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**Evolution in Economic Geography: Institutions, Regional Adaptation
and Political Economy**

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ABSTRACT

Economic geography has, over the last decade or so, drawn upon ideas from evolutionary economics in trying to understand processes of regional growth and change, with the concept of path dependence assuming particular prominence. Recently, some prominent researchers have sought to delimit and develop an evolutionary economic geography (EEG) as a distinct approach, aiming to create a more coherent and systematic theoretical framework for research. This paper contributes to debates on the nature and development of EEG. It has two main aims. First, we seek to restore a broader conception of social institutions and agency to EEG, informed by the recent writings of institutional economists like Geoffrey Hodgson. Second, we link evolutionary concepts to political economy approaches, arguing that the evolution of the economic landscape must be related to the broader dynamics of capital accumulation, centred upon the creation, realisation and geographical transfer of value. As such, we favour the utilisation of evolutionary and institutional concepts within a geographical political economy approach rather than the construction of a separate and theoretically 'pure' EEG; evolution in economic geography, not an evolutionary economic geography.

Keywords

Evolution, institutions, path dependency, adaptation, political economy.

1. INTRODUCTION

Economic geography has, over the last decade or so, drawn upon ideas from evolutionary economics in trying to understand processes of regional growth and change, with the concept of path dependence assuming particular prominence (Boschma and Lambooy, 1999; Martin and Sunley, 2006). An important insight from this work is that past technologies, organisational forms and habits of thought continue to shape the practices and actions of key actors and organisations (entrepreneurs, manager, workers, firms, trade unions, local government, development agencies, etc). Successful regional development pathways are thus dependent upon inherited sets of relations and practices within regions (e.g. a culture of entrepreneurship, a history of tolerance to new ideas, a commitment to knowledge development and training). The corollary is that regional decline can in some cases be explained by a 'lock-in' to outmoded methods and practices as external economic conditions change (Grabher, 1993; Hudson, 2005a). Such practices might have been beneficial to competitive success in previous industrial eras (e.g. mass production techniques under Fordism), but may prove a barrier to successful adjustment if market conditions change (e.g. the decline of mass markets and the growth of niche-based products).

Much of the engagement with evolutionary concepts in economic geography has been based on case studies of individual regions, particularly old industrial regions such as the Ruhr, North East England and the Basque country (Grabher, 1993; Hudson, 2005a).¹ More recently, however, some prominent researchers have sought to delimit and develop an evolutionary economic geography (hereafter EEG) as a distinct approach (Boschma and Frenken 2005; *Journal of Economic Geography* (JEG), 2007). Animated by a certain frustration with the relatively ad hoc and under-specified use of evolutionary concepts within existing work (for example, Essletzbichler and Rigby, 2007), these contributions aim to create a more coherent and systematic theoretical framework for research. According to an editorial in a recent special issue of this journal, this fledgling EEG focuses on the adaptation of the economic landscape over time, the processes and mechanisms behind this and the interaction between temporal and spatial contingency and systematic necessity. Processes of path dependence and creation are of central interest along with the self-organisation of the economy and the generation of economic novelty. Echoing the pre-occupations of (evolutionary) economists, explanation should emphasis the micro-foundations of individual behaviour, although other contributions stress the role of institutions at the macro-level (Maskell and Malmberg, 2007).

This paper contributes to debates on the nature and development of EEG. It has two main aims. First, we seek to restore a broader conception of social institutions and agency to EEG. This stems from a concern that it is overly dependent on the work of selected evolutionary economists such as Nelson and Winter, Arthur and David whilst ignoring the related tradition of institutional economics (see Hodgson, 1993; 2006). The notion of institutions which emerges from much of this literature is too narrow, regarding them as constraints on individual action and under-emphasising their capacity to also enable and frame action (Campbell, 1997). We are concerned at the over-separation of the new EEG from institutionalist economic geography (see Amin and Thrift, 1994; Storper, 1997) which highlights this latter aspect. In this respect, we seek to assess the value of evolutionary concepts for understanding the evolution of

the economic landscape rather than to construct a theoretically consistent and ‘pure’ EEG (Essletzbichler and Rigby, 2007). Our second aim is to link evolutionary concepts to political economy approaches, borrowing from the broader tradition of evolutionary political economy rather than evolutionary economics *per se* (Cooke and Morgan, 1998; Hudson, 2005b). Explanation cannot, to our mind, be couched in terms of individual rationalities alone; evolutionary thinking must also incorporate the social relations between groups of actors, raising questions of social agency and power. Furthermore, the evolution of the economic landscape needs to be related to ‘structural’ processes of value creation, competition and uneven development (Smith et al., 2002). As such, we view both geographical political economy and institutionalist economic geography as key ‘missing links’ in the development of EEG.

In developing these arguments, the paper proceeds along the following lines. In the next section, we review the recent literature in EEG, identifying its main strengths and weaknesses. The third section emphasises the need to reassert a broader sense of institutions and social agency, drawing on the work of institutional economists like Geoffrey Hodgson. This is followed by a section which examines the central concept of path dependency, situating the evolutionary approach within a broader geographical political economy framework. A brief conclusion summarises our arguments and considers their implications for EEG.

2. THE DEVELOPMENT OF EVOLUTIONARY ECONOMIC GEOGRAPHY (EEG)

There is nothing particularly novel in the about use of evolutionary notions in explanations of regional development processes. An important antecedent to recent debates on path dependency is the work of Myrdal, Hirschman, Kaldor and others in the 1950s and 1960s which explained uneven spatial development through the concept of cumulative causation. These theorists viewed regional economic development as a “cumulatively unfolding process” (Hodgson, 2001, p. 69) in which rapidly growing regions were likely to stretch their lead over other regions over the long term as their initial competitive advantages became self-reinforcing in a virtuous cycle of growth. While advancing a dynamic perspective on uneven development, such theories tended to privilege space over time in the sense that uneven regional development was the focus of analysis rather than evolutionary processes *per se*. More recently, evolutionary thinking has been adopted by both geographical economists and economic geographers. Paul Krugman and other spatially-minded economists now recognise history and path dependency as central to the explanation of regional convergence and divergence processes (Krugman, 2003). In economic geography ‘proper’, more emphasis is placed on the role of knowledge and learning processes within and between firms in facilitating successful processes of regional adaptation (Boschma and Frenken, 2006).

Contemporary interest in evolutionary ideas filtered into economic geography through the “institutional turn” of the early-to-mid 1990s (see Amin and Thrift 1994). In particular, inherited institutional frameworks and routines were viewed as critical in shaping how particular regions responded to the pressures of globalisation (Amin, 1999; Storper 1997). Notably, Storper (1997) argued that “untraded interdependencies” were crucial sources of regional competitiveness. These refer to

the everyday routines and practices of doing business which exist between firms and other economic actors (e.g. trade unions, regional governments, chambers of commerce) within regions. These are difficult to replicate elsewhere, fostering the generation and circulation of specialised knowledge. From this perspective, “the regional development problem associated with building different systems of innovation thus turns essentially on building the capacities for reflexive collective action” (Storper, 1997, p.126). The latter is particularly important during periods of radical technological change, market downturn or increased uncertainty, when key actors within a region are faced with dilemmas of adaptation. The clear implication is that successful regions display greater collective action and the ability to learn than ‘failing’ ones. As this indicates, evolution is merely one element within much of this work, representing part of the problem of institution-building or knowledge-generation rather than the major focus of analysis. It is also worth noting that the positive dimension of institutions in enabling and facilitating action is stressed in this literature rather than the more negative, constraining aspect apparent in the writings of some economists (North, 1990; Williamson, 1985).

The key concept developed in more explicitly evolutionary economic geography in recent years is path dependency. This originally emerged from the ‘old’ institutional and evolutionary economics; its genesis can be traced back to Thorstein Veblen’s famous question in 1898 “why is economics not an evolutionary science?” (cited in Martin and Sunley, 2006, p.3). Yet Veblen’s evolutionary perspective became marginalised within economic thought over the course of the twentieth century as orthodox approaches based on the principles of utility maximisation and general equilibrium analysis became firmly established (Hodgson, 2001). Since the early 1980s, however, something of a revival of evolutionary thinking has occurred, associated particularly with the work of David (1985), Arthur (1989) and Nelson and Winter (1982). David and Arthur’s work considers how certain historically specific or chance events set in train particular economic development trajectories, focusing particularly on how certain technologies are adopted and become dominant within economies over a long term period. Nelson and Winter’s contribution has focused on organisations rather than technologies, placing particular emphasis on the role of routines that are built up over time, providing the basis for competition between firms. Rather conveniently, this has left geographers to add territory - the third element in the holy trinity of economic geography identified by Storper (1997) - by utilising the concept of path dependency to explore divergent regional development trajectories, assessing the extent to which regional outcomes are shaped by past events and decisions.

A key theme here is that localised routines and practices, and the sets of social relations underpinning them, that have proved successful during a particular phase of development may prove disadvantageous as economic circumstances change, leading to a kind of economic cul-de-sac as economic actors become ‘locked-in’ to established ways of doing things. In this regard, Grabher (1993, 24) uses the example of the coal, iron and steel complex of the Ruhr in the 1970s and 1980s to indicate how “.....strongly embedded regional networks turned from ties that bind to ties that blind.” The concept of lock-in has three main dimensions: functional, relating to the nature of relations between firms; cognitive, reflecting particular world views; and political, relating to the social relations and power underpinning regional development (Hassink, 2005). The functional dimension implies a lock-in to particular methods of

production, forms of working or ties to particular suppliers or customers, while cognitive lock-in implies a failure to develop appropriate collective learning mechanisms that allow firms to read the signs of external change and react appropriately through experimentation and innovation. Political lock-in reflects the failure of regional political, business and labour actors to change policy mechanisms to encourage innovation and learning. Such collective myopia may not only inhibit the adaptation of the dominant industries, but also narrow the range of regional development possibilities as the legacy of inherited social and institutional infrastructures discourages the rise of new industries (see Friedrichs, 1993; Hudson, 1994; Schoenberger, 1997, p.104 – 107).

According to Boschma and Frenken (2006), the new EEG adds value to institutionalist economic geography through its dynamic historical approach. They view EEG as complementing the latter's focus on the role of institutions in shaping economic development by highlighting the path dependent nature of regional economic change. The recent special issue of JEG advances the EEG research agenda considerably, with some papers addressing the question of what kind of evolutionary theory for economic geography to paraphrase Amin and Thrift (2000). Alongside the framework of Generalised Darwinism based on the concepts of variety, selection and retention (Essletzbichler and Rigby, 2007), complexity theory and network-based analysis are discussed (Martin and Sunley, 2007; Glucker, 2007), while other contributions develop more specific propositions for empirical analysis and testing (Frenken and Boschma, 2007; Bottazzi et al., 2007). While these papers are to be welcomed as marking a serious engagement with evolutionary thinking by economic geographers, our arguments focus on the need for this agenda to be informed by a broader sense of institutions and social agency, encouraging the development of more nuanced perspective on path dependency and regional adaptation.

3. REASSERTING INSTITUTIONS, SOCIAL AGENCY AND POWER

Without denying that evolutionary and institutional economics can be distinguished, we find the separation between EEG and institutionalist economic geography overdrawn, ignoring the considerable overlap between the two approaches (see Martin, 2000). In particular, Boschma and Frenken (2006) regard EEG as a third way between neoclassical (represented by the new geographical economics of Krugman and others) and institutionalist economic geography, embedded in social relations, although they do consider the interfaces between these. This emergent version of EEG is centred upon firms and learning, permitting the adoption of quantitative modelling techniques associated with neoclassical economics, albeit on the basis of different micro-foundations. The effective banishment of institutions results in not only an over-emphasis on the importance of organisational routines, but also a rather restricted view of agency in terms of 'bounded rationality' (Maskell and Malmberg, 2007). This reading of evolutionary thinking seems to reflect a rather partial perspective drawn from the more biologically-informed work of Nelson and Winter (1982) (see Hodgson, 1995), on the one hand, and the rather limited view of institutions – as essentially constraining structures for individual agency (Cumbers et al., 2003) – derived from the writings of North (1990) and Williamson (1985) on the other. There appears to be little interest in how individual rationalities and organisational routines are actually constructed over time, requiring a deeper engagement with notions such as interests, values and habit, not to mention power (Allen, 2003).

As indicated earlier, two contrasting dimensions of institutions can be identified in the social science literature. These view them, negatively, as constraints on action and emphasise their positive role in framing and enabling action respectively. The notion of institutions as constraints is associated with the 'new institutional economics' (Williamson, 1985) and the seminal work of the economic historian Douglas North. North (1990, p.3) defines institutions as "rules of the game ... or ... humanly devised constraints" which structure interaction in society and the conduct of individual actors. In addition to neglecting the positive, enabling role of institutions, North identifies institutions closely with formal, legal rules, neglecting less formal habits and rules, despite some acknowledgement of 'informal constraints' (Hodgson, 2006, p 9-10). Such an emphasis perhaps reflect a preference for the more tangible and measurable aspects of institutions amongst economic analysts dissatisfied with the vagueness of the broader definition favoured by institutionalist like Hodgson, drawing on the 'old institutional economics' (OIE) tradition of Veblen and others. North's definition is echoed by the 'varieties of capitalism' approach in comparative political economy (Hall and Soskice, 2001) which examines how the institutional elements of different national economies constrain the ability of firms and other economic actors to adapt to changing economic conditions (Amable, 2003; Hall and Soskice, 2001), leading to path dependency and lock-in (Arthur, 1989). The adoption of North's constraint definition in the new EEG (Maskell and Malmberg, 2007) contrasts with the positive, enabling aspect apparent in institutionalist economic geography (Amin and Thrift, 1994; Storper, 1997), limiting the scope for cross-fertilisation between them. This serves to emphasise that the adoption of a particular concept or definition of institution from neighbouring disciplines such as institutional economics needs to be accompanied by an appreciation of the debates surrounding this term in the 'parent' disciplines (see Martin and Sunley, 2001; 2006).

Hodgson (2006, p.1) adopts a broader definition of institutions as "systems of established and prevalent social rules that structure social interactions". They "enable thought, expectation and action by imposing form and consistency on human activities", depending upon individual behaviour without being reducible to it (p.2). Contrary to the emphasis in North's writings, rules incorporate social norms and conventions as well as legal rules (p.2). Institutions are constraining and enabling, limiting what is permissible or acceptable but also facilitating certain activities with the rules of language for instance, underpinning communication. This conception owes much to the OIE with the emphasis on social rules and non-reducibility to individual interests rendering it distinct from the 'new' institutional economics of Williamson and others (see Cumbers et al., 2003). Yet the OIE failed to explain the causal processes involved in the shaping of individual preferences by institutions (Hodgson, 2002), tending to equate institutions with regularised patterns of behaviour and to present an over-socialised conception of agency where individual tastes and preferences are determined by culture (see Lawson, 2003). Some evolutionary economists have expressed discomfort at the apparent vagueness of this "broad and roomy definition of institutions" and the tendency to "call any widespread practice an institution" (Nelson, 1995, p.81).

His efforts to improve on the formulations of the OIE and to address such criticisms led Hodgson (2006) to emphasise the importance of habit, defined as a disposition to engage in certain behaviour or thought, facilitated by a particular stimulus or context.

Essentially, habits represent the key links between institutions and individual behaviour:

By structuring, constraining and enabling individual behaviours, institutions have the power to mould the capacities and behaviour of agents in fundamental ways: they have a capacity to change aspirations instead of merely enabling or constraining them. Habit is the key mechanism in this transformation. Institutions are the social structures that can involve reconstitutive downward causation, acting to some degree upon individual habits of thought and action (ibid, p.6).

Thus, the notion of 'reconstitutive downward causation' through the acquisition of habits represents the crucial mechanism by which institutions shape individual conduct, leading to regularities of behaviour. Individuals are socialised through pre-existing rules and norms, resulting in the reproduction of institutions. Accordingly, institutions are "both objective structures 'out there' and subjective springs of human agency 'in the human head'" (ibid). Rather than representing sources of inertia and stasis, they are subject to transformation through the effects of conscious human action (see Lawson, 2003). This formulation seems broadly reminiscent of the sociological concept of structuration (see Giddens, 1984; Jessop, 2001), stressing the reciprocal relationship between social structure and human agency (Hodgson, 2002). While Hodgson makes few explicit references to critical realism and the 'ontological movement in economics' (Wilson, 2006), his definition of institutions is consistent with the 'transformational model of social activity' developed by Tony Lawson (1997, 2003). This contends that social structures and institutions exist as a process of reproduction and transformation, possessing "emergent powers", which are irreducible to individual agency, although they depend upon it for activation or manifestation.

This emphasis on the interaction between social structure and human agency, mediated by institutions, raises the question of how to conceptualise the economic actor. In this respect, contributions to the new EEG have been keen to ground explanations in the micro-foundations of individual action, providing some basis for rapprochement with the methodological predilections of economists (Boschma and Frenken, 2006; Boschma and Martin, 2007). At the same time, the need to abandon the attachment to the orthodox notion of utility-maximising actor is recognised, with notions of perfect rationality replaced with bounded rationality (Boschma and Frenken, 2006; Maskell and Malmberg, 2007). From this perspective, economic decision-making in the face of uncertainty and in the possession of limited information is guided by existing routines and rules. Institutions can play an important role in reducing such uncertainty by structuring interactions and providing a common framework of expectations (Stanfield, 2006, p.252). Rather than being solely concerned with pursuing their economic self-interest, agents are concerned with dignity and self- and social-image (ibid). It is this combination of a broader set of motivations and less cognitive competence, relative to orthodox approaches, that is at the heart of evolutionary economics' conception of the economic actor (ibid). As such, while mathematical models and econometrics have a role to play in understanding behaviour, it is important that the fledgling EEG does not "become just another playground for modellers and mathematicians" so that "the questions of realism, empirical grounding and operational usefulness in policy terms" are not ignored (Hodgson, 1995, p.481). Formal modelling must be accompanied by concrete

investigations into the actual actions and motivations of real individuals and organisations operating in specific historical and geographical contexts, requiring the deployment of surveys, interviews and ethnographic methods (Stanfield, 2006, p.251).

Individual economic agents shape evolutionary processes in the context of existing institutions. Individuals are socialised in particular time-space contexts according to prevailing social rules and norms, but this does not preclude them acting creatively to transform existing structures (Lawson, 2003).ⁱⁱ This process of socialisation is shaped by the past, meaning that:

economic agents have and make history. Their actions are conditioned from that which has gone before, they have antecedence, and their actions in turn condition that which is yet to unfold; they have consequence. (Stanfield 2006, p.250).

Furthermore, the goals of particular agents and the methods that they adopt in pursuit of them are shaped by their past social interactions while both goals and methods are reassessed as part of a “continuous interactive process” (ibid, p.251). The emphasis on both the importance of habit and routine and the transformative role of individuals does, however, present something of a conceptual problem (Maskell and Malmberg, 2007). Since institutions and the social rules that they embody operate ‘behind the back’ of individual agents, fostering taken-for-granted norms and understandings, it is difficult to imagine how such individuals can consciously identify aspects of the institutions in need of transformation (ibid, p.610). Even the more positive conception of institutions as enabling action is largely concerned with how habits and routines underpin learning in relation to familiar issues and patterns (Stanfield, 2006, p.290-1). This dilemma can perhaps be best handled by avoiding over-socialised approaches inherited from the old institutionalism and arguably reproduced in the notion of ‘path dependency’ (see next section; Hudson, 2005a), emphasising the importance of creativity and the generation of innovation and novelty in the economy (Martin and Sunley, 2006).

The separation between evolution and institutions within the fledgling EEG risks overlooking the important role of institutions in shaping processes of economic change (Hodgson, 2006; Nelson, 1995; Stanfield, 2006). Indeed, institutions (along with technology) have themselves been regarded as important ‘carriers of history’ in institutionalist economic geography (Martin, 2000), acting to preserve existing social practices and routines and to transmit elements of them into the future. In some cases, these can persist long after the productive base of the economy associated with them has disappeared, representing a form of ‘cognitive lock-in’ (Grabher, 1993).ⁱⁱⁱ Yet it is important to avoid the tendency, inherited from the OIE particularly, to equate institutions with inertia, rigidity and stasis whilst associating technology with dynamism, novelty and change, effecting too stark a dichotomy between the two (Lawson, 2003). While the notion of institutions as constraints on action is derived from North rather than the OIE, it nonetheless focuses attention on their role in ‘limiting’ or even ‘preventing’ the exploration of possibilities (ibid, p.609). In response to the rather impoverished view of institutions as sources of inertia, the simple fact that institutions are also subject to processes of change and transformation must be asserted (Lawson, 2003). In addition to constraining action, institutions also enable it in various ways, not least by providing the social rules that reduce the uncertainty confronting economics agents to manageable levels (Stanfield, 2006).

The self-organisation of the economic landscape represents another emerging theme in EEG (Boschma and Martin, 2007). This refers to the notion that an aggregate spatial order emerges from the complex interactions between the behaviour of different economic actors. This is consistent with an influential strand of economic thinking about institutions, associated particularly with the Austrian school of economics. Key figures such as Carl Menger and Hayek argued that institutions and other social phenomena can arise as unintended outcomes of the interactions between agents (Hodgson, 2006). Indeed, Menger attempted to explain the development of money in this fashion, in opposition to the 'state theory' promoted by the German historical school and others (Hodgson, 2002). This emphasis on self-organisation, however, seems to owe as much to methodological preference of economists for explanations rooted in the preferences of individual agents as to its empirical value in elucidating the evolution of the economy. It is criticised as excessive by Hodgson (2006), resulting in the neglect of other mechanisms of institutional emergence, reproduction and transformation. Foremost among these is the state whose role in shaping the evolution of the economic landscape should not be underplayed (Hudson, 2005a). The role of national states in creating certain development paths is apparent from the examples of the East Asian 'tiger' economies since the 1960s, in addition to Ireland and Finland in Western Europe (Martin and Sunley, 2006). At the regional scale too, state agencies have shaped processes of economic adaptation and change as demonstrated by, for example, the 'four motors' regions of Europe (Baden Württemberg, Catalonia, Lombardy and Rhone-Alps) in the late 1980s and 1990s (Dunford et al., 1997).

In addition to the dangers of importing an underlying methodological individualism, EEG, we would argue, risks becoming overly firm-centric in its analysis. It has offered little explicit consideration of the role of other sets of actors such as labour, community groups and the state in shaping the evolution of particular places, despite the development of the 'new labour geography' and an extensive literature on the changing role of the state in economic development policy (see Herod, 1997; Martin and Sunley, 1997). Here, we should clarify that we are referring to efforts to name and delimit EEG in more specific terms (Boschma and Frenken, 2006; JEG, 2007) rather than case study research on regional adaptation, within which the role of state agencies is prominent (although labour and community groups rarely appear). More than this, the social relations between such actors receive no attention. Indeed, such an orientation seems to be largely precluded by favoured theoretical and methodological frameworks adopted which tend to emphasise features such as complex systems, non-linear dynamics, spatial competition and selection and stochastic growth processes (Bottazzi et al., 2007; Essletzbichler and Rigby, 2007; Frenken and Boschma, 2007; Martin and Sunley, 2007), privileging quasi-natural or technological forces over institutions and social relations (Lawson, 2003).

At the same time, a broader conception of agency must recognise how the social relations between different groups influence the evolution of the economy. The differential capacities of particular agents and groups to access and process information can itself be seen as an important source of social and economic inequality (Stanfield, 2006). Existing patterns of social inequality shape the socialisation of individual agents and influence the extent to which individual and groups participate in socio-economic activity (ibid). The different positions and

interests of particular individuals and groups can generate conflict over adaptation strategies at the level of individual firms, clusters and regions. This requires sensitivity to questions of power and interest, recognising that such strategies are often formulated by dominant or hegemonic groups, although often requiring some negotiation with, and persuasion of, other interests.^{iv} While particular agendas may become dominant, setting in train particular industry or regional pathways, such agendas are always open and contested. In this sense, power relations are viewed as entangled (Sharp et al., 2000), subject to ongoing debates and struggles, with the authority of certain groups remaining vulnerable to resistance and opposition. From this perspective, power is never an absolute property which a particular group can capture and hold indefinitely, but something which is actively exercised through prevailing social networks and institutions (Allen 2003).

4. REGIONAL EVOLUTION AND PATH DEPENDENCY

In addition to the links between evolutionary and institutionalist perspectives, we are also concerned with the relationship between evolutionary and political economy approaches (Hudson, 2005b). We view the adoption of a geographical political economy approach as helping to provide a broader and more critical understanding of regional adaptation processes. As contributors to the emerging EEG have recognised (Boschma and Martin, 2007; Martin and Sunley, 2006), the Marxist geography of the 1970s and 1980s was concerned with the long-run development of cities and regions, emphasising how existing spatial arrangements were periodically disputed by the introduction of new technologies, production methods and organisational structures (Harvey, 1982; Massey, 1995). In the absence of an engagement with political economy, our concern would be that EEG, somewhat ironically, risks reproducing some of the problems of institutionalist economic geography, despite the separation of the two approaches (Boschma and Frenken, 2006). These problems involve a neglect of: the unequal power relations which shape the construction of regional agendas, the role of broader extra-regional networks and processes and the activities of national states in underpinning regional development (MacLeod, 2001; MacKinnon et al., 2002). In the first part of this section, we address certain key issues concerning the conceptualisation of path dependence in a regional context (Martin and Sunley, 2006) before attempting to recast this in a broader political economy framework.

Foremost among these is the question of determinacy or whether the notion of path dependency fosters a deterministic understanding of regional economic change, over-emphasising the connections between past and present (Hudson, 2005b, p.16). There is a tendency for path dependency to be treated in an over-socialised and technologically determinist manner whereby specific ‘carriers of history’ (institutions, technologies, firms) impart strong, self-reinforcing continuities upon broader trajectories of regional economic evolution (Hudson 2005a). This grants little sense of agency to regional actors once a particular trajectory has been set in train (Grabher, 1993; Hassink, 2005). Here, we are informed by the revised definition of institutions (Hodgson, 2006) discussed in the previous section, stressing the role of human agency in reproducing and potentially transforming prevailing social rules and institutions. This implies that the process of regional evolution is an ongoing and iterative one – “path as process” (ibid, p.11) – that can have many different branching points rather than a fixed trajectory set in train at key moments. Clearly, if we accept the role of history in shaping economic development as a dynamic process unfolding over time,

it is important to recognise that regional trajectories will diverge according to particular strategies adopted and that economic actors operate in the context of past decisions. Individual agents both shape and are shaped by broader processes of economic change, in an ongoing fashion, rather than being structurally constrained by them once particular pathways are set in train. Deterministic notions of path dependency underplay the importance of novelty and creativity in the evolutionary process (Martin and Sunley 2006), and these are often associated with regional innovation or diversification (Chapman et al., 2004).

Recognising that economic evolution is “always the contingent outcome between change and inertia” (Martin 2006, p.169), notions of ‘path contingency’ (Hudson 2005a) may be more useful by emphasising the relatively open-ended nature of evolutionary processes, albeit within the context of bounded determinacy imparted by existing structures (Massey, 1995). Whilst much attention has focused on the process and outcomes of path dependence, the actual agents, mechanisms and institutions through which regional pathways are actually constructed and followed have been neglected (Martin and Sunley, 2006). The notion of path contingency, we argue, offers the potential for a more nuanced sense of agency that provides a stronger purchase on regional adaptation than the more simplistic binary implied by successful modernisation or renewal versus lock-in to obsolete technologies and organisational routines (see Grabher, 1993; Hassink, 2005). As this suggests, lock-in is generally viewed in negative terms as a barrier to adaptation despite also having positive connotations in terms of economic specialisation, externalities and increasing returns (Hassink and Shin, 2005; Martin, 2006). The influence of this entrenched binary seems to have inhibited thinking about the potentially more varied predicaments and development paths of regions (Gertler, 2003). In this context, Martin and Sunley (2006) identify different ways by which regional economies can avoid negative ‘lock-in’ through adaptation, involving: the establishment of new indigenous development paths in the context of a new technological paradigm; the existence of heterogeneity among agents, technologies, institutions and networks; the transplantation of new organisational forms, technologies or firms from outside; diversification into new markets; and the radical upgrading of the industrial base (Chapman et al., 2004).

The over-determined view of path dependence in evolutionary thinking also neglects the issues of path creation and path destruction (see Martin and Sunley, 2006). While the former is often reduced to external forces or events, viewed as accidents of history in some accounts, the latter tends to be attributed to the persistence of inherited institutions and routines which are out of tune with new forms of economic organisation and technology (see Hudson, 2005a). A more rounded view would be that “the process of economic evolution must be understood as an ongoing never-ending interplay of path dependence, path creation and path destruction that occurs as actors in different arenas reproduce, mindfully deviate from and transform existing socio-economic-technological structures, practices and development paths” (Martin and Sunley 2006, p.408). Rather than being merely the product of chance or historical accidents as Krugman (1991) and prominent evolutionary economists have suggested, purposeful human action is central to the creation of and adaptation of particular paths (Martin and Sunley, 2006). As we indicated in the previous section, the role of the state and regional state agencies is often central to path creation through the formation of accumulation strategies which typically identify the key priorities for the regional or national economy in question and attempt to construct a shared vision around this

(see Jessop, 1997). Many strategies have focused on enhancing competitiveness in recent years, informed by 'benchmarking' exercises with assess performance against 'competitor' regions (Bristow, 2005; Martin, 2006).

A key issue in attempting to 'unpack' the concept of regional path dependency concerns the precise object(s) which it applies to. Is it the regional economy itself or a region's constituent firm or industries (Martin and Sunley, 2006)? The concept of path dependency was originally applied to the technological and organisational spheres in explaining why particular technologies (for example, the QWERTY keyboard or internal combustion engine) or firms are able to eliminate competition and became dominant over the long-term. Care should be taken in employing ideas about the evolutionary behaviour of individual agents and entities to the development of more complex social phenomenon such as regions. To provide an obvious example, successful adaptation for a firm may lead it to close down its regional operations and locate elsewhere (Schamp, 2001). Here, Essletzbichler and Rigby (2007) usefully distinguish between evolution *in* regions through competition between plants within a region, understood as a common selection environment, and the evolution *of* regions through competition based on organisational and technological variety.

We are ultimately interested in the evolution of regional economies rather than firms or industries, although it is important to stress that it is key agents, organisations and groups that actually act in the context of prevailing institutions and structures. Firms are of central importance here, but the role of other groups, particularly labour and the state, should not be overlooked. As suggested by the realist emphasis on a stratified reality (Lawson, 1997; 2003), path dependency can occur at different levels and the evolution of a regional economy is itself the aggregate outcome of the decisions of key actors. The relationship between firms and regions is not one-way, of course, with the attributes of regions such as institutions, routines, technological mixes, forms of knowledge and skills exerting a crucial influence over the competitiveness of the former (Dicken and Malmberg, 2001). This implies that the issue here is largely a choice of contrasting conceptual and methodological entry points. As existing case studies suggest (Chapman et al., 2004; Grabher, 1993; Hassink, 2005), analyses of regional evolution must examine the key industries and firms within the region in question while a geographically-sensitive analysis of firm or industry evolution will highlight the effects of the broader regional environment.

While the Marxist geography of the 1970s and 1980s may have reduced regional economic change to the 'inner contradictions' of capitalism in some cases (Boschma and Martin, 2007, p.539), we would maintain that regional path dependence must be related to the broader dynamics of capital accumulation (Hudson, 2006). These dynamics are underpinned by the creation of value through the labour process and its realisation through market exchange (Smith et al., 2002). This helps to focus attention on two areas of analysis largely overlooked in discussion of regional path dependence thus far: production and the labour process and the uneven relations between regions, structured by the geographical transfer of value (ibid). This latter aspect can be seen as part of the broader shift towards a more relational perspective on regions (Allen et al., 1998; Coe et al., 2004; Yeung, 2005). Echoing Massey's earlier concept of the spatial division of labour, the concept of territorial divisions of labour provides a framework for examining what forms of production are found in different places, emphasising the labour process and the value extracted by different actors within a

production ‘chain’ or network (Dunford, 2003; Dunford and Greco, 2006). Thus, for example, following the shift to an outward processing trade regime in the European clothing sector in the late 1980s and 1990s, production was relocated to lower-cost locations in Central and Eastern Europe while design, retailing and overall control remained concentrated in Western European countries, allowing the latter to appropriate the majority of value (Smith et al., 2002, p.51-54).

From this perspective, the evolution of regions is conditioned by their position within wider territorial divisions of labour, and path dependence can be seen as a product of the succession of roles that a region has played within these (Massey, 1995). Large corporations select particular locations for investment while regional actors formulate particular strategies which insert their regions into broader divisions of labour in particularly ways. Regions can become ‘locked in’ to particular roles, reflecting the concentration of either high or low value-added activities there, although dramatic changes and reversals are also apparent as demonstrated by the emergence of ‘new industrial spaces’ in the 1970s and 1980s in Europe and North America (Scott, 1988), for instance, and the decline of old industrial regions (Hudson, 1989). These tend to be bound up with broader shifts in prevailing technologies and modes of organisation (from example, the shift from Fordism to flexibility in the 1970s and 1980s). In this context, ‘lock-in’ appears as more of a contingent effect of broader processes of territorial development than a structural cause of regional decline. Thus, it is their reduced attractiveness, relative to other locations such as ‘new industrial spaces’, that explains the decline of ‘rustbelt’ regions such as the Ruhr and North East England since the 1970s rather than the effect of ‘lock-in’ to out-moded forms of organisation and technology. As such, EEG must avoid a fixation with processes of path dependence and ‘lock-in’ *per se*; relating such processes to particular region’s changing position within wider territorial divisions of labour. This means, in turn, that the evolution of the space-economy more broadly is shaped by inherited regional arrangement, indicating that processes of path dependence in the economy are themselves place dependent (Martin and Sunley, 2006).

A political economy also foregrounds issues of power and politics that surround processes of regional adaptation. Our thinking here is also informed by relational perspectives which contend that regions themselves are social (and often temporary) constructions with varying degrees of political and economic integrity (Allen et al., 1998; Hudson forthcoming). As such, regions therefore need to be viewed as (always temporary) collective assemblages of actors whose interests will sometimes diverge and come into conflict. The potential for the dominance of a particular set of interests over others raises the normative and political questions of whom or what is doing what kind of adaptation and in whose interests (Pike *et al.* 2006)? Democratic and participatory approaches to regional development may promote more sustainable forms of economic development by fostering heterodox thinking over narrow conformity (Pike, 2004). On the one hand, successful regional adaptation may be more likely to be achieved in circumstances where the institutional culture tolerates openness, variety and a willingness to challenge established orthodoxies (see Amin, 1999; Grabher and Stark. 1997). For older institutionalists such as Veblen this would equate to instrumental over ceremonial values (Bush, 1987; Tool, 1979), where dissent from the mainstream is tolerated to the extent that it can lead to innovation critical for economic renewal. There are also likely, however, to be limits to diversity. Infinite variety may result in a situation where the “noise” generated “runs the danger

of suppressing selection with the result that less efficient forms might deprive more efficient forms of resources to an extent that locks the evolution of an entire economy” (Grabher and Stark, 1997, p.536). Questions of governance therefore loom large in understanding the ability of regional actors to develop sustainable forms of economic development which allow both effective adaptation to change whilst maintaining equity and diversity.

Our final point in this section concerns the need to view regional adaptation in the context of national political economies, overcoming the tendency of regionally-focused research in economic geography to neglect this ‘missing link’ (Hudson, 2003; MacLeod, 2001; MacKinnon et al., 2002). Research on ‘successful’ regions in Europe highlighted the importance of this relationship (Dunford, et al., 1997), while our analysis of old industrial regions in Western Europe’s largest economies highlights the connections between regional and national economic performance (Cumbers et al., 2006). In accounting for differential national performance, institutional economists and economic sociologists have drawn attention to the persistence of institutional variation, identifying distinct national ‘varieties of capitalism’ (Amable, 2003; Hall and Soskice, 2001). Ultimately, however, this approach remain dependent on a rather one-sided and limiting view of institutions as constraints on action, overlooking their positive, enabling role, and is solely concerned with the national scale, ignoring evidence of regional variety in institutional endowments (see Essletzbichler and Rigby, 2007). While the attention of EEG is rightly focused on the latter, the role of national political economies in framing and mediating processes of regional adaptation should not be overlooked.

CONCLUSIONS

This paper has sought to contribute to the development of a new EEG (Boschma and Frenken, 2006; *JEG*, 2007). The underlying question addressed in this paper can be characterised, to paraphrase Amin and Thrift (2000), as ‘what kind of evolutionary theory for what kind of evolutionary economic geography?’ We are particularly concerned by the tendency to separate the fledgling EEG from institutional economic geography (Boschma and Frenken, 2006; Boschma and Martin, 2007). Crucially, the tendency to prise the two approaches apart leaves this putative EEG looking somewhat barren and impoverished, reflecting an evacuation of institutions and social agency. Our argument is that a broader sense of social agency and institutions must be recovered from the work of Hodgson and other institutionalists, helping to inform a clearer understanding of the key notions of ‘path dependency’ and ‘lock-in’ (Martin and Sunley, 2006). Institutionalism is also part of the heterodox tradition within economics (Lawson, 2006), overlapping significantly with evolutionary economics. Certainly, although perhaps not all evolutionary economists would also regard themselves as institutionalists, key institutionalists like Hodgson also characterise their work as evolutionary. In his recent work, Hodgson (2002; 2006) defines institutions as systems of established social rules, identifying habit as the key mechanism through which institutions mould individual behaviour through ‘reconstitutive downward causation’. Economic actors remain capable of adapting and changing inherited institutional arrangements, however, as also indicated by the ‘transformational model of social activity’ developed by Lawson (1997; 2003). While institutions are themselves important ‘carriers of history’ in the economy’ they are also subject to change and transformation (*ibid.*). The emphasis on human creativity is

important in overcoming over-socialised notions of path dependency, stressing the importance of novelty and in the economy. Institutions function not only as constraints on individual behaviour (Maskell and Malmberg, 2007; North, 1990), but also enable and frame action in a positive sense, not least by reducing the uncertainty facing economic actors through the provision of a common framework of expectations (Stanfield, 2006).

The second ‘missing link’ in the development of EEG emphasised in this paper is that with political economy approaches. As key argument is that the evolution of the economic landscape must be related to the broader dynamics of capital accumulation which are centred on the creation, realisation and geographical transfer of value (Smith et al., 2002). Moving beyond well-rehearsed critiques of institutional economic geography (MacKinnon et al., 2002; MacLeod, 2001), there is a need to incorporate an awareness of unequal power relations within regions, the role of the national state and the importance of external relations into accounts of regional adjustment. The broader definition of institutions derived from Hodgson (2006) helps to challenge over-determined views of path dependency, stressing the transformative role of human agency in the context of prevailing rules and institutions (Lawson, 2003). Human creativity is associated with the generation of novelty in the economy, often manifest in forms of regional innovation and diversification (Chapman et al., 2004). As such, the more open-ended notion of path contingency (Hudson, 2005a) seems to allow greater scope for exercise of social agency. By stressing the varied predicaments and development paths of regions, it also enables us to overcome the entrenched binary between successful modernisation or renewal, following successful efforts by regional actors and organisation to upgrade the industrial base, and continuing ‘lock-in’ to outdated technologies and practices (Gertler, 2003), indicating that path creation and destruction can occur through a range of mechanisms (Martin and Sunley, 2006). Rather than being the result of ‘chance discoveries’ and historical accidents’ (Krugman, 1991), regional adaptation processes are shaped by the strategies of key actors and organisations (Pinch and Henry, 1999). Here, the role of the state and regional state agencies is often central and EEG needs to incorporate a broader and more concrete sense of agency that moves beyond ‘bounded rationality’ and firm-centric analyses. The development of regional adaptation strategies needs to be assessed in the context of the social relations between different groups and interests, raising normative and political questions about whom or what is undertaking what kind of adaptation in whose interests (Pike *et al.*, 2006). From a broader political economy perspective, ‘lock-in’ can itself be seen as a contingent effect of broader processes of uneven development. The concept of territorial divisions of labour (Dunford, 2003) is particularly useful here in providing a framework for examining the connections between adaptation processes in different regions. Accordingly, we favour the utilisation of evolutionary and institutional concepts within a geographical political economy approach rather than the construction of a separate and theoretically ‘pure’ EEG; evolution in economic geography, not an evolutionary economic geography.^v

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NOTES

ⁱ Although Asian regions have also attracted attention and an evolutionary strain was evident in some studies of successful regions such as the ‘Third Italy’ and Silicon Valley (Cooke and Morgan, 1998; Saxenian, 1994).

ⁱⁱ While Veblen was sharply critical of Marx’s materialist reading of history, his own position shared much with the latter’s famous aphorism that people “make their own history, but ... they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given and transmitted from the past” (Marx, 1977, p.300).

ⁱⁱⁱ Hudson (2005a) provides an example from the North East of England in terms of how expectations of wage labour in large organisations outlived the collapse of the region’s heavy industries, undermining successive ‘enterprise’ initiatives focused on indigenous SMEs.

^{iv} This can be seen as a restatement, albeit in very different language, of the concern with ‘ceremonial values’ that characterised the OIE (Bush, 1987; Tool, 1979).

^v To paraphrase Johnston’s (1991) comments on regional geography.