

# Rethinking relational economic geography

Henry Wai-chung Yeung

Recent theoretical and empirical work in economic geography has experienced what might be termed a 'relational turn' that focuses primarily on the ways in which socio-spatial relations of economic actors are intertwined with processes of economic change at various geographical scales. This phenomenon begs the questions of whether the 'relational turn' is simply an explicit reworking of what might be an undercurrent in economic geography during the late 1970s and the 1980s, and whether this 'turn' offers substantial advancement in our theory and practice. In this paper, I aim to evaluate critically the nature and emergence of this relational economic geography by revisiting its antecedents and conceptual frameworks. This evaluation opens up some significant conceptual issues that are further reworked in this paper. In particular, I argue that much of the work in this 'relational turn' is relational only in a *thematic* sense, focusing on various themes of socio-spatial relations without theorizing sufficiently the nature of relationality and its manifestation through power relations and actor-specific practice. This paper thus illuminates the nature of relationality and the multiple ways through which power works itself out in 'relational geometries', defined as the spatial configurations of heterogeneous power relations. As a preliminary attempt, I first conceptualize different forms of power in such relational geometries and their causal effects in producing concrete/spatial outcomes. I then show how this relational view can offer an alternative understanding of a major research concern in contemporary economic geography – regional development.

**key words** epistemology power actors socio-spatial relations economic geography

---

Department of Geography, National University of Singapore, Singapore 117570  
email: HenryYeung@nus.edu.sg

revised manuscript received 4 May 2004

## Introduction

Since the mid-1990s, the softening of sub-disciplinary boundaries within human geography and the more general call for a 'relational thinking' in human geography (Massey *et al.* 1999; see also Allen *et al.* 1997; Sack 1997; Lee and Wills 1997) have stimulated the consolidation of what might be termed a 'relational economic geography'.<sup>1</sup> In this 'relational turn', economic geographers tend to place their analytical focus on the complex nexus of relations among actors and structures that effect dynamic changes in the spatial organization of economic activities (see Amin 1998; Dicken and Malmberg 2001; Ettlinger 2001; Bathelt and Glückler 2003; Boggs and Rantisi 2003). This relational economic geography is concerned primarily with the

ways in which socio-spatial relations of actors are intertwined with broader structures and processes of economic change at various geographical scales. Despite the claims of novelty among most economic geographers who have taken on such a relational thinking in their geographical analysis, it remains unclear whether this 'relational turn' represents merely a modest reworking of earlier work in economic geography that might not be *explicitly* relational in its conceptualization and analysis. After all, heated debates on the spatial divisions of labour, locality studies and flexible specialization dominated the heyday of economic geography during much of the 1980s and the early 1990s (Scott 2000). With hindsight, these debates have legitimized the analytical concern of economic geography with the social relations of production

and the relations between the spatial and the social (Harvey 1982; Thrift 1983; Massey 1984; Smith 1984; Gregory and Urry 1985; Lee 1989). By sidestepping the pitfalls of an earlier brand of quantitative economic geography concerned with spatial geometries and locational analysis, the substantive foci on regions, localities and production processes in these debates have no doubt foregrounded the recent 'relational turn' in economic geography.

While many recent geographic writings have addressed aspects tangential to the core theoretical categories deployed in a relational economic geography (e.g. Barnett 1998; Thrift 2000; Barnes 2001; Storper 2001), there is surprisingly a lack of systematic evaluation and integration of our knowledge of this growing field. In view of limited space, this paper develops a sympathetic critique and rethinking of the 'relational turn' in order to clarify the distinctive contributions of a relational economic geography and to rework some of its conceptual tools. In the next section, I critically examine the nature and emergence of the 'relational turn' in economic geography, by revisiting relational thought that existed as an undercurrent before the 1990s and situating the recent 'relational turn' in this earlier work in economic geography. Whilst the recent 'relational turn' has some of its intellectual antecedents in the earlier debates of the 1980s (particularly the social relations of production framework), its substantive content has been broadened to include *social actors* and their *network relations* at different spatial scales. Focusing on recent economic-geographical writings on regional development, embedded networks and geographical scales, I note that much of this large body of recent work is relational only in the *thematic* sense that relations among actors and structures are an important theme in contemporary economic-geographical enquiry. In particular, the causal nature of relationality and power relations are under-theorized and under-specified. If relational thinking in economic geography is to have a greater impact, we need to rework and deepen its theoretical constructs to go beyond simply a 'thematic turn' (Jessop 2001, 1214).

The paper moves on to rework some of the most important theoretical insights in the 'relational turn' – relationality, power and actors. Dynamic and heterogeneous relations among actors and structures are conceptualized as causal mechanisms of socio-spatial change in economic landscapes. Here, I explore the notion of 'relational geometries' constituted through *relationality* and *power*. The concept

of relational geometries refers to the spatial configurations of heterogeneous relations among actors and structures through which power and identities are played out and become efficacious. These relational geometries are neither actors (e.g. individuals and firms) nor structures (e.g. class, patriarchy and the state), but configurations of relations between and among them – connecting actors and structures through horizontal and vertical power relations. Relational geometries are also not networks *per se* because the latter refer mainly to horizontal and, mostly, static ties among actors only. Actors in these relational geometries are not static 'things' fixed in time and space. They are dynamic and evolving in such relational ways that their differential practices unleash multiple forms of emergent power in relational geometries. Building on the concept of different and emergent forms of causal power as *positions* in relational geometries and as *practice* through social action, this relational perspective allows us to avoid the two polarized frameworks in contemporary economic geography – actor networks and institutional structures. This effort to rework relational economic geography thus parallels the recently reinvigorated 'relational sociology' that 'sees relations between terms or units as preeminently dynamic in nature, as unfolding, ongoing processes rather than as static ties among inert substances' (Emirbayer 1997, 289). To substantiate the relevance of this reworking of conceptual categories, I show how relationality and multiple forms of power can offer vital insights into *regional development* that go beyond existing relational frameworks in economic geography.

### Revisiting relational thought in economic geography: its nature and emergence

An examination of the nature and emergence of relational thought in economic geography can be rather difficult precisely because in many ways it is hard not to think of geographical problems in relational terms – whether implicitly or explicitly. This potentially contentious acknowledgement, however, does not mean that all theories and frameworks in economic geography, whether neo-classical, structural, and postmodern, are relational by definition. Indeed, the *relationality* in any theoretical framework needs to be theorized and demonstrated, as in the case of the following frameworks. While acknowledging the existence of an undercurrent of relational thinking in economic

geography for some time, I can only realistically focus on economic-geographical work that *explicitly* addresses how relationality and social relations impinge on the spatial organization of economic activities.<sup>2</sup> In particular, I want to revisit the *social relations of production* (SRP) framework of the late 1970s and the 1980s and show how it serves as an antecedent of the recent 'relational turn' in economic geography.

By the late 1970s, the SRP framework had emerged as a radical critique of neoclassical industrial location theory largely because 'the changes in industry since the sixties [had] shaken industrial geography and industrial location theory to their foundations' (Massey 1984, 3; also Massey 1973 1979; Walker and Storper 1981; Storper and Walker 1989). Its main tenet was to theorize how uneven development arises from the complex interrelationships between the social divisions of labour underpinned by preexisting social structures and the spatial organization of capitalist relations of production (Harvey 1982; Smith 1984; Gregory and Urry 1985). While limited space precludes a fair review of this antecedent of a relational economic geography (see Sayer 1985 1995), radical economic geographers interpreted uneven regional development by emphasizing its *structural* and *productionist* causes (e.g. social relations of production as class structures). This analytical focus on capitalist relations and spatial structures was a form of relational thinking in a thematic sense because it examined both the dynamics of social structures and capitalist relations of production and interrogated the complex relational effects of these dynamics on spatial development.<sup>3</sup> As Massey argued,

Both the broad relations between classes and the very considerable differences within them are fundamental in understanding locational change, both its causes and its wider effects. Both what are called 'interregional relations' and geographical differences in type of employment are in large part the spatial expression of the relations of production and the divisions of labour within society. (1984, 39)

The SRP framework, nevertheless, often reduced the complexity of concrete processes to the relational effects of abstract structures such as class and divisions of labour. Its weakest link was not so much the lack of relational thinking, but rather its tendency to overemphasize the structural determination of such concrete relational effects as spatial change and territorial development. This weakness in the SRP framework has led Sayer (1995) to note

the relative decline of radical political economy in the late 1980s and the 1990s.

In this context, the development of a relational economic geography needs to be situated in a relative decline in the popularity of the SRP framework in economic geography and the shift towards 'mid-range' theoretical themes that simultaneously avoid the pitfalls of structural determinism and, yet, broaden further relational thinking. Interestingly, several theorists of the SRP framework pioneered the 'relational turn' during the 1990s (e.g. Massey 1993; Storper 1997; Massey *et al.* 1999; Hudson 2001). Here, I compare and contrast three recent 'thematic turns' towards the relational view of local and regional development, the network organization of firms, and scalar geographies. For this heuristic purpose, Table I summarizes these relational themes, their conceptual categories and proponents, their geographical relevance and their theoretical antecedents. The lack of prior systematic integration of these overlapping conceptual apparatuses means that my selection is necessarily biased, partial and contentious. This brief critical survey, however, should be viewed as a necessary step in an 'unfinished project' (see also Bathelt and Glückler 2003; Boggs and Rantisi 2003). It aims to show continuities with earlier theoretical advances in economic geography and elsewhere in the social sciences, and to discuss their main problems and contradictions.

One of the 'mid-range' theoretical frameworks in Table I most closely associated with the 'relational turn' refers to the analysis of *relational assets* in local and regional development. This research moves away from neoclassical models of local and regional development that focus primarily on how economic factors of production and other resource endowments shape the absolute and comparative advantages of specific localities and regions. Instead, the relational assets approach attempts to explain local and regional development as a spatial outcome of the resurgence of regional economies characterized by Storper (1997, 26) as the 'holy trinity' of technology, organizations and territories (see also Bathelt and Glückler 2003; Bathelt *et al.* 2004; Tallman *et al.* 2004). Territorial development is theorized to be significantly embedded in networks of relational assets and spatial proximity, particularly at the local and regional scales, such that 'territorialization is often tied to specific interdependencies in economic life' (Storper 1997, 20). This shift from neoclassical notions of *comparative advantage* to institutionalist notions of *relational assets* illustrates how different

**Table I Recent relational frameworks in economic geography and their antecedents**

<i>Relational frameworks</i>	<i>Thematic concepts</i>	<i>Major authors</i>	<i>Spatial manifestations</i>	<i>Antecedents</i>
Relational assets in local and regional development	<ul style="list-style-type: none"> <li>• Institutional thickness</li> <li>• Traded and untraded interdependencies</li> <li>• Agglomeration tendencies</li> <li>• Atmosphere and milieu</li> <li>• Social capital</li> </ul>	<ul style="list-style-type: none"> <li>• Ash Amin</li> <li>• Phil Cooke</li> <li>• Anders Malmberg</li> <li>• Ron Martin</li> <li>• Peter Maskell</li> <li>• Kevin Morgan</li> <li>• Allen Scott</li> <li>• Michael Storper</li> <li>• Nigel Thrift</li> </ul>	<ul style="list-style-type: none"> <li>• New industrial spaces</li> <li>• Industrial districts</li> <li>• Clusters</li> <li>• Learning regions</li> <li>• Marshallian nodes in global cities</li> </ul>	<ul style="list-style-type: none"> <li>• Evolutionary and institutional economics</li> <li>• New economic sociology</li> <li>• Organizational analysis</li> <li>• Urban studies</li> <li>• Political studies of democracy and social movements</li> </ul>
Relational embeddedness in networks: social actors, firms and organizations	<ul style="list-style-type: none"> <li>• Inter-organizational networks</li> <li>• Actor networks</li> <li>• (Global) production chains</li> <li>• Hybrid and gender relations</li> </ul>	<ul style="list-style-type: none"> <li>• Ash Amin</li> <li>• Peter Dicken</li> <li>• Meric Gertler</li> <li>• J.K. Gibson-Graham</li> <li>• Gernot Grabher</li> <li>• Roger Lee</li> <li>• Linda McDowell</li> <li>• Jonathan Murdoch</li> <li>• Nigel Thrift</li> <li>• Sarah Whatmore</li> </ul>	<ul style="list-style-type: none"> <li>• Global–local tensions</li> <li>• Differentiated production of organizational space</li> <li>• Path dependency</li> <li>• Hybrid geographies and multiple trajectories</li> </ul>	<ul style="list-style-type: none"> <li>• New economic sociology</li> <li>• Organizational analysis and management studies</li> <li>• Poststructuralism and feminist studies</li> <li>• Science and technology studies</li> </ul>
Relational scales	<ul style="list-style-type: none"> <li>• Geographical scales as relational constructions</li> <li>• Social relations as scalar constructs</li> <li>• Rescaling and reterritorialization</li> </ul>	<ul style="list-style-type: none"> <li>• Neil Brenner</li> <li>• Kevin Cox</li> <li>• Bob Jessop</li> <li>• Jamie Peck</li> <li>• Neil Smith</li> <li>• Erik Swyngedouw</li> <li>• Peter Taylor</li> </ul>	<ul style="list-style-type: none"> <li>• Scalar geographies</li> <li>• Politics of globalization</li> <li>• Urban and regional governance</li> <li>• Social regulation of local labour markets</li> </ul>	<ul style="list-style-type: none"> <li>• Geography</li> <li>• Sociology</li> <li>• Institutional analysis</li> </ul>

relational thinking (neoclassical vs institutionalism) might lead to different conceptual themes and explanatory factors to be explored (comparative advantage vs relational assets). Instead of exploring transactional factor relations between economic actors developed in agglomerations, economic geographers have advocated several interrelated concepts to explain the spatial origins and impact of relational assets: 'institutional thickness' (Amin and Thrift 1994), 'untraded interdependencies' (Storper 1995; Storper and Salais 1997; Tallman *et al.* 2004), 'learning regions' (Asheim 1996; Maskell and Malmberg 1999; cf. Hudson 1999); 'associational economies' (Cooke and Morgan 1998) and 'local buzz' (Bathelt *et al.* 2004). Collectively, this theoretical emphasis on relational assets offers a variety of such non-economic factors as local rules, reflexive knowledge, conventions and contexts that explain the agglomeration of firm locations and the subsequent local and regional development.

While the relational assets framework has contributed to the 'relational turn' in economic geography, its spatial locus of analysis remains largely in local and regional development and its analytical anchor in endogenous (often non-economic) growth factors. Since the beginning of the 1990s, however, another strand has emerged that unravels *relational embeddedness* in all kinds of networks among economic actors – individuals, firms and organizations. As summarized in Table I, this broader strand of relational thinking is highly diverse in terms of theoretical claims, analytical themes and empirical concerns. Some economic geographers emphasize *inter-organizational networks* in order to understand industrialization, production and territorial development. Drawing upon Polanyi's (1944) notion of differential embeddedness between economy and society in pre-capitalist and capitalist times and its recent reformulation in 'new economic sociology' (Granovetter 1985), Dicken and Thrift argue the case for studying different organizational forms and processes:

the importance of organization as a cognitive, cultural, social and political (and spatial) framework for doing business has increasingly come to be realized. Indeed, nowadays, organization is often equated with 'culture', envisaged as a set of conventions. (1992, 283)

In retrospect, the concept of embeddedness represents a telling move away from studying the social relations of production *per se* in the radical political economy of the 1980s towards a broader concept-

ualization of the socio-spatial organization of production, prefiguring the extensive discussions that have taken place since the early 1990s around network paradigms, associational economies and relational geographies (see Storper 1989; Camagni 1991; Cooke and Morgan 1993 1998; Grabher 1993; Yeung 1994 2000; Dicken *et al.* 2001; Hess 2004). This emphasis on networks and their associated power relations has also facilitated the rediscovery of the firm in economic geography (Yeung 2000; Taylor and Asheim 2001), in part because it establishes an alternative analytical path between the methodological individualism of narrowly firm-centric approaches (e.g. industrial location models) and the strong sense of structural determinism that is evident in macro-process studies of geographical industrialization and uneven development (e.g. the SRP framework).

Other economic geographers have taken their philosophical and theoretical cues from such social theories as poststructuralism and actor network theory to establish a parallel theme concerned with *how hybridity* and *identities* of actors are relationally constituted via different varieties of networks. This line of relational enquiry argues for the plurality and multiplicity of actors (human and nonhumans) and their relational activities across space. Instead of conceptualizing economic units as a singular site of rational, (re)productive and progressive imperatives, this 'decentres' and 'destabilizes' the fundamental categories of organizing socio-economic life (Thrift and Olds 1996; Whatmore 1997; O'Neill and Gibson-Graham 1999; Olds and Yeung 1999; Nagar *et al.* 2002). For example, Gibson-Graham argues that

a capitalist site (a firm, industry or economy) or a capitalist practice (exploitation of wage labour, distribution of surplus value) cannot appear as the concrete embodiment of an abstract capitalist essence. It has no invariant 'inside' but is constituted by its continually changing and contradictory 'outsides'. (1996, 15–16; see also Walters 1999)

Economic actors are seen as embedded in diverse social discourses and practices, and cannot be conceived as rational and mechanistic economic entities. These actors are influenced by a broad array of hybrid relations among humans and nonhumans, and their action is significantly shaped by multiple logics and trajectories whose significance varies in different contexts (Ettlinger 2003).

In both strands of relational thought, however, *geographical scales* seem to be less apparent and held

constant in their analytical foci (with the notable exceptions of actor network analysis and global production networks/chains). While implicit elements of relational thinking about spatial scales were evident in radical political economy during the 1980s, it is not until the early 1990s and henceforth that a *relational* view of geographies of scales has been receiving serious research attention (Swyngedouw 1992 1997; Brenner 1999 2001; Herod and Wright 2002; Sheppard 2002; Sheppard and McMaster 2004). Although some may argue that this body of work is based too much on self-referential truisms, a critical review here is necessary to ascertain its contributions to the 'relational turn' in economic geography (see Table I). Indeed, much of this body of work attempts to interpret and clarify the role of overlapping scalar geographies and reconfiguring of territorial units in understanding perhaps *the* contemporary geographical phenomenon – globalization. Most of these studies of the 'relativization' of scales (Jessop 1999; Peck 2002) begin with the view that the socio-political construction of scales is critical to our understanding of globalization tendencies and their territorial outcomes. Certain geographical scales are seen as relationally constructed and historically produced under the aegis of capitalism. They refer to 'a relational element in a complex mix that also includes space, place and environment – all of which interactively make the geographies we live in and study' (Marston 2000, 221). One can think of homes, cities and regions as socially (re)produced in relation to the advent of different rounds of modernity and capitalism. These geographical scales have mixed fortunes in their political acceptance and social influence during different periods of capitalist regimes of accumulation (Smith 1984). They are not spatial solutions pre-given at the ontological level such that they can be 'jumped' and 'produced' by globalization tendencies; they are rather contested in a relational manner through social struggles and political means. This relational definition of geographical scales is important to our understanding of the scalar restructuring effects of globalization (Yeung 1998 2002; Amin 2002 2004; Peck and Yeung 2003; Flusty 2004).

To sum up, these three interrelated strands of theoretical and empirical literature have contributed to a 'thematic turn' towards a relational economic geography. While some of them have built on the important relational thought in the earlier frameworks in economic geography (particularly the social

relations of production approach), they have also gone beyond their intellectual predecessors to focus on different economic-geographical phenomena at a variety of spatial scales (e.g. complex relations between economy and culture). In this sense, this emerging relational economic geography involves more than old wine in new bottles. An important issue, however, is the *extent* to which this relational economic geography can go beyond a mere 'thematic turn' and instead rework its conceptual framework such that we not only place emphasis on relations, but ascribe causal power to both relations and relationality in explaining socio-spatial changes. This quest for a relational framework in economic geography involves an analytical movement from recognizing the *de facto* differences in relational geographies to theorizing *explanations of difference*. A relational economic geography, then, requires conceptual apparatus to explain *why* and *how* relationality and power relations matter. In one sense, the concern with causality brings us back to the SRP framework in which spatial structures were explained in relation to the social relations of production.

### Reworking relationality, power and actors

In this section, I aim to rework three important conceptual tools of a relational economic geography – relationality, power and actors – in order to identify their underlying causal properties. This is an important methodological step because some extreme variants of the 'relational turn' in economic geography have been accused of anti-essentialism. Sayer has aptly pointed out this problem:

The danger of anti-essentialism is that it switches straight from determinism and reductionism to voluntarism. Extreme versions of anti-essentialism which suppose that anything can happen in any situation therefore render explanation impossible, for there is nothing that theory can say about what determines what. (1995, 23)

For example, the generic concepts of relations and networks – as conceived in the above relational frameworks – are in themselves descriptive categories and therefore devoid of explanatory capacity. This is mainly because their material and substantive influences need to be mediated through social action. As a description of complex webs of actors and structures, these concepts are less effective in theorizing how concrete/spatial outcomes are *produced* through them. As Thévenot notes,

[t]he notion of network is very compelling because of its power to embrace in its *description* a potential list of entities which is much broader than the one offered by models of action and practice. But this notion tends to overlook the heterogeneity of links for the benefit of a unified picture of interconnected entities. (2001, 408; my emphasis)

I argue that one missing link in the relational frameworks summarized in Table I is the conceptualization of *power* practised through relationality. We need not only to unpack what power is in relational terms, but more importantly also to demonstrate how heterogeneous configurations of power relations (i.e. relational geometries) can generate certain emergent effects and spatial tendencies that account for concrete economic change.

While I will briefly substantiate the following theoretical reworking in the final sub-section, let me start with one stylized example to be used throughout this section. In this example, our analytical problem is to explain the success of some firms in a particular region. An economic geographer from the relational assets perspective will likely explain this phenomenon in relation to the presence of these assets – however they are defined – and their benefits to the firms and the region. Another from the embedded networks approach will attribute the success of the firms (and, by inference, the region) to their embeddedness in localized inter-firm networks. Whilst these are fairly convincing stories, they are rather partial because both relational assets and network embeddedness tend to be conceived *a priori* as positive and beneficial to the performance of firms and regions. More critically, this positive assumption implicit in both concepts ignores the *relational* ways in which their causality works. The fact that some firms have developed transactional

relationships with one another to form an inter-firm network in one region does not really explain why these firms are successful or why the region becomes prosperous – a problem of counterfactual-ity. Their success and prosperity need to be explained in terms of how this network performs *in relation to* competing networks in the same region and elsewhere (e.g. global competition). To assess the performance of an individual network firm, we also have to examine its relational position in the network (e.g. its dominance and control) and the importance of this network in relation to the firm’s overall transactional activities that often go beyond localized networks (e.g. see Dicken *et al.* 2001; Henderson *et al.* 2002; Coe *et al.* forthcoming). In different empirical contexts, this inherent *relationality* in firm networks generates rather different configurations of power relations, some of which are more important than others and have more capacity to produce concrete outcomes in the regional space-economy.

*The nature of relationality*

To clarify the nature of relationality, we first have to understand relational thinking. As defined by Massey and Collective, relational thinking represents

an attempt to reimagine the either/or constructions of binary thinking (where the only relations are negative ones of exclusion) and to recognize the important elements of interconnection which go into the construction of any identity. (1999, 12)

Some critical clarifications of the quotation are necessary here. First, relationality presupposes binaries such that relations between these opposing binaries can be ‘reimagined’. Figure 1 shows how relationality works through the conceptual connections between/among actors and structures,

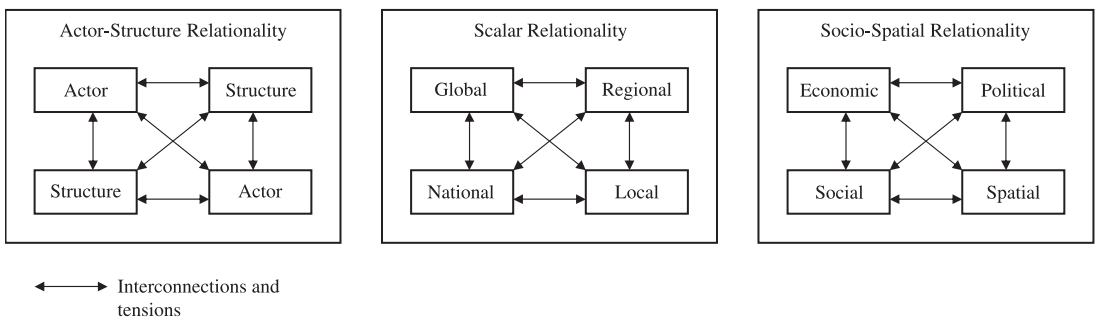


Figure 1 The nature of relationality in relational economic geography

global–local scales, and the social and the spatial (see also Boggs and Rantisi 2003). It is through these matrix-like interconnections that each end of the binary achieves its meaning. It is thus impossible to think of the global without presupposing its relation to the local (and other spatial scales). Revisiting my stylized example above, it is simply not useful to think of the firm without relating it to the network and the institutional structure in which the firm is embedded. Second, it follows that not all binary relations are necessarily ‘exclusive’. Such exclusiveness in binary thinking needs to be demonstrated in relation to the implied ‘inclusiveness’ of relational thinking, not merely asserted. In other words, some binaries can be useful insofar as they stimulate relational thinking.

As such, relationality refers to an essential quality embedded in an iterative process of drawing interconnections between two or more discrete categories and phenomena that may not necessarily be binaries. Thinking about relationality necessitates an analytical movement away from abstract phenomena (e.g. the firm or the network) to examine the interconnections between discrete phenomena and to transcend their dichotomization:

Taking a relational orientation suggests that the real work of the human organization occurs within the space of interaction between its members. Thus the theorist must account for the relationships among, rather than the individual properties of, organizational members. (Bradbury and Lichtenstein 2000, 551)

Clearly, such an emphasis on relationality has strong parallels in earlier studies in the physical sciences (e.g. quantum physics) and social sciences (e.g. systems analysis and social theory; see a critical review in Emirbayer 1997). A relational conception of actors and structures also presupposes an understanding of Giddens’ (1984) conception of ‘structuration’ in which the discursive consciousness and reflexivity of human agency can arguably shape the structures that both enable and constrain their activities.

What might then be useful in this argument for a relational thinking in economic geography? I believe it has something to do with the inherent *tension* in relationality that in turn gives rise to the analytical significance of different forms of emergent power. The contingent realization of these different forms of emergent power depends on specific empirical contexts. The process of connecting different discrete categories necessitates an appre-

ciation of the tension between these categories. For example, in arguing for an analytical shift from the social relations of production of the 1970s and the 1980s to relations between actors and their embedded networks in the 1990s and beyond, we often invoke an analytical tension in theorizing the connections between these categories. This tension in relationality, nevertheless, is not necessarily a bad thing for theory development. To understand this tension in relationality, we need to bring different forms of *emergent power* back into our theorization – a process missing in much of the ‘thematic turn’ in a relational economic geography that too frequently tends to privilege particular categories (e.g. the local, the cultural, the intangible and the institutional). What is often lacking in such a relational economic geography is analytical focus on the tension and power relations *between* – not *within* – such categories (see Figure 1). Focusing on the inherent tension in relationality and its manifestation through differential power relations also allows us to incorporate actor-specific *practice* into our analysis of contemporary economic change. In the context of the earlier stylized example, it is thus sensible to analyse the tension in the (dis)embedding process of firms in localized networks and to explain socio-spatial outcomes in relation to how diverse firms negotiate and act on this tension differently. An analysis of the differential capacity of firms in this negotiation process needs to take into account different forms of power (e.g. market competition and state intervention) and their manifestation through firm-specific practices.

#### *Emergent power as relational constructs*

If relationality is constituted through interactions, interconnections and tensions, then there is clearly a great deal of *heterogeneity* and *unevenness* in these relational processes. This heterogeneity and unevenness does not refer to the socio-spatial outcomes themselves – as well documented in the uneven development literature. Instead, I refer to the inherent heterogeneity and unevenness in the constitution and configuration of relational geometries that in turn *produce* concrete outcomes. There are thus different *forms of power* embedded in different configurations of relational geometries. Allen (2003) has analysed the relations between spatiality and power at a general level and developed a relational notion of the ‘spatial assemblages of power’ in which spatiality is imbued with power *and* power is intertwined with spatiality (cf.



Lefebvre 1991). This relational view of power has also been emphasized in the recent 'institutional turn' in economic geography (Amin 2001; Jessop 2001). To understand how power is unleashed through heterogeneous relational geometries, we need to unpack its causal nature and concrete forms. On power, Lukes concludes that

there are various answers, all deeply familiar, which respond to our interests in both the outcomes and the location of power. Perhaps this explains why, in our ordinary unreflective judgements and comparisons of power, we normally know what we mean and have little difficulty in understanding one another, yet every attempt at a single general answer to the question has failed and seems likely to fail. (1986, 17)

Following Allen's conception of power as 'a relational effect of social interaction' (2003, 2), I define power as the relational effects of the capacity to influence *and* the exercise of this capacity through actor-specific practice. It is thus defined in neither simply positional nor practical terms because it is encapsulated in *both* position and practice. As such, power is both a relational and an emergent construct manifested through practice. Power is a *relational* attribute because its effects are experienced through the process of its mobilization and practice. For example, we think of an actor as powerful or having power when we know of prior outcomes arising from the structures of relations in which this actor is embedded. This actor can be deemed to possess a *capacity* to act within those structures of relations. Its power is dependent on the fact that this capacity is exercised eventually and successfully. Power is therefore not an inherently possessed quality as in the Weberian concept of bureaucracy and 'iron cage' (Weber [1947] 1964; see Clegg 1990), the resource-dependency school of organization theories (Pfeffer and Salancik 1978; Pfeffer 1981) and the structural power school of global political economy (Strange 1994). Power is also not an actor-specific property as in social network analysis (Burt 1982 1992; Emirbayer and Goodwin 1994; Kilduff and Tsai 2003). In this latter literature, an actor's power in a network is a function of its positionality within the network (e.g. centrality) or of 'the strength of association between actors in the composition of the network' (Bridge 1997, 619). But the structure of a network tells us little about the qualitative nature of the relations among actors that are far more important than structures *per se*.

Instead, I see power as the emergent effects of *social practice among actors* who have the capacity and resources to influence. Social actors are thus critical in the mediation of power as relational effects, although they do not possess power *per se*. Theorizing overlapping contexts and rationalities of actors, Ettliger argues that theories privileging network relations are 'insufficient to explain how different types of connections among different types of actors make a difference, and do so in different contexts' (2003, 157). While capacity is inscribed in heterogeneous relations in a structural sense, its causality is effectual through actor-specific practice and therefore cannot be determined *a priori*. The relational effects of power are multi-directional because some actors derive their capacity to influence from structural positions, whereas others experience power through relational practice. Revisiting my stylized example of firms and networks in regional development, such a relational conception of power is useful to understand why, say, relational assets and institutional thickness may not generally be beneficial to *all* firms in a region. The practice of adversarial and ultra-competitive power relations between local and non-local firms may jeopardize the structural possibility of mutual interaction and localized learning derived from the presence of such relational assets and institutional thickness. The dominant positionality of global firms in such localized networks can only explain concrete learning outcomes in partial terms. A better explanation requires an examination of the practice of such power relations among local and non-local firms in relation to their respective structural positionality and mutual interconnections – a perspective advocated in this relational view of regional development (see the final subsection).

A relational view also conceptualizes power as an *emergent* attribute such that the sum of heterogeneous relations is much greater than that of individual parts. In Figure 1, this emergent effect of power is illustrated by the summation of various interconnections within each box. The emergence of power from these sets of relations represents a particular kind of causal effect because the presence of their constitutive parts (e.g. actors or structures) precedes any concrete effects or outcomes. Going back to my stylized example, the emergent power of relational assets and institutional thickness is clearly greater than the sum of individual assets or institutions in a particular region. The sheer presence of local assets (e.g. technological competencies) or local institutions

(e.g. pro-development coalitions) does not necessarily constitute an emergent effect propelling superior firm performance and regional development. This is because the efficacy of such an emergent effect is contingent on the practice of a variety of actors such as firms, unions and agencies entering into all sorts of heterogeneous relations – a relational practice that activates this emergent effect. In other words, the emergent nature of power is experienced through action and practice. Mediated and realized through actor-specific practice, the emergent power embedded in these relations provides a major force to drive association and interconnections and to produce socio-spatial outcomes. As evident in the literature on the ‘learning region’ and local embeddedness, emergent power enhances the possibilities for actors in heterogeneous relations to engage in recursive learning and reflexivity. Such actors as firms in relational networks benefit from place-based learning that otherwise would not occur if these actors exist and operate independently. The territorialized relationships between actors and space are also highly intertwined in the sense that firms produce places through their place-based activities and places produce firms via prevailing sets of institutions, rules and conventions (see Dicken 2000; Dicken and Malmberg 2001; Hudson 2001; Bathelt *et al.* 2004; Tallman *et al.* 2004).

#### *Power and relationality in relational geometries*

My rather abstract theorization of power so far perhaps explains why relational frameworks in Table I tend to ignore or downplay the role of power in relational constructs. Instead, these frameworks focus on ‘mid-range’ analytical themes as the explanatory categories of their relational constructs (e.g. relational assets, institutional thickness and network embeddedness). The causal nature of relationality and power is implicit, rendering these thematic frameworks incomplete as a general theory in economic geography. Here, I explore the ways that the causality of relational geometries is unleashed through two particular forms of power relations – relational complementarity and relational specificity. By complementarity, I refer to a form of power relations where the constituents of relational geometries benefit from each other’s co-presence and engagement. These constituents can be actors (e.g. firms), structures (e.g. markets and states) or both. Greater complementarity in the power relations among these constituents will enhance its emergent

power to produce spatial change and outcomes. This is because the complementary ‘fit’ between actor strategies and structural imperatives reduces conflicts and resistance, and therefore leads to the realization of intended outcomes.

In concrete terms, such complementary power relations can be found in the market practices of such *actors* as firms. Despite their unequal power relations, firms with different market power and competitive advantages tend to enter into cooperative relations (e.g. technology alliances and production networks) in order to tap into each other’s complementary assets. Through this process of relational interaction, a new set of ‘relational assets’ can be produced in such ways that bind some firms to a particular set of relational geometry. These firms thus enjoy ‘relational complementarity’ – a relational advantage defined by and practised through their cooperative relations. Their mutual benefits (e.g. better market performance) and spatial tendencies (e.g. co-location or agglomeration) are not explained by the *fact* that they are embedded in networks – an analytical approach common in the relational embeddedness literature (see Table I). Rather, these concrete benefits and tendencies are explained by the *processes* through which their complementarity is relationally constructed and the *ways* in which they themselves realize this complementarity. The former processes may involve discursive constructions of cooperation within each firm to legitimize their economies of cooperation. The latter may include the practice of power relations such that the focal firm may encourage its key suppliers to co-locate near its production sites. The fact that these firms are embedded in the same cooperative network does not explain the socio-spatial outcome of their co-location. Such a causal explanation needs to be located in the ways through which relational complementarity among these firms is constructed and realized through the practice of power and its relational effects.

*Relational specificity* refers to a particular form of power relations in which dedicated commitment is enforced among constituents in dyadic and heterogeneous relations. This form of relational power has some parallels in the concept of ‘asset specificity’ in transaction costs economics (Williamson 1975 1985) that examines the transactional problems arising from dedicated commitment by producers and suppliers. Specificity in power relations, however, covers a much *broader* analytical ground than the narrow focus in transaction costs economics that

'the transaction is usefully made the basic unit of analysis' (Williamson 1981, 568). Relational specificity is determined by the extent to which constituents in relational geometries are dependent on and 'locked-in' to their ongoing power relations for resources and information. This dependency is specific to particular relational geometries (e.g. regional networks) and therefore requires dedicated commitment from these constituents to make the relational geometry 'work'. The capacity of a relational geometry to produce concrete outcomes among its constituents is proportional to the degree of this relational specificity. In concrete terms, the performance of some firms or regions may be highly dependent on specific kinds of relations. State subsidiaries and political support can enhance the performance of some uncompetitive firms, whereas technological spillovers – in both localized and non-localized forms – can benefit other unrelated firms in these specific localities or networks. This specificity in power relations, for example, explains why Japanese *keiretsu* production networks and ethnic business networks are more exclusive and dedicated than other business and production networks. Relational specificity also explains why there are still substantial variations in business co-ordination and control mechanisms among competitive economies in the world today (Hamilton and Feenstra 1995; DiMaggio 2001; Guillén 2001).

#### *Making a difference: reinterpreting regional development*

Since Massey's (1978 1984) seminal contribution, economic geographers have tended to think of *regional development* as a problem of unequal social relations of production and the manifestation of these relations through spatial divisions of labour. In this view, successive waves of investment are attracted to regions offering adequate opportunities for profitable production, while regions in which these opportunities have been exhausted experience a process of divestment. At any one point in time, the prevailing balance between rounds of investment and divestment is reflected in a particular form of geographical inequality. The recent 'relational turn' in economic geography has conceived regional development as a problem of (the lack of) relational assets and/or institutional thickness:

The existence of the conventions and relations that permit reflexivity are something like *assets* to the organizations or regions that have them, or even to the individual agents caught up in them. Regions and

organizations who have them have advantages because these relations and conventions – much more so than stocks of physical capital, codified knowledge, or infrastructure – are difficult, slow, and costly to reproduce, and sometimes they are impossible to imitate. The status of the region is now not merely a locus of true pecuniary externalities, but – for the lucky regions – are a site of important stocks of relational assets. (Storper 1997, 44; original italics)

To a large extent, the proponents of these relational frameworks argue that localized agglomerations and institutional structures are both necessary and sufficient to account for regional growth and development. Their analytical focus seems to be largely placed on social and institutional conditions *within* regions in explaining processes of economic development. There is much less emphasis on *non-local* relations and flows in shaping the trajectory of regional development. Branding this recent resurgence of interest in regions as a form of 'new regionalism', MacKinnon *et al.* (2002, 295) point out that 'the implicit claim that regions can somehow be regarded as distinct objects with causal powers of their own can be seen as a form of spatial fetishism that tends to elide intraregional divisions and tensions' (Lovering 1999; Hudson 2001).

Placing its analytical emphasis on heterogeneous configurations of power relations – local and non-local – within particular regions, my relational framework may help to redress this analytical bias towards localized relations within regions. It conceives the region not as a closed system or a container of intangible assets and structures, but as a relational construct through which heterogeneous flows of actors, assets and structures coalesce and take place (Amin 1998 1999; Coe *et al.* forthcoming). In what sense, then, can we rethink regional development as a 'relational problem'? The relational approach to regional development is not about using the *presence* of relational assets or institutional thickness to explain why some regions prosper and others falter. Clearly, relational assets and/or institutional thickness in one region might be a liability and a constraint to development in another region. Not all regions, for example, can benefit from localized agglomerations of high technology firms. There may also be contradictions in the politicization of local and community-based economic initiatives. Regional development thus needs to be understood in relational terms. It is about improvement in economic conditions of a region relative to an earlier historical period. It is also about relational

interdependency because the fortunes of one region are intimately linked to other regions through relations of control and dependency, market competition and extra-local forces. As such, relational assets and institutional thickness are not necessarily the causal explanations of regional development, even though they are likely to be present in some developing or – in the words of Storper (1997, 44) – ‘lucky’ regions. Their causal links to regional development must be theorized in relation to their *complementarity* and *specificity* to particular regions in question.

Put in these terms, a relational approach to regional development seeks to identify the complex relational geometry comprising *local* and *non-local* actors, *tangible* and *intangible* assets, *formal* and *informal* institutional structures, and their interactive power relations. There is no *a priori* privileging of particular categories. The analytical focus is on the inherent tension in producing regional development outcomes. In particular, the approach analyses the relational complementarity and specificity of these actors, assets and structures – not their mere presence or absence. This methodological specification allows for an analysis of why some actors (e.g. firms and unions) are more tied to specific regions and therefore likely to contribute to regional development. It also helps to identify the relational advantage of regions when a particular set of heterogeneous relations (relational geometry) might be more beneficial to one region and less effectual in another region (cf. Saxenian 1994; Cooke and Morgan 1998; Scott 1998; Scott and Storper 2003). This differential causation of development in different regions vis-à-vis a particular relational geometry of firms, business networks, trade associations, labour unions, civil associations, government authorities, and so on can be theorized in relation to their different degree of relational complementarity and specificity. Explaining regional development requires us to unpack these dynamic relations and the ways in which their causal powers are realized through actor-specific practices. This relational approach to regional development goes beyond the ‘stock-taking approach’ in which the development of a region is often explained retrospectively through the presence (or absence) of localized stock of relational assets and institutional structures.

## Conclusion

This paper has argued that the ‘relational turn’ in economic geography does break some new ground,

but remains incomplete. Most of the theoretical frameworks in this turn are oriented towards developing new research *themes* for understanding the geographical foundations of socio-economic life. I have reworked some conceptual tools under-theorized in this ‘thematic turn’, particularly the notion of ‘relational geometries’ and the nature of relationality and power in relational geometries. To ‘operationalize’ our relational thinking, I believe that we must bring power back into our relational thinking. We need to move from descriptive vocabularies of power to developing a relational notion of what Allen (1999) terms the spatial assemblages of power. This relational conception explains why we need to reorient our analytical attention away from individual actors or institutional structures as if they are causal and explanatory in their own right. Instead, we must unpack relational geometries imbued with causal power capable of producing spatial change. In this sense, my approach goes far beyond the relational view proposed by Bathelt and Glückler that ‘any analysis in relational economic geography is based on an understanding of intentions and strategies of economic actors and ensembles of actors and the patterns of how they behave’ (2003, 125).

How then do we apply this relational perspective in economic geography without being accused of creating greater fuzziness of concepts and fragmentation in geographical research? After all, the kind of relational thinking advocated in this paper might appear to be imprecise and fuzzy because it does not clearly specify – beyond forms of emergent power and relational geometries – operationalizable variables for further empirical testing (cf. Markusen 1999; Hudson 2003; Peck 2003; Yeung 2003). I argue, however, that this theoretical reworking is intentionally reflexive and therefore opens up spaces for further theorization and spirited debates. My reworking of power represents a conscious strategy to establish causality between relational geometries and concrete (spatial) outcomes. The success of this effort will depend critically on how we get out of the atomistic/individualist conceptions of economic activities and spatial changes that are so ingrained in our geographical imaginations. Thinking about these activities and changes in relational terms is only a first step towards unveiling the analytical capacity of a relational economic geography. Ascribing causal power to relational geometries represents quite another leap towards a kind of economic geography that is inherently reflexive and contextual

without over-privileging or over-socializing the economic.

## Acknowledgements

I would like to thank Eric Sheppard, Nancy Ettlinger, Gernot Grabher, Jamie Peck, Nigel Thrift, Sally Weller and Yu Zhou for their helpful comments on an earlier draft. I am also very grateful to the three anonymous referees of *Transactions* and the Editor, Adam Tickell, who have offered very detailed and useful comments on various iterations that have helped sharpening my arguments. I am solely responsible for any errors or mistakes in this paper.

## Notes

- 1 Such a relational thinking has also been revived recently in sociology (Emirbayer 1997) and management (Dyer and Singh 1998; Gulati *et al.* 2000).
- 2 While some geographers in these earlier debates might not associate themselves with the recent 'relational turn', I acknowledge the contentious nature of my claim that relational thinking implicitly underpinned their work.
- 3 While the SRP framework did not consider the relations, for example, between economy and culture, it can still be a form of relational thinking in a thematic sense.

## References

- Allen J** 1999 Spatial assemblages of power: from domination to empowerment in **Massey D, Allen J and Sarre P** eds *Human geography today* Polity, Cambridge 194–218
- Allen J** 2003 *Lost geographies of power* Blackwell, Oxford
- Allen J, Massey D and Cochrane A** 1997 *Re-thinking the region* Routledge, London
- Amin A** 1998 Globalisation and regional development: a relational perspective *Competition and Change* 3 145–65
- Amin A** 1999 An institutionalist perspective on regional economic development *International Journal of Urban and Regional Research* 23 365–78
- Amin A** 2001 Moving on: institutionalism in economic geography *Environment and Planning A* 33 1237–41
- Amin A** 2002 Spatialities of globalisation *Environment and Planning A* 34 385–99
- Amin A** 2004 Regulating economic globalization *Transactions of the Institute of British Geographers* 29 217–33
- Amin A and Thrift N** 1994 Living in the global in **Amin A and Thrift N** eds *Globalisation institutions and regional development in Europe* Oxford University Press, Oxford 1–22
- Asheim B T** 1996 Industrial districts as 'learning regions' *European Planning Studies* 4 379–400
- Barnes T J** 2001 Retheorizing economic geography: from the quantitative revolution to the 'cultural turn' *Annals of the Association of American Geographers* 91 546–65
- Barnett C** 1998 The cultural turn: fashion or progress in human geography? *Antipode* 30 379–94
- Bathelt H and Glückler J** 2003 Toward a relational economic geography *Journal of Economic Geography* 3 117–44
- Bathelt H, Malmberg A and Maskell P** 2004 Clusters and knowledge: local buzz, global pipelines and the process of knowledge creation *Progress in Human Geography* 28 31–56
- Boggs J S and Rantisi N M** 2003 The 'relational turn' in economic geography *Journal of Economic Geography* 3 109–16
- Bradbury H and Lichtenstein B M B** 2000 Relationality in organizational research: exploring the space between *Organization Science* 11 551–64
- Brenner N** 1999 Beyond state-centrism? Space territoriality and geographical scale in globalisation studies *Theory and Society* 28 39–78
- Brenner N** 2001 The limits to scale? Methodological reflections on scalar structuration *Progress in Human Geography* 25 591–614
- Bridge G** 1997 Mapping the terrain of time-space compression *Environment and Planning D* 15 611–26
- Burt R S** 1982 *Towards a structural theory of action* Academic Press, New York
- Burt R S** 1992 *Structural holes* Harvard University Press, Cambridge MA
- Camagni R P** ed 1991 *Innovation networks: spatial perspectives* Belhaven Press, London
- Clegg S R** 1990 *Modern organization* Sage, London
- Coe N, Hess M, Yeung H W C, Dicken P and Henderson J** forthcoming 'Globalizing' regional development: a global production networks perspective *Transactions of the Institute of British Geographers* 29
- Cooke P N and Morgan K** 1993 The network paradigm: new departures in corporate and regional development *Environment and Planning D: Society and Space* 11 543–64
- Cooke P N and Morgan K** 1998 *The associational economy* Oxford University Press, Oxford
- Dicken P** 2000 Places and flows: situating international investment in **Clark G L, Feldman M A and Gertler M S** eds *The Oxford handbook of economic geography* Oxford University Press, Oxford 275–91
- Dicken P and Malmberg A** 2001 Firms in territories: a relational perspective *Economic Geography* 77 345–63
- Dicken P and Thrift N** 1992 The organization of production and the production of organization *Transactions Institute of British Geographer* 17 279–91
- Dicken P, Kelly P F, Olds K and Yeung H W C** 2001 Chains and networks, territories and scales *Global Networks* 1 89–112
- DiMaggio P J** ed 2001 *The twenty-first-century firm* Princeton University Press, Princeton

- Dyer J H and Singh H** 1998 The relational view: co-operative strategy and sources of interorganizational competitive advantage *Academy of Management Review* 23 660–79
- Emirbayer M** 1997 Manifesto for a relational sociology *American Journal of Sociology* 103 281–317
- Emirbayer M and Goodwin J** 1994 Network analysis culture and the problem of agency *American Journal of Sociology* 99 1411–54
- Ettlinger N** 2001 A relational perspective in economic geography: connecting competitiveness with diversity and difference *Antipode* 33 216–27
- Ettlinger N** 2003 Cultural economic geography and a relational and microspace approach to trusts, rationalities, networks, and change in collaborative workplaces *Journal of Economic Geography* 3 145–71
- Flusty S** 2004 *De-coca-colonization: making the globe from the inside out* Routledge, New York
- Gibson-Graham J K** 1996 *The end of capitalism (as we knew it)* Blackwell, Oxford
- Giddens A** 1984 *The constitution of society: outline of the theory of structuration* Polity Press, Cambridge
- Grabher G** ed 1993 *The embedded firm* Routledge, London
- Granovetter M** 1985 Economic action and social structure: the problem of embeddedness *American Journal of Sociology* 91 481–510
- Gregory D and Urry J** eds 1985 *Social relations and spatial structures* Macmillan, London
- Guillén M F** 2001 *The limits of convergence* Princeton University Press, Princeton
- Gulati R, Nohria N and Zaheer A** 2000 Strategic networks *Strategic Management Journal* 21 203–15
- Hamilton G G and Feenstra R C** 1995 Varieties of hierarchies and markets *Industrial and Corporate Change* 4 51–91
- Harvey D** 1982 *The limits to capital* Blackwell, Oxford
- Henderson J, Dicken P, Hess M, Coe N and Yeung H W C** 2002 Global production networks and the analysis of economic development *Review of International Political Economy* 9 436–64
- Herod A and Wright M W** eds 2002 *Geographies of power* Blackwell, Oxford
- Hess M** 2004 'Spatial' relationships? Towards a reconceptualization of embeddedness *Progress in Human Geography* 28 165–86
- Hudson R** 1999 The learning economy, the learning firm and the learning region *European Urban and Regional Studies* 6 59–72
- Hudson R** 2001 *Producing places* Guilford, New York
- Hudson R** 2003 Fuzzy concepts and sloppy thinking *Regional Studies* 37 741–6
- Jessop B** 1999 Some critical reflections on globalisation and its illogic(s) in **Olds K, Dicken P, Kelly P F, Kong L and Yeung H W C** eds *Globalisation and the Asia Pacific: contested territories* Routledge, London 19–38
- Jessop B** 2001 Institutional re(turns) and the strategic-relational approach *Environment and Planning A* 33 1213–35
- Kilduff M and Tsai W** 2003 *Social networks and organizations* Sage, London
- Lee R** 1989 Social relations and the geography of material life in **Gregory D and Walford R** eds *Horizons in human geography* Macmillan, London 152–69
- Lee R and Wills J** eds 1997 *Geographies of economies* Arnold, London
- Lefebvre H** 1991 *The production of space* Basil Blackwell, Oxford
- Lovering J** 1999 Theory led by policy: the inadequacies of the 'new regionalism' *International Journal of Urban and Regional Research* 23 379–95
- Lukes S** ed 1986 *Power* Blackwell, Oxford
- MacKinnon D, Cumbers A and Chapman K** 2002 Learning, innovation and regional development *Progress in Human Geography* 26 293–311
- Markusen A** 1999 Fuzzy concepts scanty evidence policy distance: the case for rigor and policy relevance in critical regional studies *Regional Studies* 33 869–84
- Marston S A** 2000 The social construction of scale *Progress in Human Geography* 24 219–41
- Maskell P and Malmberg A** 1999 Localised learning and industrial competitiveness *Cambridge Journal of Economics* 23 167–85
- Massey D** 1973 Towards a critique of industrial location theory *Antipode* 5 33–9
- Massey D** 1978 In what sense a regional problem? *Regional Studies* 13 233–43
- Massey D** 1979 A critical evaluation of industrial-location theory in **Hamilton F E I and Linge G J R** eds *Spatial analysis, industry and industrial environment* John Wiley, Chichester 57–72
- Massey D** 1984 *Spatial division of labour* Macmillan, London
- Massey D** 1993 Power-geometry and a progressive sense of place in **Bird J, Curtis B, Putnam T, Robertson G and Tickner L** eds *Mapping the futures: local cultures and global change* Routledge, London 59–69
- Massey D and Collective** 1999 Issues and debates in **Massey D, Allen J and Sarre P** eds *Human geography today* Polity, Cambridge 3–21
- Massey D, Allen J and Sarre P** eds 1999 *Human geography today* Polity, Cambridge
- Nagar R, Lawson V, McDowell L and Hanson S** 2002 Locating globalization: feminist (re)readings of the subjects and spaces of globalization *Economic Geography* 78 257–84
- O'Neill P M and Gibson-Graham J K** 1999 Enterprise discourse and executive talk: stories that destabilize the company *Transactions of the Institute of British Geographers* 24 11–22
- Olds K and Yeung H W C** 1999 (Re)shaping 'Chinese' business networks in a globalising era *Environment and Planning D: Society and Space* 17 535–55
- Peck J A** 2002 Political economies of scale: scalar politics, fast policy, and neoliberal workfare *Economic Geography* 78 331–60
- Peck J A** 2003 Fuzzy old world *Regional Studies* 37 729–40

- Peck J A and Yeung H W C** eds 2003 *Remaking the global economy: economic-geographical perspectives* Sage, London
- Pfeffer J** 1981 *Power in organisations* Pitman, Boston
- Pfeffer J and Salancik G R** 1978 *The external control of organisations* Harper & Row, London
- Polanyi K** 1944 *The great transformation* Holt Rinehart, New York
- Sack R D** 1997 *Homo geographicus* Johns Hopkins University Press, Baltimore
- Saxenian A** 1994 *Regional advantage* Harvard University Press, Cambridge MA
- Sayer A** 1985 Industry and space: a sympathetic critique of radical research *Environment and Planning D* 3 3–29
- Sayer A** 1995 *Radical political economy: a critique* Basil Blackwell, Oxford
- Scott A J** 1998 *Regions and the world economy* Oxford University Press, Oxford
- Scott A J** 2000 Economic geography: the great half-century *Cambridge Journal of Economics* 24 483–504
- Scott A J and Storper M** 2003 Regions, globalization, development *Regional Studies* 37 579–93
- Sheppard E** 2002 The spaces and times of globalization: place, scale, networks, and positionality *Economic Geography* 78 307–30
- Sheppard E and McMaster R** eds 2004 *Scale and geographic inquiry: nature, society and method* Blackwell, Oxford
- Smith N** 1984 *Uneven development* Blackwell, Oxford
- Storper M** 1989 The transition to flexible specialization *Cambridge Journal of Economics* 13 273–305
- Storper M** 1995 The resurgence of regional economies ten years later *European Urban and Regional Studies* 2 191–221
- Storper M** 1997 *The regional world* Guilford, New York
- Storper M** 2001 The poverty of radical theory today: from the false promises of Marxism to the mirage of the cultural turn *International Journal of Urban and Regional Research* 25 155–79
- Storper M and Salais R** 1997 *Worlds of production* Harvard University Press, Cambridge MA
- Storper M and Walker R** 1989 *The capitalist imperative* Basil Blackwell, Oxford
- Strange S** 1994 *States and markets* 2nd edn Pinter, London
- Swyngedouw E A** 1992 The Mammon quest. 'Glocalisation' interspatial competition and the monetary order: the construction of new scales in **Dunford M and Kafkalas G** eds *Cities and regions in the new Europe* Belhaven, London 39–67
- Swyngedouw E A** 1997 Neither global nor local: 'glocalization' and the politics of scale in **Cox K R** ed *Spaces of globalisation* Guilford, New York 137–66
- Tallman S, Jenkins M, Henry N and Pinch S** 2004 Knowledge, clusters, and competitive advantage *Academy of Management Review* 29 258–71
- Taylor M and Asheim B T** 2001 The concept of the firm in economic geography *Economic Geography* 77 315–28
- Thévenot L** 2001 Organized complexity: conventions of coordination and the composition of economic arrangements *European Journal of Social Theory* 4 405–25
- Thrift N** 1983 On the determination of social action in space and time *Environment and Planning D: Society and Space* 1 23–57
- Thrift N** 2000 Pandora's box? Cultural geographies of economies in **Clark G L, Feldman M A and Gertler M S** eds *The Oxford handbook of economic geography* Oxford University Press, Oxford 689–704
- Thrift N and Olds K** 1996 Refiguring the economic in economic geography *Progress in Human Geography* 20 311–37
- Walker R and Storper M** 1981 Capital and industrial location *Progress in Human Geography* 5 473–509
- Walters W** 1999 Decentering the economy *Economy and Society* 28 312–23
- Weber M** [1947] 1964 *The theory of social and economic organization* The Free Press, New York
- Whatmore S** 1997 Dissecting the autonomous self: hybrid cartographies for a relational ethics *Environment and Planning D: Society and Space* 15 37–53
- Williamson O E** 1975 *Markets and hierarchies* The Free Press, New York
- Williamson O E** 1981 The economics of organization: the transaction cost approach *American Journal of Sociology* 87 548–77
- Williamson O E** 1985 *The economic institution of capitalism* The Free Press, New York
- Yeung H W C** 1994 Critical reviews of geographical perspectives on business organisations and the organisation of production: towards a network approach *Progress in Human Geography* 18 460–90
- Yeung H W C** 1998 Capital, state and space: contesting the borderless world *Transactions of the Institute of British Geographers* 23 291–309
- Yeung H W C** 2000 Organising 'the firm' in industrial geography I *Progress in Human Geography* 24 301–15
- Yeung H W C** 2002 The limits to globalization theory: a geographic perspective on global economic change *Economic Geography* 78 285–305
- Yeung H W C** 2003 Practicing new economic geographies: a methodological examination *Annals of the Association of American Geographers* 93 442–62