

# Open systemness and contested reference frames and change. A reformulation of the varieties of capitalism theory\*

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The theory of *Varieties of Capitalism* is conceived as a systems theory. Without using systems theoretical language, different varieties are constructed as entities whose parts are complementary. Critics argue that this thwarts understanding of institutional change. While joining in this criticism I will argue that a systems perspective, more precisely a perspective of *open and relatively loosely ordered social entities revealing systemness*, is appropriate for analyzing politico-economic development. For human survival, political economies need this systemness. A political economy cannot be competitive without a considerable degree of functionality. But a functionalist logic automatically leading to systemness does not exist. As the parts of political economies (firms, stock markets, state departments) are relatively autonomous, the relevant actors often do not know what is functional, and *reference frames*, consisting of economic, social and environmental goals, are contested. Moreover, there are equi-functional ways to bring about identical results. These aspects of openness are the basis for institutional change that is kept in check by forces of path inertia.

**Keywords:** capitalism—varieties of, systems theory, open systems, institutional change, uncertainty, path dependency

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## 1. Introduction: Posing the problem

The Varieties of Capitalism (VoC) perspective is one of the most intensively discussed theoretical approaches in political economy in recent years. This approach is of interest because it sheds light on the fundamental differences between the main forms of socio-economic organization currently existing—liberal capitalism and coordinated capitalism (of which the latter can be subdivided into e.g. corporatist and etatist varieties). Perhaps more important is that VoC theory positions itself in the politically highly relevant debate about whether global competition forces coordinated capitalisms into a liberal direction. The message of the most prominent representative of the VoC literature is that different varieties of capitalism follow different roads to competitiveness and that convergence on liberal terms is not necessary.

VoC theory is one of the few theories where a systems approach in the analysis of social entities still plays a central, albeit undertheorized and implicit, role – long after systems theory largely disappeared from the social science scene in the 1970s<sup>1</sup>. The systems approach is understandable because without coherence – ‘systemness’ – political economies cannot be effective. This approach was already present in early ‘regulation theory’ (Boyer 1986; cf. Becker 1989) and was revived in the work of David Soskice and Peter Hall (2001), where the liberal market economy (LME) and the coordinated market economy (CME) are constructed as entities, whose parts are supposed to be complementary to one other – ‘one set of institutions is complementary to another when its presence raises the returns available from the other’ (Hall and Gingerich 2001, pp. 1f) – and functional for the performance of the whole. This functional relationship between parts and the whole is characteristic of systems.

A major criticism of the VoC approach has been that it has difficulties in explaining institutional change other than of the very incremental sort because as configurations of complementary elements, capitalist varieties are understood in a way that either nothing or the varieties as a whole (‘the system’) will change (Thelen 2004, p. 3). Like systems in classic social scientific systems theory where, in analogy to biological organisms, the parts have been assumed to exist by

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<sup>1</sup>Classic social scientific systems theory was developed in anthropology in the 1920s and then entered Sociology in the following decade where it came to full blossom in the work of Talcott Parsons (a compilation representing his work is Parsons 1977). In the 1950s and 1960, when it also reached Political Science, it was the dominant social scientific theory. It conceived societies in analogy to biological organisms and its overarching question, how can we explain the survival of society, was also inspired by biology. Approximately 25 years ago it quickly lost influence because of its inherent functionalism, difficulties in coping with social change (prominent critics were Gouldner 1971 and Giddens 1977) and the general reorientation of the social sciences since the 1980s away from grand theory and holistic reasoning towards middle range theories and empirical work. Most social scientists still employ some sort of systems theoretical language, however.

functional necessity, varieties of capitalism are assumed to be rigidly structured and highly path dependent. However, in most countries a trend towards (more) liberalization is visible, both in political economies that have already been relatively liberal (USA, other Anglo-Saxon countries) as well as in political economies with a strong coordination component (on the European continent and in Japan). Barriers to trade and competition have been removed, the stock-market capitalization of firms has increased, state companies have been privatized, employment protection has been reduced, social security and welfare regulations have been tightened and benefits have been cut (Korpi and Palme 2003; Kvist and Meier Jaeger 2004), even if social expenditures – particularly pensions and health care costs – have, largely because of demographic ageing, risen. The VoC approach is aware of these changes (cf. Hall and Soskice 2001, pp. 53ff) but it understates the extent of change by stating that ‘because of comparative advantages, international competition mitigates in favour of national diversity rather than institutional convergence’ (ibid, p. 50). Most importantly, it has difficulties in finding the theoretical instruments to analyze these changes. Very recently some progress has been made in papers addressing the topic of change (Hall 2005a; Hall and Thelen 2005), but it still remains unclear how change is related to the configurations of complementary elements characterizing varieties of capitalism. Will complementarity be damaged by change?

Because of its inability to satisfactorily cope with the developments just mentioned and its rather rigid conception of complementarities, the VoC approach has been criticized many times, particularly by researchers from or related to the Max Planck Institute for the Study of Societies in Cologne (Höpner 2001, 2005a; Jackson 2002; Streeck 2002, 2004 and 2005; Streeck and Thelen 2005), the Warwick Business School (Crouch 2005a and 2005b; Crouch and Farrell 2004, Morgan 2005) and in recent writings by ‘regulationists’ from CEPREMAP in Paris, such as Amable (2003, 2005) and Boyer (2004, 2005). These scholars also regularly point to problems with the very concept of complementarities. Their criticisms are important and will be scrutinized here. Some other critical points, particularly the regular confusion of ideal types and real cases and the half-hearted use of a systems theoretical framework leading to an under-theorizing of reference frames in the VoC literature, will be added.

While the weak aspect of the VoC theory is its rigid conception of complementarity, the weak aspect of the critiques referred to is that they do not formulate an encompassing alternative. Therefore, what *we have to look for is a theory that is not rigid and does not have fundamental difficulties in explaining change, but that at the same time acknowledges the necessity of a systems character of competitive political economies*. In this paper, I want to argue that the solution to this question is to maintain the systems perspective of the VoC literature, but to conceive political

economies as *open systems*.<sup>2</sup> Societies, political economies and other social entities are not systems like biological organisms or machines. They are not so 'perfect'; they are marked by conflict and dysfunctionality and their structures are less determinate, with space for development in different directions. Therefore, social systems such as political economies have to be understood as open systems. Implicitly, arguments of a number of critics of the VoC literature also move in this direction (see below), and recently Peter Hall (2005b, p. 375) rejected the idea of varieties of capitalism as systems in the classic sense: 'I am skeptical that the social world throws up anything as coherent as a "system" with "imperatives" that some institutions must be created to fulfill'.

Open systems are systems (or to be precise *system-like entities*) whenever they perform. Without a certain degree of systemness, i.e. of functionality of their parts in relation to a reference frame of goals such as employment and GDP growth, political economies cannot 'perform', i.e. remain competitive. At the same time, these systems are open systems because of their multi-layered, contested and often contradictory reference frames consisting not only of goals such as maintaining competitiveness of firms and advancing national economies as locations for investment, but also of goals such as job security, generous social benefits, gender equality or environmental protection. An aspect indirectly facilitating openness is our limited capacity strictly to determine functionality in advance. Furthermore, political economies are 'open' social systems because many of their parts, particularly individual companies, are relatively autonomous (Tolliday and Zeitlin 1991; Morgan 2005, p. 415f) and hold reference frames of their own. The latter renders open systems loose systems that, moreover, leave space for equi-functionality where different configurations of elements might bring about the same results. In general, the openness of social systems reflects the fact that people are divided into groups with different interests and ideas. When the forces of openness are very strong, they might even bring about systems failure, i.e. such a low level of systemness that a political economy loses its competitiveness.

Openness also reflects the fact that *real varieties of capitalism or politico-economic systems diverge from ideal-typical varieties of capitalism* – a conceptual distinction

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<sup>2</sup>The following is essentially based on Becker 1988. Earlier ideas pointing in the direction of open social systems are present in the work of Robert Merton, ideas that experienced some revival in the 1960s (representative texts are collected in Merton 1967; originally 1949). In this context, Nicholas Demerath III (1967) formulated the idea of different degrees of 'systemness', which is important in this paper. In his work on organization theory, Richard Scott (2003; 5th edition) summarized these and subsequent theoretical developments under the heading of 'open systems perspective'. Scott (p. 24ff, p. 77) also mentions ingredients of open systems as defined in this paper, such as 'loose coupling' of 'semi-autonomous' parts. And like Luhmann (1984), he particularly stresses the open boundaries of such systems. Apart from this aspect, open systems theory is a relatively isolated part of his book, however, and he does not discuss the interplay between systemness pressure and openness.

that is important in this paper. In the Weberian tradition, typologies consist of ideal types: idealized, but not fictitious, constructions of reality. Typologies are pragmatic devices required for bringing order to comparisons, but do not cover every aspect of empirical reality. They are different from classifications or clusters where cases represent types (as in the phrase ‘the US *is* a liberal VoC’). In the context of typologies as understood here, complex cases – political economies as well as, for example, welfare states or democracies – never represent ideal types, they approximate them. Ideal types may be reformulated, but in principle they are fixed constructions while cases are historical entities and may change their location on the axes between the types (Dogan and Pelassy 1990, p. 174). This point has to be stressed because the distinction between ideal types and cases is a weak point in the VoC literature (see also Crouch 2005b).

Subsequently, I will critically present the argument of the VoC theory, elaborate the problems of complementarity and functionality, construct political economies as open and loose social systems, and in that context discuss comparative institutional advantages. Then, I will present real political economies as heterogeneous entities that are always distinct from ideal types. Finally, I will touch on the issues of change and path dependence.

## 2. Complementarities in varieties of capitalism

Theories about forms or varieties of capitalism have been developed for several reasons: sometimes simply to illuminate different regulative modes; sometimes for political reasons to demonstrate the social and economic superiority of a specific form; and in other cases to describe different politico-economic modes of accomplishing competitiveness. With roots in the 1920s (Hilferding 1924), a revival in the 1960s (Shonfield 1965, Galbraith 1967) and a shift towards welfare capitalisms (Esping-Andersen 1990), it was with Albert’s *Capitalisme contre capitalisme* (1991) identifying a ‘Rhineland’ and ‘Anglo-Saxon’ capitalism that the topic of forms of capitalism entered its current stage, with attention turning towards the impact of globalization on different political economies and their potential for adjustment to these challenges. Similar typologies were put forward by Hutton (1995; ‘stakeholder’ vs ‘shareholder’ forms), Dore (2000), and Hall and Soskice (2001) with their ‘liberal’ and ‘coordinated’ varieties of capitalism, each containing comparative institutional advantages in international competition. Non-dichotomous typologies distinguishing three to five types have been presented by, for example, Rhodes and Apeldoorn (1997), Vivien Schmidt (2002), and the ‘regulationists’ (Amable 2003; Hollingsworth and Boyer 1997).

The theory most quoted, most criticized, most directly stressing the idea of institutional complementarities, and therefore to some degree also the one most closely resembling classic systems theory, is that of Peter Hall and David Soskice.

Because of both its prominence and sophistication and because it does not matter for the purpose of this paper whether two or more varieties are distinguished, the remainder of this paper will focus on the work of these authors more than on other similar approaches to the issue of institutional complementarities.

The institutions identified by Hall and Soskice (2001, pp. 6f) that have to be in a relationship of (mutual) complementarity are: 1) *labour or industrial relations*, i.e. the relations between organized capital and labour at the macro-economic level; 2) *corporate governance*, i.e. the configuration of and relation between companies and investors; 3) *inter-firm relations* with respect to networking and contractor-supplier relationships; 4) *employer-employee relations within firms*, particularly regarding the question of employee involvement in decision-making; 5) *training and education systems* (about the relative relevance of general and specific skills); plus, as added by Hall and Gingerich (2001, p. 16), 6) *the level of social protection*; i.e. the character of the welfare system and the labour market, and 7) *product market regulation*, i.e. the limits of competition as determined by national governments. The two varieties of capitalism, of which the liberal one is more or less present in the Anglo-Saxon world and the coordinated one mostly in Northwest Europe as well as Japan, are characterized by different configurations of complementarity. A high degree of complementarity occurs when the configurations are as indicated in Table 1. The VoC literature assumes that in order to stay competitive, this high degree of complementarity is necessary.

Given these complementarities, LMEs with their easy hiring and firing, low investment in skills and hierarchically organized, ‘Taylorist’ production processes, tend to prefer price-sensitive mass-production, while CMEs with their investment in skilled workers, more autonomy on the shop floor and hence their long-term commitments to labour, tend to prefer quality-sensitive flexible specialization. Generally, because of the skills – commitment nexus, but also because of the stronger reliance on patient bank financing, CMEs have a longer-term orientation than LMEs.<sup>3</sup>

### 3. Complementarity, functionality and reference frames: moves towards openness

The concept of complementarity as used in the VoC literature means that institutions of one part of the economy are ‘raising returns’, i.e. are functional, for one or more of the other parts (institutions). Perhaps the reverse is also true (cf. Hall and Soskice 2001, p. 17). Streeck (2004, p. 102) has described this nexus as follows: ‘Complementarity is a relationship between at least two

<sup>3</sup>For a discussion of the related distinction between radical and incremental innovation as sources of comparative institutional advantage for LMEs and CMEs respectively, see below p. 14f.

**Table 1** Basic complementarities of LMEs and CMEs and the resulting specialisations in international competition

Institutional dimension	LMEs	CMEs
(Organized) Industrial relations	Largely restricted to the wage – profit game	Main role for strategic interaction and negotiations
Corporate governance	Financial reliance on the stock-market; short-term orientation	Dependence on bank capital; long-term orientation
Inter-firm relations	Competitive; price-governed contractor-supplier relationships	Networking and cross-shareholding; strategic interaction
Employer-employee relations within firms	Firms unidirectional controlled by management	Some form of employee involvement
Training and education systems	Stress on general skills; limited vocational training	Stress on specific skills, to be acquired by apprenticeship systems or the like
Level of social protection	Residual social security; easy hiring and firing	Relatively generous social security; considerable employment protection
Product market regulation	Only few limits on competition; laissez faire principle	Level of competition related to other, e.g. social goals
<b>Resulting specialisations</b>		
Mode of production on the shop floor	Strong reliance on mass production and Fordism	Prominence of flexible specialization
Competitive advantages	Price-sensitive goods; radical innovation	Quality-sensitive goods; incremental innovation

elements. **Element E' is complementary to element E if its presence enhances the performance of E.** And he adds: 'Complementarity may be mutual, i.e. E may be complementary to E' where E' is at the same time complementary to E. Complementarity may also involve more than two elements interacting in a virtuous circle of mutual enhancement.'

In terms of the framework set in Table 1, this definition would mean that stock-market reliance of firms, for example, enhances unidirectional management control of these firms, residual social security, as well as residual vocational training. As another example, it would mean that purely special interest orientation of unions and employer associations in wages and profits respectively is complementary to basically similar relations between contractors and suppliers as well as to a liberal product market. Or it would mean that restricted product markets are complementary to employee involvement in company strategies and affairs, an apprenticeship system and bank-financed investment.

Are these relationships really given; are the relations of the described elements really mutually functional?

But sometimes mutual functionality does seem to exist.. Hall and Soskice (2001, p. 18) present this example: ‘Long-term employment is more feasible where the financial system provides capital on terms that are not sensitive to current profitability. Conversely, fluid labour markets may be more effective at sustaining employment in the presence of financial markets that transfer resources readily among endeavours thereby maintaining a demand for labour’. However, the problem with this example is the sharp opposition of long-term versus short-term orientations. Quarterly figures are not as important in CMEs, but with a few exceptions companies and banks cannot neglect ‘current profitability’ for a long time. On the other hand, companies in LMEs, particularly new ones, cannot expect immediate profits on new investment. In fact, shareholders only expect to have rising returns, even if a company is still in the red, and positive future prospects. The stock-market bubble in the late 1990s illustrates this: most new ICT companies did not make profits for years, but their shares surged. A long-term perspective is indispensable for short-term gains.

Other relations between elements of a variety of capitalism might be found truly to be mutually complementary – perhaps unidirectional management is complementary to stock market reliance of firms and vice versa – and high statistical correlations might exist between the elements or parts of a capitalist variety (Hall and Gingerich 2001 show such correlations). However, general functional complementarity among any of the parts in a political economy does not exist, and statistical correlations (in the first instance, they are only co-occurrences) are different from complementarities being functional to each other as proposed by Hall and Soskice (and Hall and Gingerich) as well as by Streeck. When complementarity is given it exists perhaps among the parts, but certainly between these parts and a variety’s reference frame, i.e. its goal(s) and the specific way the goal(s) of a variety is (are) achieved. The main goal of the capitalist varieties as assumed by Hall and Soskice is profitability and competitiveness, and achieving this goal entails price-sensitive mass production in the LME and quality-sensitive flexible specialization in the CME.

It appears that the authors of the VoC literature are imprecise in their choice and application of concepts. The same holds for many of their critics. It is not complementary relationships among parts of a political economy that are fundamental but rather the functional relationships of these parts to the political economy’s goals or reference frames. As outlined in the introduction of this paper, systems should be understood as macro-social configurations, whose parts are functionally related to the macro-level goals such as competitiveness or social justice, which people and organizations pursue. It is in this sense of each institution complementing the other in being functional to the reference frame that



we have to talk about complementarity. What we have to inquire about is functionality, and the question is more precisely about the functionality of the parts in open social systems. What do the critics of the VoC approach say in this respect?

A basic criticism is that **functionality is difficult to determine** (Streeck 2004, pp. 101f; Amable 2003, p. 4). How do we know what is functional in complex configurations? The ‘causal texture of the real world’ is complex, and it is only **ex post** that we can have *some* certainty about causality in societal and politico-economic contexts. Uncertainty always remains (Beckert 1996), however, because hypothesis testing, as conducted in the natural sciences, is impossible. We can only say with certainty that whenever a political economy performs positively, the **elements of its institutional configuration did not seriously harm its goals** (did not, for example, seriously disturb competitiveness). **Instead of an institutional configuration, however, the real causes of rising or decreasing competitiveness might have been favourable circumstances** – the house price bubble in Denmark and the Netherlands versus the costs of German unification exemplify such circumstances in the 1990s (cf. Becker and Schwartz 2005). Amable (2003, p. 3) even more generally questions the explanatory relevance of institutional factors with respect to macro-economic performance.

**A number of critical accounts do not establish varieties of capitalism as open systems but points in this direction.** On the one hand there is openness, because political economies are in a state of **permanent disequilibrium** (Höpner 2005a, p. 342, referring to regulation theory) and no mechanism automatically bringing about functionality exists (Boyer 2005, p. 367). This results from the slack existing in any institutional order (ibid, p. 368; Streeck 2005, p. 363) and because the forces of autonomy also have their impact on a political economy (ibid). On the other hand, and here systemness comes in, **functionality has ‘to be continuously established, restored, redefined, and defended** against all sorts of disorganizing forces’ (Höpner 2005a, p. 344, quoting Streeck; Crouch’s (Crouch and Farrell 2004; Crouch 2005b, pp. 61ff) ‘functional’ but ‘not functionalist’ account is similar). **There are not only the forces of autonomy, but also those of system integration** (Streeck 2005, p. 364;) and political economies are thus in a state of continuous adjustment (Boyer 2005, p. 367).

**Functionality and system integration are related to goals.** These goals are the reference frames of systems. Independent from a reference frame there can be no complementarity and functionality of the parts at all. The goals that are always, explicitly or implicitly, present in the VoC literature are performance and competitiveness. Reference frames of capitalist varieties have not been discussed in a general sense by either the VoC literature or by its critics, however. The result is that this central dimension of a system has not received the attention it requires. Considering these frames might have resulted in the insight that reference frames of macro-social entities always contain more than one goal

and that taking into account complex and possibly contradictory reference frames is crucial for understanding real political economies.

Reference frames of capitalist varieties are existentially determined – competitiveness (or economic performance in very general terms) represents the basic goal in the game of survival – but they are also politically and ideologically construed and therefore depend on power relations. Examples are goals like employment, standards of social equality and welfare and environmental targets (Table 2), goals that are also open for different interpretations. The political and ideological struggle between Liberals, Conservatives and Social Democrats in the past decades has been about these reference points: pro- and contra-flexibilization, requirements of globalization, authority structures within firms, (de)regulation, and social benefits. Liberal forces turned out to be strongest. As a consequence, liberal goals have become more prominent in most Western countries' reference frames. In election campaigns, party programmes, in the political media and in the social sciences individual responsibility is stressed more than it was twenty years ago. The free market is increasingly valued more than equality, equality of condition has increasingly been replaced by equality of opportunity, and environmental goals have been beaten by targets of GDP growth. It seems environmental goals have been forgotten – even in the context of disasters such as the flooding of Louisiana by hurricane Katrina. Democratic arrangements as co-determination are under pressure, while shareholder orientations become dominant. The battle is not over, and one has to differentiate between countries (cf. Dore 2000; Hall and Gingrich 2001; Streeck 2001; Schmidt 2002), but this is the current trend.

The distinction between existentially determined systemic goals such as competitiveness or, on the company level, profitability on the one hand, and

**Table 2** The elements of reference frames of varieties of capitalism

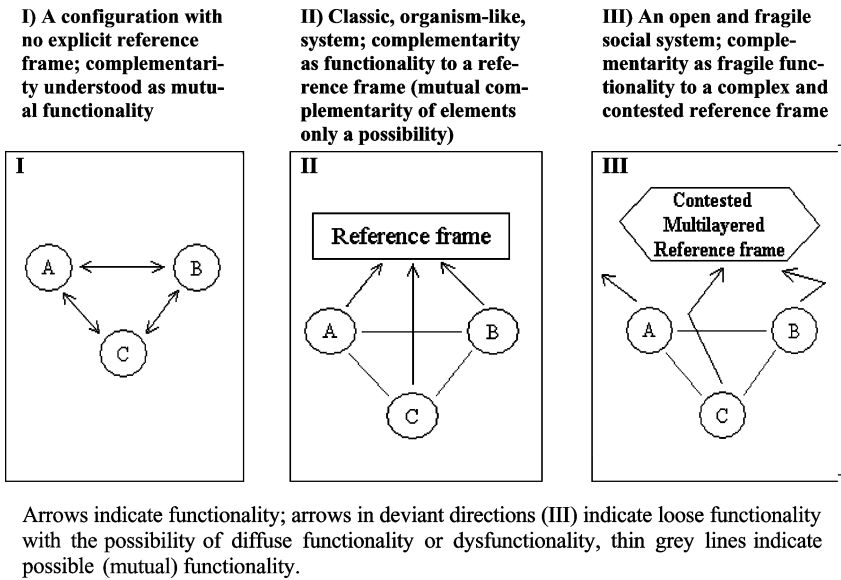
<b>Contested goals where (dys)functionality is related to</b>		
<b>Existential, systemic goals, also contested, however</b>	<b>Possibly contested political goals, e.g.:</b>	<b>Contenders, e.g.:</b>
Order	Equality	Political parties
Efficiency	Freedom	State bureaucracies
Profitability	GDP growth	Governments
Competitiveness	Generous social security	Organizations
	Environmental protection	Unions
	Full employment	Employers and companies
	Co-determination	Social movements
	Low taxes	Voters

political goals such as equality and freedom on the other, is very important but also **arbitrary** to some degree. It is important because it points to the division between what could be called 'objective' and 'subjective' goals. Meeting objective goals is required for material survival within a given system, while 'subjective' goals do not necessarily have to be accomplished. A certain degree of order and competitiveness is required, but these goals might become politicized and genuine politico-ideological goals might have existentially necessary components – so some degree of freedom and equality might be required for maintaining competitiveness. Furthermore, it has to be repeated that there is no guarantee that 'objective' goals such as competitiveness are the overriding ones. Requirements are not automatically accomplished. Power relations and lacking human capacities may inhibit this.

**In the main VoC texts, social protection and co-determination (as aspects of corporate governance) are presented as institutional dimensions of a variety of capitalism, but not in terms of independent reference points.** They only serve as complementary elements for accomplishing competitiveness. Critics of the VoC approach such as Streeck and Boyer also do not explicitly point to reference frames. The former writes that 'other objectives than efficiency may take precedence' (2004, p. 104; see also 2005, pp. 364f), while the latter (2004, p. 16) points out that in CMEs not all coordination processes have the same aims. According to Jackson (2005, p. 378) complementarity/functionality has to be related to the outcomes one is interested in, Höpner (2005b, p. 384) refers to 'conflicts of aims between different kinds of performance' and Peter Hall (2005b, p. 374) concedes that 'it is useful to highlight the distinction between complementarities that enhance aggregate economic performance (...) from those that deliver benefits primarily to a few specific groups'. From here, it only takes a few steps to **conceptualize VoCs as open systems with contested and flexible, power-dependent reference frames where (as illustrated in Figure 1, III, which is compared to simple mutual complementarity – Figure 1, I – and a machine- or organism-like system with a fixed reference frame – Figure 1, II) functionality is not easy to accomplish.** But these steps have not previously been taken.

#### **4. Comparative institutional advantages and equi-functionality**

Let's go back for a moment to the central reference point in the VoC literature: economic performance and competitiveness. The difficulties in functionally relating institutions in an unequivocal way to this goal also mean that the concept of comparative institutional advantages is fragile. This concept is further weakened by the idea of 'functional equivalence', which Jackson critically launched against



**Figure 1** Three forms of complementarity of elements (indicated as A, B, C).

the VoC theory (2002, p. 16, p. 48).<sup>4</sup> Its meaning is that ‘different, functionally equivalent means might be found to produce similar results’. The inverse should also be true then: similar means might produce different results.

Jackson points to functional equivalents in corporate governance. We can also take the very ways competitiveness is supposed to be accomplished: through mass production of price-sensitive goods accompanied by radical innovation in LMEs, and through flexible specialization in quality-sensitive goods plus incremental innovation in CMEs. In the VoC literature these alternative roads are linked to specific education and training institutions. Leaving aside innovation for a moment, the prevalent idea is that an apprenticeship system generating specific skills facilitates quality production while general skills make it easier to specialize in price-sensitive mass production. But this picture is problematic. Mass production, Taylorism and Fordism are not restricted to political economies approaching the LME, but are also prominent in places such as Germany or the Scandinavian countries that strongly feature CME elements, particularly institutions generating specific skills. Given this factor and the fact that services comprise about 70 percent of employment, comparative institutional advantages relate, if at all, to a relatively small segment of a country’s economy.

<sup>4</sup>See also Crouch 2005b. The use of this concept in comparative political economy dates back at least to Streeck and Hollingsworth (1994). Termed equi-finality it was originally formulated by Robert Merton (1967; cf. Stinchcombe 1967).

In countries approaching the CME type, much manufacturing – tires, bricks, furniture, bottles, machine components etc. – is performed by workers on assembly lines who are not required to be skilled (even if they are). After graduation, many German, Austrian, Swiss, or, in the somewhat different system, Dutch apprentices will lose their jobs and have to find new employment in assembly line production.<sup>5</sup> In the service sector the situation is similar. After a few years of education one will qualify, for example, as a special-skill shoe retailer, but the job one gets is nearly the same as that of a part-time colleague who received a one-day instruction. Unskilled employees are largely equi-functional to skilled personnel in this case and with practical experience the differences might even disappear. Or take technical services, car repair for example, where firms working with well-educated all-round mechanics are losing ground against firms working with briefly trained specialists for tires, clutches, brakes and so forth. In this case the division of labour is equi-functional to an all-around qualification.

A comparable story can be told about quality production. It also takes place in countries with a high LME content and without the supply of the vocational skills assumed to be required. Table 3 shows that with a few exceptions – e.g. Australia, Ireland and the Netherlands – most advanced industrial countries, both rather coordinated as well as rather liberal ones, have comparative advantages in the production of ‘non-electronic machinery’, independent of their education and training systems. Sweden, Italy and Austria lead the pack, but the US is also well positioned and Britain, another general-skills country, ranks higher in this branch of industry than the Netherlands, a special-skills country (with no comparative advantages at all in this field). Perhaps the data in the table are too superficial, and we need more specific information. Part of this information is that the US not only is a large-scale producer of, say, ketchup, but also of quality high tech, sophisticated aircraft and of agricultural machines. Furthermore, the machine tool industry that remained very strong until the 1970s (Finegold et al. 1994) has experienced some sort of revival in recent years (Macpherson and Kalafsky 2003). ‘German quality cars’ are also produced there as well as in South Africa, and suppliers in countries that do not have sophisticated apprenticeship systems make many parts of such cars. Additionally, Britain, lacking institutionalized multi-year vocational training of its workforce, is the location of the production of Japanese quality cars, and Italy, also lacking such a system, is the producer of quality machinery (cf. Crouch 2005b: 66 and 154).

The explanatory factor in these cases is equi-functionality: in some cases the Taylorist division of labour is equi-functional to an apprenticeship system and in other cases intra-firm training or special courses are the equi-functional

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<sup>5</sup>This account of the apprenticeship system is partly based on personal experience. The author was an apprentice electrician in a German electricity company for three and a half years.

**Table 3** Comparative advantages in non-electronic machinery of advanced OECD countries in 2002\*

Australia	4%; 0,36	Italy	19%; 1,93
Austria	18%; 1,85	Japan	16%; 1,64
Belgium	8%; 0,64	Netherlands	8%; 0,64
Denmark	14%; 1,45	Norway	4%; 0,40
Finland	13%; 1,27	Sweden	16%; 1,97
France	11%; 1,12	Switzerland	17%; 1,72
Germany	17%; 1,71	UK	13%; 1,33
Ireland	2%; 0,22	USA	14%; 1,46

\*The percentages refer to the share of the sector in total merchandize exports. The second figure shows the ratio of exports to imports; a value higher than 1 indicates comparative advantage.

Source: ITC 2004

means. Companies like Boeing and Lockheed Martin will have a training system of their own; the same will be true for construction companies as well as for a large number of companies specialized in technical services. One cannot build skyscrapers or bridges with only unskilled workers, and the on-site customer service of computer and telephone networks and other machinery still requires all-around trained technicians and mechanics. In countries lacking an apprenticeship-like system these qualified people will be formed by community colleges, intra-firm training or simply by years of practical experience (perhaps complemented with some courses). No matter how it is accomplished, it takes time to generate specialized skills.

In the case of radical versus incremental innovation the situation is similar to that of price-sensitive versus quality-sensitive production. The thesis is that LMEs tend to be radically innovative while CMEs are better at incremental innovation. A detailed explanation of this difference and explication of the distinction at stake is not given in the VoC literature. Following the interpretation of Crouch (2005b, p. 30ff; for a detailed discussion of the topic see also Zachery Taylor 2004) the idea seems to be that fiercer competition and more flexibility in LMEs facilitate radical innovation, while CMEs have an edge in incremental improvements by their better trained workforce.

Empirically, this dichotomy looks like a description of only very recent American versus German and other continental European (as well as Japanese) innovative performance in the ICT field. Investigating a longer period than the 1990s would reveal different results, particularly with respect to Germany that has been radically innovative in automobiles, machinery and chemicals. The same is true if one would not only compare the US to Germany or Italy, but include in the analysis the rather liberal countries Australia, Canada, Ireland and New Zealand as well as the more coordinated cases of Finland and

Sweden. A look at the annually published 'Innovation Capacity Index' of the *World Economic Forum* and the 'Tentative Summary Innovation Index' of the *OECD* reveals that the former group of countries is not particularly innovative at all, while the Scandinavian countries mentioned are top-ranked. In telecommunication technology they have been radically innovative (Amable 2003). In Finland it is the *Science and Technology Policy Council* (chaired by the Prime Minister) that coordinates innovation policy and in Sweden collective agreements between capital and labour include innovation goals (Elvander 2002, p. 201). One has to conclude, therefore, that political economies approximating the liberal type do not automatically bring about radical innovation and that equi-final routes to radical innovation exist. The same is true for incremental innovation. Moreover, radical innovation is not a daily affair and therefore cannot be the sole basis for competitiveness of countries such as the US.

The replacement of functional components by equi-functional ones is not the big problem it is in the VoC literature. Varieties are not locked into specific configurations and when alternatives emerge they may be integrated. Furthermore, in the context of equi-functional configurations, there are good reasons to speak of comparative institutional advantages in the strict sense Ricardo spoke about comparative advantages: Liberal political economies appear to be largely as good in the production of quality goods as coordinated political economies. Therefore the primary division is not about quality and one has to add that quality production only covers a relatively small part of whatever political economy. This is often overlooked in the literature.<sup>6</sup> In terms of specialization, the division between the two varieties is primarily about the modes of production on the shop floor: since LMEs are better in mass production they *tend*, but not more than that, to concentrate there. CMEs *tend* to be less competitive in mass production and therefore have a tendency towards flexible specialization.

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<sup>6</sup>One could add here the striking fact that the US and Britain are ranked very high in one of the very few comparative investigations of quality production (Aiginger 2000). Aiginger's research includes the whole range of goods produced in an economy, not only luxury cars and specialized machinery that are very often mentioned as examples of quality production. The US and Britain perform particularly well in 'quality' pharmaceuticals, probably produced in mass production. When investigating quality, one has to also ask the question how good the quality of so-called quality goods is. Do Swiss watches really have higher quality than cheaper, but still not cheap, Japanese ones? Are German premium cars better than American premium cars? We have to be aware of the existence of *varieties of capitalist images* strongly affecting consumer views on quality (cf. Pauli 2002 with respect to Switzerland) and bringing about comparative image advantages. 'My own experience is that Germany has a global reputation of quality and reliability (...). This is helpful for doing business because customers are willing to pay a premium price for Siemens goods', H. von Pierer, the former CEO of Siemens, said to a newspaper (*NRC Handelsblad*, February 19, 2005, p. 22). An intriguing question is how much the VoC literature reproduces these images.

## 5. Ideal types and historically grown heterogeneous realities

Equi-functionality brings contingency into the institutional constellations that characterize politico-economic systems. Moreover, these constellations are heterogeneous. The picture presented by the VoC literature about firms as summarized in Table 1 is misleading because in so far as it is appropriate, it only refers to small segments of the business world, which represent 10 percent or less of total employment. It focuses almost solely on big industrial companies that are exposed to international competition. But small companies are different from big ones. In liberal economies a large majority of small companies do not rely on the stock market, in coordinated economies they do not have co-determination, and what they often do have in common is a rather local orientation. Moreover, service companies, both big ones and particularly small ones, also are structured differently from big industrial companies.

Other factors to be considered are that economies transcend territorial borders and national institutional frameworks, that they are embedded in global financial markets and take part in the international division of labour, and that their multinational companies (MNCs) have border-crossing forms of corporate governance. In terms of systems, political economies have vague boundaries, and national economies have to be indicated as so-called national economies. Economies are numerous and differ in one way or another. Their training systems are different (cf. Estevez-Abé et al. 2001, Table 4) but also their industrial relations and structures of corporate governance (Edwards 2004). One can construct clusters of similar countries, but differences remain.

Varieties of capitalism have to be conceived, therefore, as ideal types (each with imagined separate territories). Everyone involved in the discussion seems to agree here, but there is much confusion between ideal types and real countries (cf. Crouch 2005b, p. 23). Ideal types present an idealized, although not fictitious reality; aspects alien to the types are consciously left aside. Equi-functionality renders it difficult to sharply distinguish political economies at the firm level; the ideal-typical discussion only covers a relatively small segment of the business world and in terms of social protection and market regulation, reality neither offers purely liberal nor purely coordinated cases. The US is more liberal than Germany or Sweden, but it is not a one hundred percent pure market economy. Hall and Soskice (2001, pp. 6f) are aware of this, but at the same time they are also exemplary for the confused discussion when they (ibid, p. 17) classify national political economies as *either* liberal *or* coordinated. This is contradictory. Real cases only approximate ideal types, and regularly they are hybrids containing elements of more than one type. Strictly speaking, therefore, a liberal country is only a country with strong liberal traits. If one draws axes between ideal types, as is done in a simplifying way in Figure 2, then countries will have to be located at certain positions on these axes.





Note: country locations are not based on precise measurements

**Figure 2** Simplified illustration of ideal types (CME, LME) and concrete political economics\*.

In the course of time, countries regularly change their positions on the axes between ideal types, and they regularly have done so in the past.<sup>7</sup> In historically evolved complex cases such as political economies, countries can never truly ‘represent’ one of the types. The ‘mixed’ type Hall and Soskice leave some room for (2003; cf. Hall and Gingerich 2001) cannot rationally be constructed, because in reality all political economies are ‘mixed’. The US is one specifically mixed capitalist variety or political economy, Germany is a differently mixed variety and the same is true for all other countries. Since real political economies are always hybrids it does not make sense to describe the process of convergence one sees occurring as ‘hybridization’ (for references see Höpner 2001, p. 37). If one wants to construct more than two varieties (which makes sense, but is not important for this paper), corporatist or statist or those mentioned by the regulationists would be candidates, and what is described as hybridization could better be understood as the re-mixing of existing hybrids.

The topic of ideal types is important to the discussion of functionality and open systems because in the VoC literature the typology is not only about different political-economic configurations but also about performance; and ideal types are conceived as the best performing configurations. The more a country diverges from the ideal type, the more its performance and competitiveness declines. It is either ‘all fish or all fowl,’ as Robert Goodin (2003) writes.

Ideal types as best performers seem to be an implication of Hall and Soskice’s theory. Empirical data do not unequivocally support the idea that the two countries supposedly nearing the LME and CME, the US and Germany respectively, have performed the best in the recent past (Kenworthy 2006, pp. 80ff). Leaving aside empirical data, is it a viable theoretical construction to identify ideal types as best performers? Do concrete cases feature open system-like configurations with contested reference frames and dysfunctional components, while ideal types feature machine-like systemic constructions where every

<sup>7</sup>It is more pertinent to acknowledge that real cases are moving on the axes between ideal types than to determine the exact distance between two points. This distance is continuously changing, sometimes very slowly, sometimes more quickly. If one wants to measure distances one would first have to produce a catalogue of relevant features identifying (to be derived from the components in Table 1) an ideal type and second a scale from e.g. 1 to 10 in order to quantify the distances between real and ideal-typical features. In the course of this one would have to quantify qualitative entities. This is not an exact exercise, however, and could only be seen as an indicator of the distance between ideal types and real cases.

element is in a perfect functional relationship to economic performance as the fixed reference frame? A consequence of positively answering these questions would be that by constructing more ideal types one would inevitably get a larger number of best performers. Because of such problematic consequences and because of what was said before on equi-functionality as well as on the difficulty to determine functionality, the questions just posed should be answered negatively. By idealizing historically grown differences ideal-typical varieties of capitalism point to *different idealized ways* to socio-economic performance, but not to *ideal ways* to achieve performance. They also point to different degrees of emphasis on reference points such as environmental care and social equality, but in ideal-typical constructions, economic performance and other reference points have to be assumed to co-exist in harmony. Real varieties of capitalism should be understood as open system-like configurations, but in the constructions of ideal types the systems dimension can be ignored.

In conclusion, no principal argument and no presentation of empirical evidence can support the assumption that ideal types are ideal configurations for maximum performance. They are only ideational constructions designed to bring analytical order into a world of concrete cases with many differences and peculiarities. The level of competitiveness reached by these cases is the result of specific properties and circumstances. These concrete cases do not have the institutional structure they have because of advantages in global competition; supposing this would be overly functionalist reasoning. Instead, the institutional configurations have historically evolved for many other, more particular reasons – for example path continuities from pre-capitalist times, relatively autonomous ideological developments or power relations. And once located in capitalist competition, whether national or global, institutional configurations have gained a certain level of systemness by processes of societal trial and error. These processes, in a long-term view, have a rather incremental character in which originally independent or partially related structures have been adjusted, supplemented by new elements and made as functional for the goal of economic performance as possible in a context of rival goals and human cognitive restrictions (Becker 1988, p. 879; cf. Boyer 2005, p. 367 and Jackson 2005, pp. 379f; a fine illustration of such processes is provided by Thelen's book [2004] on the evolution of training systems in Britain, Germany, Japan and the US). However, if there is more error than success, these processes will fail.

Processes of societal trial and error could be conceived as the social form of natural selection. Individuals, groups, organizations, firms, and governments react to changes in their environments and reference frames by adjusting their settings and rules. In the context of ongoing social conflict, paradigmatic ideas and power relations, people and organizations formulate different options corresponding to their particular interests and insight into social reality. As a rule they do not

act on the basis of grand visions, but largely in the framework of their routines, and with a high level of caution when they try new steps.<sup>8</sup> The process of adjusting might involve learning, accommodation and compromising, and it slows or shuts down when the involved actors are satisfied with the state they have reached<sup>9</sup>; or in other words, when equilibrium with continuing (and only sometimes ‘increasing’) returns is reached. In unsuccessful cases it may slow or shut down because of a stalemate of the opposing forces involved or because of desperation.

## 6. The open systems perspective and change

In summary, the ingredients for the identification of political economies as open (and loose) systems as presented in this paper consist of:

- 1 (‘National’) political economies, which should not be confused with ideal-typical varieties of capitalism, are neither controlled nor consciously designed by anybody and have historically evolved from more or less independently originated structures and institutions and are permanently under pressure to adjust to changing circumstances.
- 2 This adjustment is necessary because political economies of whatever variety are under pressure to generate **systemness**, i.e. to be structured functionally because at least a certain degree of functional order of their configurations is required for the maintenance of given levels of employment and standard of living.
- 3 **In a globalized market economy there is pressure on this configuration to be functional to international competitiveness.** Competitiveness is an existential reference point of a market economy. In comparative perspective, political economies consist of specific, as well as **equi-functional settings**.
- 4 Since nobody knows exactly what is functional we can only decide *ex post* whether or not and to what degree this systemness has been realized. It is indicated by success. A successful, competitive political economy has to be assumed to consist of institutional relations facilitating competitiveness (even if accidental circumstances may also be relevant).
- 5 Saying that adjustment and functionality are necessary does not mean that the relevant actors will achieve them! The open systems perspective stresses the importance of functional relations but it is **not functionalist!** This perspective not only stresses functionality but also **openness**.

<sup>8</sup>Tolliday and Zeitlin (1991, pp. 12ff) made a similar point in their discussion of whether companies in competitive markets are subject to some sort of natural selection. They reject the idea that competitive strategies are ‘imposed’ upon firms, emphasize that goals other than profitability can be very important for firms and that they often do not know in advance what is rational.

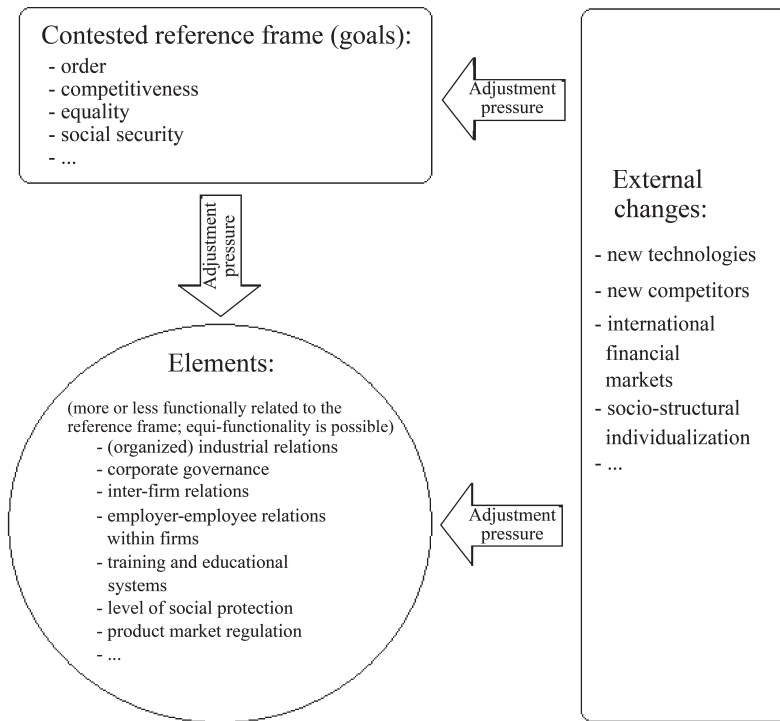
<sup>9</sup>These actors – policy-makers – will probably put forth a justification for their reaction, but knowledge about the decisive factors bringing about a new equilibrium is not strictly required.

- 6 Functionality (which is a more appropriate term than complementarity) in a political economy is related to a **reference frame** of which competitiveness is only one, though existential, goal. A reference frame is comprised of existential as well as historically evolved but contested, political goals such as (more) income equality, welfare for everybody, participatory rights and environmental protection.
- 7 The goals of the reference frame might be contradictory (e.g. employment versus welfare or growth versus environmental protection). Furthermore, existential goals or reference points are open to different interpretations and thus are also contested. The multi-layered, possibly contradictory, character of reference frames and the contention on goals are aspects of openness in a political economy.
- 8 Further contributing to openness, parts of political economies such as firms or vocational training institutions are relatively autonomous and have, in addition to the macro-social goals, reference points of their own. This autonomy, the uncertainty about functionality and the multi-layered and contested reference frames are reasons why political economies are **not social systems in the classic sense. They are only system-like configurations featuring some degree of systemness.**
- 9 Because of the lack of overall control, the relative autonomy of the parts, the uncertainty about functionality, the conflicts about reference frames, and the direction of politico-economic development there is no guarantee that a satisfying level of systemness of a political economy can be achieved. Open social systems as summarized in Figure 3 are open not only to conflict and change, but also to **failure.**
- 10 Retrospectively, systemness can be constructed as result of societal trial and error.

As indicated, understanding institutional change does not present a problem for the open systems perspective. Capitalist competition, interest-based or relatively autonomous ideological contention about reference points, requirements to meet changed reference frames and relatively autonomous actions of specific institutions, certain industrial (sub-) branches or individual firms continually bring about change.<sup>10</sup> Learning and intended change also play a role. On the

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<sup>10</sup>In figure 3 the forces triggering change have been indicated as external. This is a debatable point, however. Often, the demarcation between intrinsic and external is vague. Competition among companies is a constitutive element of capitalism and so are the subsequent technological and socio-structural changes it brings about as well as the conflict-ridden relation between labour and capital that is responsible for much of the contention on reference frames. Are social-structural changes an intrinsic aspect of the *system-like configuration*? How might ideological changes be related to technological and socio-structural developments that also are relatively autonomous?



The open system has to adapt to changes in both reference frames (societal goals) and external circumstances. Adaptation is hampered by the relative autonomy of system-elements and limited human capacity to adjust. If accomplished, systemness will be achieved by societal processes of tried and error.

**Figure 3** Varieties of capitalism as open macro-social systems.

other hand, the forces of path continuity limit the scope of change. Path continuity mainly results from transformation costs, the inertia of action, disagreement among policy-makers and power relations that propel political economies along their 'paths'. It may also partially stem from rational awareness of the exigencies of systemness. Therefore, open systems are open, but at the same their openness is limited by given structures. The extent of the openness and strength of the limits in open system-like configurations depend on the situation. They are not quantifiable in advance.

What happens in terms of varieties of capitalism when, for example, a political economy with a high degree of coordination liberalizes? Liberal goals will gain

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Finally, new national competitors are related to globalization, which is triggered off by the capitalist dynamic, but in terms of the territorial dimension they are external.

more prominence in the reference frame and elements with rather a CME character will be replaced by equi-functional (in the good case) elements or by dysfunctional elements (in the worst case). On the axis between the ideal-typical CME variety and the ideal-typical LME variety the 'C' (coordinated) country becomes less 'C' and moves into liberal direction. The country's political economy changes, but this does not necessarily affect its industrial specialization – although in the longer run this is also possible – or its competitiveness. The change can also turn out to be a disaster. It is an open process. The factors just mentioned – endogenous and exogenous pressures towards change, power relations, transformation costs – and the previously mentioned systemic pressures and societal processes of trial and error require attention when analyzing change in political economies.

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