself seems to be increasingly subordinated to the ‘logic’ of the capitalist economy. The commodification of knowledge in turn allows for the emergence of what could be seen as a ‘knowledge-intensive sub-economy’, but this has to be seen in conjunction with the growing socio-spatial division of labour within the overall profit-driven economy framework. Therefore, instead of a widespread knowledge-sharing process, we may witness a process of knowledge accumulation as part of a wider circular and cumulative causation mechanism, in which knowledge, power and wealth reinforce each other with significant social and spatial effects. This in turn casts shadows of doubt over the expected desirable effects that the alleged emergence of the ‘knowledge era’ is supposed to bring about. These doubts, together with the question marks over the nature of the ‘knowledge economy’ carry some crucial inferences for concepts in economic geography that take the emergence of the ‘knowledge economy’ for granted and uncritically embrace the idea that knowledge and learning are the most important factors of economic development. These economic geography concepts thus deserve a critical (re)examination.

NOTES

1. Lundvall and Johnson (1994, p. 23, note 1) have for instance argued that ‘knowledge, energy and materials are the basic resources in production rather than labour and capital; knowledge may be regarded as the key resource’. 
2. See Bourdieu (1977; 1984) and his concept of ‘economic capital’, ‘political capital’ and ‘cultural capital’ as a possible way forward.

3. Myrdal (1957) originally introduced the idea of circular and cumulative causation when studying processes of social exclusion (see ibid., 13–20). Subsequently he applied the principle of such causation into the space-economic context. It is useful to note that Myrdal has argued that the negative effects of the processes of circular and cumulative causation can be overcome only when tackled on several or all fronts by intervention from outside.

4. I am thankful to John Tomaney for highlighting this aspect.


REFERENCES


