

Towards a Relational Economic Geography: Old Wine in New Bottles?

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Abstract: Recent theoretical and empirical advances in economic geography have contributed to the emergence of what might be termed a “relational turn” that focuses primarily on the ways in which socio-spatial relations of actors are intertwined with processes of economic changes at various geographical scales – global, local, or glocal. This mapping of actor-oriented “relational geometries” fundamentally challenges the neoclassical economic geography in which economic actors are atomized in order to ascribe causal power to abstract spatial regularities in economic processes. A relational economic geography, however, places at its forefront crucial explanatory power in socio-spatial relations among such actors as individuals, firms, institutions, and other nonhuman actants. To a significant extent, this relational turn in economic geography is associated with the rise of “new economic geographies” in which more attention has been paid to socio-cultural practices and institutional foundations of economic geographies and performances. In this paper, I aim to survey critically the antecedents and key frameworks in this relational economic geography *and* to develop some conceptual categories in order to steer this “relational turn” towards the ontological level. I argue that existing analyses of socio-spatial relations crosscutting different territorial formations and geographical scales have not paid sufficient attention to how power is inscribed and works itself out in relational geometries. By theorizing different effects of power and types of relational geometries, this paper identifies different configurations of power and governance in relational geometries that in turn explain their causal effects in producing concrete/spatial outcomes. Some implications for research methodology and empirical studies are addressed in the concluding section.

Keyword: relational geometries, power, actors, socio-spatial relations, economic geography.

Introduction

The emergence of a new kind of economic geography since the mid-1990s that focuses primarily on interactive relations among all sorts of actors should not be too surprising. After all, heated debates on spatial divisions of labor, locality studies, and flexible specialization dominated the heyday of economic geography during much of the 1980s and the early 1990s (see Scott, 2000). These mostly fruitful debates moved our analytical concern from social relations of production to the relations between the spatial and the social (Thrift, 1983; Massey, 1984). By sidestepping the pitfalls of an even earlier wave of quantitative economic geography concerned with spatial geometries and locational analysis, they certainly foreshadowed what Thrift (2000a) and Barnes (2001) term the “cultural turn” and “hermeneutic theorizing” in economic geography that emphasizes how economic action and spatial processes are intimately linked to aspects of the relational, the cultural, the intangible,

and the discursive. This attempt to “refigure” and “decenter” the economic has significantly broadened the analytical scope of economic geography to include not only radical political economy, but also cultural studies and social theories (Gibson-Graham, 1996; Thrift and Olds, 1996; Schoenberger, 1997; Amin and Thrift, 2000; cf. Martin and Sunley, 2001). Amidst this recent trend towards the “softening” of sub-disciplinary boundaries within human geography and the general call for a “relational thinking” in human geography today (Massey et al., 1999; see also Allen et al., 1997; Sack, 1997)¹, we begin to witness the rise of what might be termed a “relational economic geography” that places its analytical focus on the complex nexus of relations among actors *and* ascribe causal powers to these relations that effect dynamic changes in the spatial organization of economic activities. This relational economic geography is concerned primarily with the ways in which socio-spatial relations of actors are intertwined with processes of economic changes at various geographical scales – global, local, and/or glocal. Given its intellectual links to earlier debates in the economic geography of the 1980s, one may question how far this “relational turn” in economic geography represents merely old wine put in new bottles.

This paper aims to analyze and assess the role of this relational thinking in (new) economic geography by focusing on and further developing *theoretical categories* that might be applied to future research in economic geography. There are some important caveats to this modest aim. To begin, economic geography is conceived as a field of geographic study in which the analytical focus is placed on economic activities in relation to space, though the explanations of these activities need not necessarily be economic – they can be political, institutional, cultural, and social. While making explicit claims for theory and practice in economic geography, this paper is not just about uncovering the economic dimension of this *relational thinking*. As defined by Massey and Collective (1999: 12), relational thinking can

¹ Such a relational thinking has also been revived recently in sociology (Emirbayer, 1997) and management (Dyer and Singh, 1998; Gulati et al., 2000).

be viewed as “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”. Any attempt to assess the originality and innovativeness of a relational economic geography needs to go beyond the binary thinking of an ontological separation between the economic and all other dimensions of socio-spatial life. Moreover, my choice of assessing and developing theoretical categories for a relational economic geography implies that the paper will not address much wider philosophical and epistemological debates on *why* such a relational economic geography has emerged (see Barnes, 1996; 2001; Lee and Wills, 1997; Peck and Wills, 2001). Instead, I want to take stock of the current key theoretical categories developed in this relational economic geography *and* to theorize further what might constitute this relational economic geography to enhance its potential for advancing geographic research.

In fulfilling the above aim, I hope to make the following contributions to the development of a relational economic geography. First, while many recent geographic writings have addressed aspects tangential to the core categories deployed in a relational economic geography, there is clearly a lack of systematic integration of our knowledge of this growing field – a reflection perhaps of too much fragmentation in human geography today. For example, we have certainly learnt a lot from recent critical reviews of the “cultural turn” in geography (Barnett, 1998; Thrift, 2000a; Barnes, 2001; Storper, 2001), the “institutional turn” in the regional development literature (Amin, 1999; Jessop, 2001; MacLeod, 2001a; 2001b), and the “geographical turn” in economics (Martin and Sunley, 1996; Martin, 1999). Writing in a celebrating mode, Amin (1998: 158) notes that “[t]he relational turn in regional development studies has breathed vitality into a subject that was becoming conceptually sclerotic. In addition, it provides an important counter-weight to conceptual renewal based on the adoption of ideas from economics, specifically the ‘new economic geography’, centred

around tired and familiar formulae concerning the economics of agglomeration”. Although a relational economic geography pays some attention to the cultural, the social, and the institutional, it is not limited exclusively to any of these dimensions. It is necessary for this paper to present systematically the key antecedents and theoretical categories that constitute this relational economic geography (Section 2).

Second, despite presumably the valid claim that the “new economic geography” (under which a relational economic geography is likely to be subsumed) is in itself a critical and reflexive intellectual enterprise, there seems to be a shortage of critical interrogations of the key elements underlying a relational economic geography. This lack of *ex post* reflexivity can be dangerous for its intellectual projects and future trajectories because a relational economic geography might be seen as a universal panacea for resolving all analytical problems confronting earlier waves of economic-geographical research. A critical reflection on the state-of-the-art in a relational economy geography hopefully can avoid the problem of what Storper (2001) terms “the poverty of radical theory” in which radical/critical theory has lost its intellectual “edge” to conventional and conservative thinking (see also Markusen, 1999; Peck, 1999; Martin, 2001). Reflecting on earlier waves of radical political economy in economic geography, Storper (2001: 159) contends that:

For those of us who come from the Left, the bitter irony of our day is that self-described conservatives in some cases, and liberals (again in the continental sense) are probably now, on average, as effective at critical social science as are self-described radicals.

Third, for the relational thinking in economic geography to make a significant impact on the advancement of geographical research, we need to develop *new* conceptual categories that go beyond simply a “thematic turn”, in the words of Jessop (2001: 1214), in which relations among actors are (re)asserted to be an important theme in economic-geographical enquiry. We must steer the field towards an “ontological turn” in which dynamic and heterogeneous relations among actors are conceptualized as constituting the essential

foundations of socio-spatial existence. This geographical effort 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 accomplish this objective towards an “ontological turn” in a relational economic geography, section three of this paper explores in detail one key conceptual category that provides the ontological foundation of a relational economy geography – the notion of “relational geometries”. This concept refers to complex webs of heterogeneous relations among actors in which power and identities are inscribed and played out. Actors in these relational geometries are not static “things” fixed in time and space, but rather agencies whose relational practices unleash power inscribed in relational geometries and whose identities, subjectivities, and experiences are always (re)constituted by such practices. If this steering from the thematic to the ontological is successful, we might begin to witness the rise of an ontological relational turn that ascribes causal power to relational geometries in effecting the spatial organization of economic change. My argument for the role of relational geometries as possibly an important *explanans* of economic change extends further the contributions of several existing theoretical perspectives in a relational economic geography.

Key Relational Frameworks and Their Antecedents

To start this rather problematical reconstruction of what constitutes a relational economic geography so far, I outline three such major “thematic turns” in economic geography towards the relational view of local and regional development, the network organization of firms, and scalar geographies (see Table 1). The lack of prior systematic integration of these conceptual apparatuses means that my selection is necessarily biased, partial, and incomplete. This brief survey, however, should be viewed as a prelude to an “unfinished project”, rather than a definitive guide to a relational economy geography. My

categorization of a relational economic geography into these three analytical frameworks is also not intended to be a watertight compartmentalization of what is supposedly a closely connected field of study. As this paper is largely about steering a relational economy geography towards the ontological turn via developing the theoretical category of “relational geometries”, this section has a three-fold aim: (1) to put together these interrelated theoretical frameworks; (2) to show their connections with earlier theoretical advances in economic geography and elsewhere in the social sciences; and (3) to discuss their key problems and contradictions.

Table 1 here

One of the key theoretical frameworks in Table 1 that is most closely associated with the “relational turn” in economic geography must be the economic-geographical analysis of *relational assets* in local and regional development. This line of geographical research moves beyond the conventional economic analysis of local and regional development that focuses primarily on how economic factors of production and other resource endowments shape the comparative advantage and fortunes 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 that are characterized by one of the approach’s leading proponents – Michael Storper (1997: 26) – as the “holy trinity” of technology, organizations, and territories. This thematic “relational turn” away from the neoclassical notions of comparative advantages to the institutionalist notions of “relational assets” represents a quantum leap in the ways through which we conceptualize local and regional development. Instead of asking what kinds of transactional factor relations exist among such actors as firms and industries in specific agglomerations and industrial districts, economic geographers have advocated several interrelated concepts that explain the spatial origins and impact of relational

assets: “institutional thickness” (Amin and Thrift, 1994), “untraded interdependencies” (Storper, 1995; Storper and Salais, 1997), and “learning regions” (Asheim, 1996; Maskell and Malmberg, 1999; cf. Hudson, 1999). Collectively, this theoretical emphasis on relational assets offers a variety of such non-economic reasons as local rules, reflexive knowledge, conventions, and contexts that explain the agglomeration of firm locations and the subsequent local and regional development. As Storper (1997: 243) argues, these relational assets allow economic actors “to gain access to local production capacities, which are often rooted in subtle local action frameworks and competences; to gain access to the contexts in which they can learn how to tailor their international products to local or national markets; to benefit from spillovers in both cases, which may permit them forms of access and development that they cannot otherwise anticipate, opening up forms of action and channels of interaction unknown to them”.

While the relational assets approach has undoubtedly laid the foundational stone for the relational turn in economic geography – a reflection of the domination of localities and regions in the Anglo-American economic geography of the 1990s, its spatial emphasis remains largely in local and regional development. Since the beginning of the 1990s, however, another major strand of economic-geographical studies has emerged to unravel the *relational embeddedness* in all kinds of networks among social actors, firms, and organizations. As summarized in Table 1, this broader strand of relational frameworks is highly diverse in terms of ontological claims, analytical themes, and empirical concerns. On the one hand, a number of leading economic geographers have ventured into a thematic-relational turn towards *inter-organizational networks* as the key concept to understanding industrialization, production, and territorial development. Drawing upon Polanyi’s (1944) notion of the inseparable embeddedness between economy and society and the “new economic sociology” of Granovetter (1985), Zukin and DiMaggio (1990), Granovetter and

Swedberg (1992), Smelser and Swedberg (1994), and others, Dicken and Thrift (1992: 283) have vigorously re-established the case for studying different organizational forms and processes in economic geography: “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”. In retrospect, this represents a telling move away from studying social relations of production *per se* in the radical political economy of the 1980s towards a broader conceptualization of the socio-organization of production, prefiguring the extensive discussions that have taken place in recent years around “network” paradigms, economies, and geographies (see Storper, 1989; Camagni, 1991; Florida, 1991; Cooke and Morgan, 1993; 1998; Grabher, 1993; Yeung, 1994; 2000a; 2001; 2002a). This emphasis on networks and their associated power relations has helped facilitate the recent “rediscovery of the firm” in economic geography (see Yeung; 2000b; Taylor and Asheim, 2001), in part because it establishes an alternative analytical path between the methodological individualism of narrowly firm-centric approaches and the strong sense of structural determinism that is evident in macro-process studies of geographical industrialization (e.g. Walker, 1989). As noted by Massey (1999: 283),

The conceptual synchronies of structuralism, although based on “relations”, are relations imagined in a highly particular way. Above all, they are characterized by links within them, between their constituent elements, such that they form a completely interlocked system. They are closed systems. It is this aspect of the conceptualization which does most damage.

On the other hand, another group of economic geographers have taken their philosophical and theoretical cues from such social theories as poststructuralism and actor network theory to establish a parallel thematic concern with *relational hybridity* and *fragmentation* in social 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 (e.g. the firm, the labor market, and the commodity) as a singular site of rational, (re)productive, and progressive imperatives, this strand of a relational economic geography has been concerned with “decentering” and “destabilizing” these fundamental categories of organizing socio-economic life (see also Hanson et al., 2002). For example, Gibson-Graham (1996: 15-16) argues that “a capitalist site (a firm, industry or economy) or a capitalist practice (exploitation of wage labor, 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’” (see also Walters, 1999). Economic actors are argued to be embedded in diverse social discourses and practices, and therefore cannot be conceived as rational and mechanistic economic entities as in the neoclassical rational choice theory. Recent work by Schoenberger (1997) and others (Whatmore, 1997; 1999; Thrift, 1998; 2000b; O’Neill and Gibson-Graham, 1999; Olds and Yeung, 1999; McDowell, 2001a; 2001b) have shown that the behavior of economic actors is by no means governed by a singular logic of profit maximization. Rather, 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. As argued by Schoenberger (2000: 329),

Spatial form, however, is not merely a by-product of decisions taken according to the more compelling specifics of products, markets, and production processes. Firms produce and use and are shaped by spatial relations as a normal part of doing business and must continually create and seek to validate spatio-temporal processes and understandings as a condition of staying alive. Another way of saying this might be that spatial and temporal processes are very deeply part of the production function and the growth trajectory, not artifacts of them.

It is important to note, however, that *geographical scales* seem to be the obvious missing link in most of the work associated with these two strands of analytical frameworks in a relational economic geography (with the notable exceptions of actor network analysis and global production networks/chains). Interestingly, the recent revival of spatial scales in human

geography owes much less to spatial analysis of the kind in the 1950s and the 1960s whereby spatial scales were rigidly defined in the Euclidean conceptions of absolute distance and space as a “container”. For example, McCarty and Lindberg (1966: 23-24) observe that “[i]t has long been customary to indicate the ratio of map-space to earth-space by means of a distance-scale”. Similarly, Haggett’s (1965: 263) understatement that “scale problems have long troubled geographers” remains largely valid today, although his retreat into the bifurcated scales of the regional and the local levels did not really solve the paradox that “data available at one level were unobtainable at another, statistical techniques applicable at one level were inappropriate for another”.

As identified in Table 1, it is only since the early 1990s that a *relational* view of geographies of scales has been receiving a very significant amount of attention among political-economic geographers (Brenner, 1999a; 2001; Kelly, 1999; Marston, 2000; Herod and Wright, 2002). Interestingly, 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 no doubt socially constructed and historically produced under the aegis of capitalism. They can be seen as “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 association with 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, 1991). 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. As Brenner (2001: 609; original italics) argues, we have to pay attention to the specific properties of geographical scales as “the *hierarchization* of spaces in relation to one another which is the very essence of their scalar ordering/differentiation or ‘rescaling’”. In this sense, globalization represents a significant “scalar problem” because its very processes are constituted by the rescaling of multiple and overlapping geographical scales that fundamentally challenges preexisting hierarchization of geographic spaces and territoriality (Taylor et al., 2001; Yeung, 2002b). Facilitated by the enhanced spatial connectivity across the globe, events and happenings at different geographical scales (e.g. the national and the local scales) are often connected via globalization tendencies. Globalization is therefore associated with such rescaling effects as global localization or glocalization (Swyngedouw, 1992; 1997) and changing urban/regional governance (MacLeod and Goodwin, 1999). Brenner (1999b: 435), for example, asserts that “the post-1970s wave of globalisation has significantly decentred the role of the national scale as a self-enclosed container of socio-economic relations”. This phenomenon of scalar connectivity transforms our interrogation of globalization from simply an analytical problem of understanding globalization as a horizontal spatial reach – a common notion in globalization theory – to a “scalar problem” in which it is impossible to understand globalization without unpacking what *enables* it to transcend different geographical scales, and in the process, reconstitutes and reconfigures relations between these scales.

In short, there is no doubt that the three interrelated strands of theoretical and empirical literature identified in Table 1 have contributed to a “thematic turn” in what might be termed a “relational economic geography”. They have certainly gone far beyond their

intellectual predecessors in geography – spatial analysis in the 1950s/1960s and radical political economy in the 1970s/1980s. In this sense, this emerging strand of a relational economic geography clearly involves *more* than “old wine in new bottles”. A remaining question, however, points to the *extent* to which this relational economic geography can go beyond a mere “thematic turn” to raise fundamental questions at the ontological level about the role of “relational geometries” in explaining socio-economic life. This quest for an “ontological turn” is clearly no easy task as it involves an epistemological movement from recognizing *de facto* differences in relational geographies to theorizing what might explain these differences. This movement entails what Storper (2001: 168) calls a shift from “a procedure” to “a substantive” one:

Much research simply documents their conditions or their differences and leaves it at that, as if the mere existence of differences (whether cultural or economic) were sufficient justification for action, using cultural groups as the central unit of action.

The next section is primarily concerned with this epistemological movement to develop the notion of “relational geometries” as a credible *explanans* of economic geographies and spatial change.

From Old Wine to New Wine: Relational Geometries as An Explanans

In this subsection, I argue that the concepts of relations and networks are in themselves descriptive categories and therefore devoid of explanatory power. Preoccupying with the multiplicity and hybridity of actors in these relational networks, while offering an attractive “comfort zone” to those unwilling to search for causal explanations, does not necessarily advance our capacity to explain *why* actors become hybrid and experience multiple trajectories in the first place. For example, in much of the actor network theory literature in geography (e.g. Murdoch, 1997; Whatmore, 1997; Murdoch et al., 2000), the analytical focus is placed on unearthing the complex web of relations between humans and non-humans in order to “accord nonhumans their due place in the construction of the world”

(Bingham, 1996: 636). Bingham (1996: 643-4; original italics) terms this epistemological orientation as “materialist semiotics” that “is concerned with how all sorts of bits and pieces – bodies, machines, and buildings, as well as texts – are associated together in attempts to build order. None of these bits and pieces are privileged: any or all of them could be necessary in the production of a particular local ordering, and any or all of them might play the role of what are referred to as *actants*”. But exactly how are these actor networks driven to create causal outcomes in time and space? How, as Callon (1987: 93; cited in Bingham, 1996: 647) argues, an actor network serves as “simultaneously an actor whose activity is networking heterogeneous elements and a network that is able to redefine and transform what it is made of”? A description of complex webs of actor relations in networks does serve to decenter the economic and to overcome the binary between subjects and objects. But it does just about that, without offering significant provisions for theorizing how these relations and networks are capable of *producing* concrete/spatial outcomes. As Thévenot (2001: 408; my emphasis) notes,

The notion of network is very compelling because 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.

To redress this analytical lacuna, I contend that one key missing link in the existing relational economic geography is the role of *power* in relational geometries. Without a deeper understanding of the ontological relationships between power, actors, and their relational geometries, much of the relational economic geography will likely to fall short of offering reflexive explanations of spatial change and appealing to scholars concerned with the emancipation of social actors. We need not only to unpack what power is in relational geometries, but more importantly also to demonstrate how differentiated configurations of relational geometries can generate heterogeneous power and capabilities to effect spatial tendencies. At the ontological level, this conceptualization takes causal power away from

actors *per se* and affirms to relational geometries the efficacy of producing change in socio-spatial existence. This ontological turn towards relational geometries does not mean that actors – human and nonhumans – are unimportant and, as Markusen (1999: 870) complains, “processes themselves become the causal agents”. But the importance of actors rests with the peculiar ways through which they enter into and engage with complex webs of relational networks because, as will be shown below, this peculiarity significantly enhances or limits the efficacy of relational geometries. My perspective therefore does not necessarily contradict the existing work on the thematic turn in a relational economic geography that accords to actors a privileged analytical role. But it does strengthen the analytical power of this relational economic geography and enable a more coherent approach to studying the spatial organization of economic activities.

As a starting point of my excursion into the ontological turn in a relational economic geography, I first problematize the complex relationships between power, actors, and relational geometries. Here, I move often between the ontological and the empirical levels such that my reasoning can be illustrated through brief empirical examples. My theoretical concern, however, is not with testing and/or supporting these arguments at the ontological level by empirical evidence. The next subsection examines five generic properties of relational geometries that enable their causal efficacy: complementarity, specificity, indivisibility, interconnectedness, and interdependency. These properties are theorized to influence strongly the geometrical configurations of relational networks. This theorization is then followed up by a specification of power, control, and governance in relational geometries that showcases the explanatory capacity of a relational economic geography. In a modest way, I hope that this ontological perspective on relational geometries can contribute to enhancing the analytical power and rigor of a relational economic geography.

Problematizing Power, Actors, and Relational Geometries

To affirm causal efficacy to relational geometries at the ontological level, one must satisfactorily answer the question of where this efficacy comes from. This paper proposes that power inscribed in different configurations of relational geometries fundamentally shapes the structuration of social life. In other words, relational geometries are not only the primary axis of collective social life and order; their inscribed power indeed shapes how this social life and order is fundamentally organized. A relational economic geography therefore needs to problematize and explain “power and/in relations” that in turn form the basic axis of our theorization. As Massey and Collective (1999: 13) argue, “relations” in relational thinking are “themselves relations ‘of power’”. For example, Allen (1997; 1999) analyzes the relations between spatiality and power at a general level. After reviewing critically different “spatial vocabularies of power” in the work of such social theorists as Karl Marx, Max Weber, Anthony Giddens, Michel Foucault, Gilles Deleuze, and Bruno Latour, he develops a relational notion of the “spatial assemblages of power” in which both spatiality is imbued with power *and* power is intertwined with spatiality. This relational view of power, however, is not entirely unique. It has a place in Jessop’s (1990) strategic-relational approach to state theory that conceives the state as a specific institutional ensemble with certain capabilities and liabilities which mediate that power. To Jessop (2001: 1223), this approach “involves the study of structures in terms of their structurally inscribed strategic selectivities and actions in terms of (differentially reflexive) structurally oriented strategic calculation”. The recent “institutional turn” in geography also addresses some dimensions of this institutionalization of power. Amin (2001a: 1241), for example, argues for “the virtual powers of economic formation and expression, and their institutionalisation”.

While I will examine in detail below the specification of power and control in relational geometries, it might be useful to make three key points about the nature of power –

its relational, emergent, and distributed effects. Power is defined here as the capabilities to influence *and* the relational exercise of this influence through practice. First, power is a *relational* attribute because it is efficacious only through the process of realization and practice. Power is not an inherently possessed quality as in the Weberian concept of bureaucracy and “iron cage” (Weber [1947] 1964; see also Clegg, 1990; 2001), the resource-dependency school of organization theories (Pfeffer and Salancik, 1978; Pfeffer, 1981; 1992), and the structural power school of global political economy (Strange, 1994). It is also not an actor-specific property as in social network analysis (Burt, 1982; 1992; Emirbayer and Goodwin, 1994). In this latter literature, it is most commonly suggested that power in a network is a function of positionality within the network (e.g. centrality) or as being derived from “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 relationships that is far more important than structures *per se*. Instead, I see power as the *capacity to influence* that is realized only through the process of exercising this influence. In other words, power should be conceived as a *practice* rather than a *position* within a relational network (see also Allen, 1997; 1999; Pratt, 1997; Dicken et al., 2001; Henderson et al., 2002).

Second, causal power can be ascribed to relational networks when their relational geometries generate an *emergent* effect such that the sum of these relations is much greater than that of individual actors. The geometrical configurations of these *emergent network relations* provide the central dynamic to drive networks and to produce spatial outcomes. Power is thus constituted collectively by network relations and its influence can only be realized in a relational sense through the exercise of its capacity to influence. Actors in relational geometries do not possess power *per se*. Through their practice, actors perform the role as the agents exercising that emergent power inscribed in relational geometries. As all actors – humans and nonhumans – are embedded in relational geometries in one form or

another, their asymmetrical and differentiated access to and exercise of power in these relational geometries leads to multiple trajectories and spatial outcomes. A key research problem for a relational economic geography becomes how to identify this emergent effect of power and to follow through its realization *vis-à-vis* actor-specific practices.

Third, power exists in relational geometries in the form of *distributed power*. This diffuse form of power works in a Foucauldian capillary-like way whereby it is always present in all kinds of social interactions, not just in the abstract structures conceived by such grand structural theories of Karl Marx and others. As Allen (1999: 201-2) observes from Foucault's writings,

the practices of power are judged more by the effectiveness with which subjects internalize their effects than by the extent to which they conform or comply with them. In that sense, on this account the thing called power is not so much above us, as around us and among us. It is an immanent not an external force; or put another way, it is conceived as inseparable from its effects.

This ubiquitous presence of power in social interactions, however, does not diminish the role of relational geometries in explaining causal outcomes. For if relational geometries are differentially configured in different time-space and organizational contexts, then the nature and efficacy of this diffuse and distributed power will change too. It is entirely conceivable that power is much more immanent and influential in some relational geometries than others. This view of power as an immanent and multidimensional attribute distributed throughout relational geometries allows us to escape the epistemological trap of excessively focusing on the singular, such as the cultural, the discursive, and the scalar. In some configurations of relational geometries, the realization of immanent power may be just about discursive practices of actors. In other configurations, however, this exercise of power may involve a combination of practices that are simultaneously cultural and economic, discursive and material. There are therefore *a priori* theoretical reasons to associate the locus of power with different types of relational geometries at the ontological level (see below).

Having clarified the relational, emergent, and distributed effects of power and the role of actors in its realization, I now turn to the key theoretical category of this paper – *relational geometries*. While I borrow the word “geometries” from the branch of mathematics dealing with the properties and relations of points, lines, angles, surfaces and so on, the term “relational geometries” should *not* be conceived as just another attempt at spatial analysis creeping in from the “back door”. In fact, the concept of relational geometries denotes dynamic *configurations* of relations and interconnections among binary opposites that constitute the essential foundations of socio-spatial existence. The geometrical dimension of these relations can be fundamentally spatial; it can also be graphical such that its various lines and flows can be mapped and analyzed. Actors are conceived as relational beings whose existence always depends on their relational “others”. Put in this relational perspective, no social beings are meaningful and existential unless they have entered into some sorts of relational geometries. As such, there is thus no economy without its relational “others” known as consumers, producers, nonhumans, and other actors. My conception of relational geometries extends Massey’s (1993) discussion of “power geometries” by which she means the “maps of power” and through which “we are all constructed that opens up the possibility of a politics of renegotiating those identities” (Massey, 1999: 289).

Before a discussion of the properties of relational geometries in the next subsection, it is useful to outline a typology of relational geometries that is relevant for the theoretical development of a relational economic geography. In Table 2, five major types of relational geometries are identified: (1) actors and actors; (2) actors and space; (3) actors and institutions; (4) micro-macro structures; and (5) action and structures. This typology is by no means exhaustive and comprehensive. But it should suffice in the context of this paper’s interest in conceptualizing the theoretical category of “relational geometries”. Several important observations emerge from an analysis of the first two columns of Table 2. First,

actors – humans and nonhumans – are featured prominently, but not exclusively, in these relational geometries. While actors must be embedded at the ontological level in relational geometries of one kind or another, relational geometries can possibly be constituted by heterogeneous associations among other objects and categories without actors as such. For example, asymmetrical relations among such actors as research scientists, CEOs, consumers, and machines no doubt constitute a peculiar form of relational geometry known as production chains and/or business networks. But relational geometry can also exist between micro- and macro-structures. A non-scalar representation of the global economy may explain globalization as “out there-in here connectivity” crystallized around such places as cities and regions (Massey, 1994; Amin, 1998; 2001b; 2002; Scott, 2001; Sheppard, 2002). These places become the focal points for interactions between micro- and macro-constituent of a particular kind of relational geometry. Similarly, Hudson (2001: 257) argues that “[e]ach relational network has its own spatial reach, and the spatial reaches may not be coincident, although they may mutually influence one another”.

Table 2 here

Second, manifestations of different relational geometries need not be tangible and material. Intangibles and non-material manifestations have a place in defining these relational geometries. Consider, for instance, a relational geometry that is constituted by interactions between actors and institutions. In an empirical sense, this relational geometry can be expressed in the norms, conventions, and “rules of the game” among actors and institutions embedded in specific territorial ensembles. Empirical research into the geographies of finance clearly exemplifies this dimension of a relational geometry (see Thrift, 1994; Clark, 1997; Sidaway and Bryson, 2002).

Third, while relational geometries have spatiality built into them, their geographies are not always necessarily the same. Different types and configurations of relational geometries inscribe in space variegated tendencies and trails. Some relational geometries (e.g. action and structures) may inscribe permanent changes to nature and environment through the distanced effects of such actions as consumption and production. Nature might be commodified and subjugated in this relational geometry to become a mere “input” into actor-specific pleasure activities or production processes. Other types of relational geometries (e.g. actors and space) may produce all kinds of *new* spaces and geographies that herald the emergence of a “new world order”. Different relational geometries are thus associated with different spatial tendencies and outcomes.

To reiterate my arguments so far, power – in its various dimensions and forms – drives relational geometries and explains spatial outcomes; but different configurations of relational geometries shape the ways in which the exercise of power is realized through the practices of actors. This mutually constitutive dimension of power and relational geometries poses a significant analytical problem for a relational economic geography. In the next two subsections, I aim to show specifically how different properties and configurations of relational geometries might contribute to the concept’s capacity to explain economic geographies and spatial change.

Properties of Relational Geometries

This subsection considers five generic properties of relational geometries: (1) complementarity; (2) specificity; (3) indivisibility; (4) interconnectedness; and (5) interdependency. As shown in Table 2, these properties do not always occur in each type of relational geometries. In fact, I argue that their different configurations explain the efficacy of relational geometries in producing spatial tendencies. The first generic property of relational geometries is *complementarity* that contributes to the fundamental existence of any

cooperative relations. Complementarity exists when the constituents of relational geometries benefit from each other's co-presence and engagement. It can be expressed in the forms of better access to resources and information otherwise unavailable on a standalone basis. This generic dimension of complementarity is particularly important to the relational geometry among different actors. For example, different firms and economic agents enter into specific business and production networks in order to tap into each other's complementary assets. In this process of relational interaction, a new stock of "relational assets" will be produced in such ways that bind firms to particular relational geometry and/or locality (see also Table 1). Complementarity in relational geometries also has a spatial dimension simply because the complementary assets and/or resources brought into a relational geometry by actors and/or institutions tend to be highly territorialized – a key argument in much of the economic geography literature on local and regional development. In other words, if these complementary assets and resources are ubiquitous, there are no *prima facie* reasons to expect the formation and transformation of relational geometries involving actors and institutions. Greater complementarity among the constituents of a relational geometry will more likely contribute to its emergent power to effect spatial change and outcomes.

Specificity refers to fluid and yet dedicated commitment among constituents in dyadic and network relations. This property of relational geometries has some parallels with the concept of "asset specificity" in the transaction costs economics (Williamson, 1975; 1985) that examines the transactional problems arising from dedicated commitment by producers and suppliers. Because some goods or services must be produced through capital assets specifically tailored to their production and these assets are not reusable in producing other goods and services (e.g. technology and know-how), high costs of transaction will be incurred in negotiation if the production is carried out through arm-length contracts in the market. The situation is worsened if there is small numbers bargaining, i.e. oligopoly conditions. The

negotiation, co-ordination, and enforcement of these contracts are extremely problematic, cumbersome, and costly (see also “sunk costs” in Clark and Wrigley, 1995; 1997a; 1997b). Specificity in relational geometries, however, covers a much *broader* ground at the ontological level beyond the narrow focus in the transaction costs economics that “the transaction is usefully made the basic unit of analysis” (Williamson, 1981: 568). This relational specificity is determined by the extent to which binary/opposite forces and constituents must co-exist in a form of mutual dependency (see below). This dependency is specific to the constituents involved in a relational geometry (e.g. actors and institutions) and therefore requires dedicated commitment from all constituents to make the relational geometry “work”. The greater this specificity in a relational geometry is, the greater the extent of exclusion in this relational geometry will be. Some business and production networks, for example, are clearly much more exclusive than others – a phenomenon explainable by the extent of specificity in those relational geometries (e.g. Japanese *keiretsu* production networks and Chinese business networks; see Yeung, 2000c).

The extent of specificity and exclusion in relational geometries also tends to be place-bound because geography matters. In a world differentiated by various spatial formations and territorial attributes – physical and human, relational geometries are configured differently according to geographical variations in contingent conditions (e.g. cultures and politics). Relational geometries involving constituents from geographic regions that promulgate different norms and conventions, for example, can exhibit drastically different extent of specificity and exclusiveness (Table 2). This difference 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; Biggart and Guillén, 1999; Feenstra et al., 1999; Thévenot, 2001). In countries where ownership and control of firms are more interconnected, firms co-operate as well as compete and are able to share risks with financial

partners, it becomes highly difficult and problematic to define precisely the boundaries of firms (hierarchies), markets, and networks. This apparently disorganized institutional structuring of markets and hierarchies (e.g. in Europe) contrasts so much with their counterparts from the Anglo-American world (Whitley, 1999). In other economies that are significantly dominated by state involvement, relational geometries tend to evolve in the forms of business groups, conglomerates, and networks (Yeung, 1998; 2002c). These organizational forms and processes are characterized by co-operative relationships with customers and suppliers based on trust and social ties.

Sometimes, certain micro-structures (e.g. local labor markets) may be so specifically committed to and coupled with broader macro-structures (e.g. global production networks) in such ways that the relational geometry between these micro- and macro-structures is highly indivisible. This *indivisibility* is a third generic property of relational geometries that refers to the fact that dividing and separating relational geometries into their constituent parts would render these geometries meaningless and ineffectual. Indivisibility enhances the possibilities for the constituents in relational geometries to engage in recursive learning and reflexivity. As evidently shown in the literature on the “learning region” and local embeddedness, member firms in indivisible relational networks benefit from place-based learning that otherwise would not occur if these firms exist and operate independently. The territorialized relationships between actors and space are also highly indivisible in the sense that firms produce places through their place-based activities *and* places produce firms via prevailing sets of institutions, rules and conventions. For example, Dicken (2000: 285) has identified four such deeply interconnected sets of firm-place relationships (see also Dicken and Malmberg, 2001; Hudson, 2001):

- intra-firm relationships: between different parts of a transnational business network, as each part strives to maintain or to enhance its position vis-à-vis other parts of the organization;

- inter-firm relationships: between firms belonging to separate, but overlapping, business networks as part of customer-supplier transactions and other inter-firm interactions;
- firm-place relationships: as firms attempt to extract the maximum benefits from the communities in which they are embedded and as communities attempt to derive the maximum benefits from the firms' local operations and;
- place-place relationships: between places, as each community attempts to capture and retain the investments (and especially the jobs) of the component parts of transnational corporations.

The above three properties of relational geometries do not take into account how relational scales work themselves out into the transformation of relational geometries and spatial outcomes. I argue that it is through the generic property of *interconnectedness* among the constituents of relational geometries that geographical scales matter. While complementarity, specificity, and indivisibility in relational geometries seem to be largely place-based, constituents in these geometries can be located and interconnected at different geographical scales. Relational geometries do not merely spread horizontally over spatial surfaces; they connect and bridge different geographical scales in a hierarchical sense and, in the process, reconstitute and reconfigure relations between these scales. The extent of this interconnectedness among constituents at different scales therefore determines the efficacy of relational geometries in shaping spatial tendencies. In the actor network theory literature, for example, places can be conceived as an unintended outcome of the interconnectedness of relational geometries through which distanced effects of actors elsewhere are experienced in specific localities (see Table 2). Drawing upon Harvey (1989) and Giddens (1990), for example, Leyshon (1995: 17; original italics) argues that “[e]conomic and social actors who are *absent* in time and space may now have as much influence upon local processes of social change as those who are *present* in time and space”.

Interconnectedness in relational geometries explains the extent to which learning and interactions can go far beyond specific scales and places. Amin and Cohendet (1999) and

Grabher (2001) have argued for non-local origins of learning and interactions in relational geometries comprising firms and institutions in specific localities. Differentiated markets, resources, and sites of organizational learning often exist at different geographical scales. For example, while today's global markets tend to be highly regionalized (Morrison et al., 1991; Lévy, 1995; Mirza, 1998), specialized resources and strategic assets tend to be highly localized and are often available at the sub-national scale (see Amin and Thrift, 1994; Cooke and Morgan, 1998; Scott, 1998; 2001; Cooke, 2001). A firm with an organizational structure that is highly sensitive to this scalar differentiation of market, resource, and learning availability can achieve greater economies of learning. It is possible for a decentralized global corporation embedded in a highly interconnected relational geometry to tap into differentiated regional markets and, simultaneously, to secure highly localized resources and assets. Interconnectedness in relational geometries can also enhance diversity and thus prospects for the survival of its constituents. This diversity through maintaining greater interconnectedness among constituents at different geographical scales can in turn be a key precondition for relational learning and innovation because the potential for interactive learning in a homogeneous spatial and/or scalar setting is virtually absent. A good example is how global corporations today are implementing the worldwide integration of their subsidiaries through global mandates and the possibility of subsidiary initiatives (Birkinshaw, 1997; Birkinshaw and Hood, 1998; O'Donnell, 2000; Phelps and Fuller, 2000).

The fifth generic property of relational geometries relates to the extent of *interdependency* among their constituents. As alluded earlier, this interdependency is linked to two other generic properties – specificity and indivisibility. However, interdependency among constituents in relational geometries does not necessarily imply specificity and indivisibility. In some relational geometries (e.g. action and structures in Table 2), a particular action may not be peculiar and specific to a set of social structures. For example, the consumption of

coffee – as a social practice – is not specific to gendered relations. But the practice does involve the (re)production of a particular kind of gendered relations (e.g. exploitation of women labor in coffee plantations elsewhere). These gendered relations depend on the practice of coffee consumption. The extent of interdependency in this relational geometry between coffee consumption and gendered exploitation therefore helps us understand how action is related to social structures (see also Hartwick, 1998; Crewe, 2000). In other relational geometries (e.g. actors and actors in Table 2), constituents may be divisible through their separate identities and practices. One firm, at least from an ownership point of view, may still be divisible from another firm in a strongly interconnected and interdependent relational geometry.

Taken together, the peculiar configurations of these five generic properties of relational geometries shape the capacity of relational geometries in effecting spatial changes. The precise working of these configurations is a contingent matter and can only be answered through detailed empirical research. Having said that, it is possible to theorize *a priori* the locus of power and control in relational geometries through a better specification of these configurations of relational geometries. My aim here is *not* to produce “testable” hypotheses for empirical research. But rather I am interested in how these configurations of properties influence the explanatory relationships between relational geometries and their constituents. In other words, the specifications developed in the next subsection will help us understand better what exactly *drives* relational geometries to produce observable outcomes.

Power and Control in Relational Geometries

As argued earlier, power is inscribed in relational geometries and exercised through actor-specific practices. How then does power and control vary with different types of relational geometries and configurations of their generic properties? In Table 2, I outline four major modes of power and control in relational geometries: (1) associational; (2) constitutive;

(3) regulatory; and (4) empowerment. In the *associational* mode, power – as defined and elaborated earlier – exists in a particular relational geometry by association among actors. This actor-specific association tends to be enhanced by the complementarity and interconnectedness properties of a relational geometry. As actors bring different complementary assets/resources to this relational geometry, their likelihood to cooperate and interact in an associational manner is greater. Furthermore, as actors located at different spatial scales are enrolled into a relational geometry, the interconnectedness of this relational geometry is strengthened and that promotes further interaction among actors. It is through these complex interactions among actors in this relational geometry that power is generated and realized. The locus of control in this associational mode does not rest with individual actors, but rather with the relational and collective interaction among these actors. While individual actors do not possess the capacity to influence outcomes that underscores the notion of the associational mode of power, their collective action does unleash the latent power diffusely inscribed in the relational geometry. One good empirical example is how the process of association among individual actors contributes to the formation of ethnic business networks that in turn produce an emergent power to effect concrete outcomes (e.g. making collective representations to hostile host governments). Another example can be found in studies of local and regional development in which the effects of association among actors in particular economies are held to be the critical success factor in these economies (Cooke and Morgan, 1998; Scott, 2001).

While complementarity and interconnectedness in some relational geometries tend to enhance their associational mode of power and control, the indivisibility in other relational geometries (e.g. actors and space, and micro-macro structures) means that power and control are exercised in a mutually *constitutive* mode. These relational geometries therefore should not be just “little more than *carriers* of resources mobilized at different sites and locations on

the network” (Allen, 1999: 201; original italics). Constituents in these relational geometries actually mutate and are (re)constituted through the combination of different embedded constituents and their interaction. To take an example from Table 2, the territorialization of firms in specific industrial systems – interactions between actors and space – may not only constitute a new kind of industrial space, but also experience self-transformations through recursive learning and other innovations in the process. In another example, the development of global city-regions as a microcosm of the global economy marks simultaneously the (re)constitution of a specific territorial organization (e.g. the seamless amalgamation of a global city with its hinterland) *and* the transformation and direction of flows in the global economy towards specific global city-regions. In both examples, the constitutive mode of power works through the indivisibility of different constituents in relational geometries. The control of this power is again diffuse throughout the relational geometry itself because no individual actors or structures (e.g. a firm or a global city) can “contain” or possess that power. The individual action of these constituents, however, can unleash a chain of reactions in such relational ways that the indivisibility in the relational geometry kicks in to ensure transformations among other constituents. It is likely, for example, that the locational bidding of a city for the headquarters of global corporations will necessitate competitive bids from other cities. Through this process, the global mosaic of cities may be (re)constituted into one in which only a few major global cities emerge as the favorite sites for the locations of these global corporations.

Power also works through relational geometries as a constraining force that operates to regulate the behavior and practice of actors. In this *regulatory* mode, the property of interdependency among actors tends to pose a problem of collective action. In this interdependent situation, no actor will initiate specific action in a relational geometry without an explicit commitment from other actors to do so. In fact, most actors will follow the

established and institutionalized norms and conventions. Power in these relational geometries works through the establishment of these norms and conventions that in turn poses a regulatory effect on the practices of individual actors. The “institutional turn” in local and regional development studies (MacLeod, 2001a; 2001b), for example, has shown how interdependence between firms and institutions has led to the emergence of a peculiar mode of social regulation. Here again, power is collectively constituted by norms and conventions rather than by individual actors. The real test of control occurs when specific actors “challenge” these norms and conventions. This challenge in turn unleashes the latent power embedded in the norms and conventions in such ways to regulate the behavior and practice of these actors, failing which either the actors are confronted with legitimization problems or the relational geometry faces stress from within.

Another way through which power can work through relational geometries is known as the *empowerment* mode when the greater interdependency among actors, constituents, and structures creates conditions for more openness and possibilities for (re)negotiation. This mode of power and governance applies particularly to relational geometries that involve interactions between actors and institutions, and between action and structures. The tendency towards empowerment in these relational geometries is explained by a situation in which institutions and structures are often more resourceful and powerful than individual actors and their action. While these institutions and structures may pose as a constraint to regulate actors and action, they can also empower these actors to accomplish tasks and visions otherwise impossible to achieve. For example, while gendered relations may constrain the kind of consumption enjoyed by individual actors, they can also empower specific actors to switch to other forms of consumption or to pose alternative resistance strategies. For example, Mullings (1999) observes that female data-entry operators in Jamaica are not always the victims of industrial restructuring. Instead, they may use everyday social practices to resist work

demands that threaten to reduce their welfare (e.g. demand for efficient, docile and disciplined workers).

Conclusion

In this paper, I argue that while the current “relational turn” in economic geography does break away significantly from earlier neoclassical and structural analyses of the spatial organization of economic activities, this turn is primarily occurring at the thematic level. Most of the key theoretical frameworks in this relational economic geography remain oriented towards developing new research themes for understanding the geographical foundations of socio-economic life. To complement this majestic effort towards a more inclusive and socialized kind of theorizing economic geographies, I suggest an epistemological movement in our conceptualization of this relational economic geography towards the “ontological turn” in which relations among actors, structures, and space (and relational thinking) must be theorized as constitutive of the geographical foundations of socio-economic life. For a relational economic geography to be a truly “new wine”, we must move away from the theoretical preoccupation with such singular dimensions as the cultural, the discursive, and the scalar, and develop new theoretical categories for analyzing socio-spatial relations crosscutting different territorial formations and geographical scales.

In particular, I have developed the notion of “relational geometries” as an important conceptual category for a relational economic geography. I have theorized not only different types of relational geometries, but also how their different configurations shape the causal efficacy of these relational geometries in producing concrete outcomes in economy, society, and space. One key dimension in this theorization that is largely missing in the “thematic turn” towards a relational economic geography is power. It is one thing to conceive the socio-spatial world in terms of relations, it is quite another to couch causal explanations in terms of these relations. To “operationalize” our relational thinking, I believe that we must bring power

back into our existing 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”. To accomplish this theoretical task, I have identified the relational, emergent, and distributed effects of power in relational geometries and examined how these effects of power work themselves out in different configurations of relational geometries. My theoretical deliberations have generated four loci of power and governance in relational geometries: associational, constitutive, regulatory, and empowerment modes. This theorization has shown that power rests with neither individual actors nor institutions, but rather with relational geometries themselves. This ontological inscription of power in relational geometries explains why we need to reorient our analytical attention from researching into individual actors and their practices to unpacking relational geometries imbued with causal power capable of producing spatial change. It further advances our relational thinking such that it is impossible to understand concrete events and outcomes without considering how power in relational geometries interacts with actor-specific practices.

What then are the implications of this “ontological turn” towards a relational perspective for research methodology and empirical studies in economic geography? Researching into relationality requires us to be reflexive in our research process and yet at the same time to take seriously the work of approaching objectivity. As Bradbury and Lichtenstein (2000: 552-3) suggest,

Taking a relational orientation means enacting a constellation of research values and interests in which organizational phenomena and the researcher’s relationships with these phenomena is conceived of as interdependent and intersubjective... As opposed to forsaking objectivity as a goal, one can choose a never-ending movement toward partial objectivity that includes reflexivity, recognition of the limitations of one’s own engagement, and commitment to the value of open-ended inquiry.

This reflexive methodology forces us to go beyond focusing on actors (humans and nonhumans) to incorporate their dyadic and network relations into our analysis. It necessitates (1) comparative analyses to uncover the presence and absence of intangible ingredients in

relational geometries, (2) historical analysis to unpack interactions in these relational geometries, and (3) practice to view relationality in action through participatory and action-oriented methods. The important methodological lesson here is that to learn about the network is to be a part of the network. For example, using the associational method via learning history and/or panel discussion allows us to bring actors into associational relationships and to learn from their interactions.

On the empirical side of the research act, however, the preoccupation with the singular – economic, cultural, discursive, and scalar – in some recent economic-geographical research has been accused of creating greater fuzziness of concepts and fragmentation of research in the subdiscipline (Markusen, 1999; Ettlinger, 2001; cf. Amin and Thrift, 2000; Hudson, 2002) and of lacking social relevance and policy implications (Peck, 1999; Martin, 2001). Will the same accusation likely be placed on a relational economic geography that takes relational geometries seriously? 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 power inscribed in relational geometries – operationalizable variables for further empirical testing. I argue, however, that this ontological theorization is intentionally reflexive and therefore opens up spaces for further theorization and debates. The injection of power into the concept of relational geometries represents a conscious theoretical strategy to establish causality between relational geometries and concrete (spatial) outcomes. The success of this effort to accord relational geometries with the analytical status of an *explanans* will depend critically on how best economic geographers are willing to 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 but only a first step towards unveiling the analytical capacity of a relational economic geography. Ascribing causal power to relational geometries represents quite another quantum leap towards a kind of

economic geography that is much more reflexive and contextual without over-privileging or over-socializing the economic. That, I suppose, is going to be a good new wine for all.

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