

# The limits to scale? Methodological reflections on scalar structuration

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**Abstract:** Fruitful new avenues of theorization and research have been opened by recent writings on the production of geographical scale. However, this outpouring of research on scale production and on rescaling processes has been accompanied by a notable analytical blunting of the concept of geographical scale as it has been blended unreflexively into other core geographical concepts such as place, locality, territory and space. This essay explores this methodological danger: first, through a critical reading of Sallie Marston's (2000) recent article in this journal on 'The social construction of scale'; second, through a critical examination of the influential notion of a politics 'of ' scale. A concluding section suggests that our theoretical grasp of geographical scale could be significantly advanced if scaling processes are distinguished more precisely from other major dimensions of sociospatial structuration under capitalism. Eleven methodological hypotheses for confronting this task are then proposed.

**Key words:** geographical scale, rescaling, production of space, sociospatial theory, structuration.

Scale seems to make a difference; but does it really?

Kevin Cox (1996: 669)

## I Introduction

The concept of geographical scale has become a buzzword of sorts in recent debates among political, economic and urban geographers. Although scale has long played an important, if largely implicit, role in geographical research, it has attracted unprecedented methodological and empirical attention in the context of contemporary debates about globalization, shifting global-local relations, the reterritorialization of labor regulation, the apparent crisis of the Keynesian welfare national state and urban-regional restructuring (see, for instance, Castree, 2000; Herod, 1997; Jessop, 1999; 2000; Kelly, 1999; MacLeod and Goodwin, 1999; Peck, 1996; Smith, 1995; Swyngedouw, 1997).

The proposition that geographical scale is *socially constructed* is repeated frequently in these discussions, and countless articles have been published in recent years which effectively demonstrate the power of this proposition with reference to a wide range of historical and geographical contexts (see, for instance, Delaney and Leitner, 1997). A second major subset of the emergent literature on geographical scale is devoted to exploring the dynamics of *rescaling processes* by means of which entrenched scalar configurations are continually junked and remade through intense sociopolitical struggles (Berndt, 2000; Crump and Merrett, 1998; Swyngedouw, 2000; Zeller, 2000). A number of scholars, finally, continue to grapple theoretically with the notion of scale itself (Collinge, 1999; Howitt, 1998; Jessop, 2000; Jonas, 1994; Smith, 1993; 2000). In this context, many geographers have elaborated *processual* notions of scale in their efforts to understand the ways in which entrenched scalar configurations are being reorganized, rejigged and retrenched in the current era of global, national and local restructuring (Brenner, 1998a; MacLeod, 1999; Swyngedouw, 1997). Rather than viewing scale as a self-evident or pre-given platform for geographical processes, these scholars have introduced more dynamic conceptualizations in order to investigate the contested, and continually evolving, role of scale as a container, arena, scaffolding and hierarchy of sociospatial practices within contemporary capitalism. In sum, traditional Euclidian, Cartesian and Westphalian notions of geographical scale as a fixed, bounded, self-enclosed and pre-given container are currently being superseded – at least within the parameters of critical geographical theory and research – by a highly productive emphasis on process, evolution, dynamism and sociopolitical contestation.

Recent work on geographical scale has revealed convincingly the essential importance of scalar hierarchies, relations, processes and dynamics to many of the core concerns of economic, political and urban geographers – and, indeed, of social scientists more generally (Taylor, 1996). As evidenced by the remarkable proliferation of articles, book chapters and conference panels on the theme of geographical scale and its social construction during the last few years, fruitful new avenues of theorization and research have been opened up by these explorations. Yet, as I hope to indicate in what follows, certain methodological dangers have accompanied this renaissance of debates on what, over two decades ago, Henri Lefebvre (1976: 68) aptly termed the ‘scale question’.

One of these dangers – my central focus here – is the analytical blunting of the concept of geographical scale as it is applied, often rather indeterminately, to an expanding range of sociospatial phenomena, relations and processes. During the last decade, numerous articles have been written in order to illustrate certain key theoretical propositions derived from the work of scholars such as Neil Smith and Erik Swyngedouw with reference to specific instances of scale production or of rescaling. As a result of these research initiatives, the production of scale thesis has now been illustrated quite effectively with reference to, among other issues: (a) the uneven development of capital and the geography of industrial location; (b) the changing geographies of state power, political regulation and sociopolitical identity; and (c) the organizational structures and strategies of labor unions, political parties and social movements. While such case studies have significantly advanced our understanding of scaling processes under capitalism, they have also arguably underpinned a noticeable slippage in the literature between notions of geographical scale and other core geographical concepts, such as place, locality, territory and space. However, if the notion of

geographical scale is extended unreflexively to demarcate any aspect of sociospatial processes, then much of the analytical power and theoretical potential of recent methodological innovations may ultimately be lost, causing scale to collapse into an overgeneralized 'chaotic conception'. For this reason, as research on the production of scale continues to expand and accelerate, it seems particularly urgent to specify as precisely as possible the appropriate parameters and applications of the concept.

I shall elaborate these concerns, first, through a critical reading of Sallie Marston's (2000) important recent article in this journal on 'The social construction of scale'. Because of the lucidity of its exposition and the importance of the methodological and substantive issues it examines, Marston's article provides a particularly useful basis for reflection upon what might be termed the *limits to scale*. This discussion leads, second, to an analysis of a key ambiguity within the notion of a politics 'of' scale as developed by radical geographers. A concluding section suggests that our theoretical grasp of geographical scale could be significantly advanced if scaling processes – the hierarchical differentiation and (re)ordering of geographical scales – are distinguished more precisely from other major dimensions of sociospatial structuration under capitalism. Eleven methodological hypotheses for confronting this task are then proposed.

One crucial methodological caveat is in order before proceeding. In arguing for a more precise and thus analytically narrower conceptualization of geographical scale, my aim is in no way to deny the essential importance of scale as a constitutive dimension of sociospatial processes. My intention, rather, is to contribute to the development of an approach to sociospatial theory in which the specifically scalar dimensions of social spatiality – in contradistinction to its many other dimensions, such as localization, place-making, territorialization, spatial distancing, the formation of spatial networks, the production of environment/nature and so forth – may be adequately recognized and theorized (see also Howitt, 1998). Some readers may object that this methodological procedure imposes an arbitrary separation of distinct 'dimensions' of social spatiality that are in practice dialectically intertwined. Although this danger is admittedly a real one, I believe that it stems from certain unavoidable methodological dilemmas that accompany any exercise in theory construction. All forms of social theory, even the most avowedly poststructuralist approaches, necessarily involve the introduction and deployment of conceptual distinctions (Dreyfus and Rabinow, 1983). This proposition seems particularly relevant in the field of sociospatial theory, which is confronted with the hugely complex task of deciphering the social content of spatial formations that, as Lefebvre (1991 [1974]: 85–86) once observed, more closely resemble the unevenly layered textures of a 'flaky *mille-feuille* pastry' than the 'homogenous and isotropic space of classical (Euclidian/Cartesian) mathematics'. In my view, however, the extraordinary 'hypercomplexity' (Lefebvre, 1991 [1974]: 88) of social space within modern capitalism need not deter us from attempting to construct theoretical vocabularies through which to decode critically some of its main dynamics and contours. The relevant methodological question, I would suggest, is whether the conceptual distinctions deployed by sociospatial theorists ultimately illuminate, or obfuscate, the specific sociospatial processes under investigation.

As will become apparent below, I believe that the methodological advantages of a scalar structuration approach outweigh its potential methodological risks. For purposes of the present discussion, my main defense of this methodological approach consists in

the claim that it can clarify certain theoretical confusions that have become prevalent within major strands of the existing literature on the production of scale. A more sustained, constructive exploration of how processes of scalar structuration are relationally intertwined with other dimensions of social spatiality awaits further inquiry. The following discussion is intended to develop, albeit in a preliminary manner, some of the conceptual tools and methodological strategies through which this task might be confronted more directly.

Above and beyond these methodological justifications, my interest in the problem of scalar structuration – and, more generally, in the production of scale – stems from political considerations. Although capitalism has long been differentiated into scalar hierarchies, it can be argued that the current period of global restructuring is marked by particularly profound transformations of scalar organization. Throughout the last two decades, the geoeconomic project of neoliberalism has entailed a massive assault upon established scales of sociopolitical regulation (particularly those of the Keynesian welfare national state) and an aggressive attempt to forge new global, national, regional and local scalar hierarchies in which unrestricted capital mobility, unfettered market relations, intensified commodification and a logic of ‘beggar-thy-neighbor’ competition are to be permanently institutionalized (Eisenschitz and Gough, 1996; Gill, 1999; Peck and Tickell, 1994; Swyngedouw, 1992; 2000). At the same time, however, oppositional movements which strive to block or to roll back the contemporary neoliberal onslaught have likewise begun to mobilize geographical scale in strategic, often highly creative ways – whether by ‘jumping scales’ to circumvent hegemonic institutional practices (Smith, 1993), by attempting to socialize capital at particular scales (Eisenschitz and Gough, 1996) or by envisioning radically different scalar arrangements based upon principles of radical democracy and social justice rather than the capitalist logic of endless accumulation. In this sense, the increasing prominence of scalar concepts in contemporary geographical discourse appears to represent a ‘real abstraction’ of ongoing sociopolitical struggles: it is precisely because the configuration of geographical scales has become such an important stake of contemporary restructuring processes that geographers and other social scientists have become so attuned, in recent years, to its profound methodological significance. The present essay focuses predominantly upon methodological considerations and thus touches only fleetingly upon contemporary scalar struggles. Nonetheless, the following discussion is motivated by a concern to develop a framework for sociospatial analysis which might help critically illuminate the settings and the stakes of such struggles.

## II In what sense a scalar problem?

Doreen Massey’s famous (1994 [1979]: 63) question, ‘In what sense are “regional” problems *regional* problems?’, can be usefully applied to recent work on geographical scale by asking, ‘In what sense are “scalar” problems *scalar* problems?’ Although it would be highly illuminating to apply this question to any number of recent contributions to the literature on geographical scale, I shall focus here upon an important recent article by Sallie Marston (2000) which provides a state-of-the-art overview, synthesis and critical assessment of this burgeoning literature.

Marston’s article raises a number of significant methodological questions about

recent work on geographical scale. Most crucial among these is her assertion that geographers have operated with an overly narrow understanding of the causal forces underlying scale construction and scale transformation. By means of a detailed overview of recent writings on the production of geographical scale, Marston demonstrates that most scholars have analyzed the scaling of capitalism as a medium and an outcome of processes associated primarily with capital, labor and state institutions. By contrast, Marston argues for a more systematic analysis of the role of social reproduction and consumption processes in the evolution of capitalism's scalar configuration. Marston argues, in particular, that patriarchal gender relations have played prominent, if largely neglected, roles in each of these latter processes. Hence a more systematic consideration of social reproduction and consumption processes can, Marston proposes, open up the scale literature to an appreciation of the crucial role of patriarchal gender relations in the social construction of geographical scale. Marston summarizes her reading of the contemporary scale literature within human geography as follows: (Marston, 2000: 233):<sup>1</sup>

Preoccupied with questions of capitalist production, contemporary writing about scale in human geography has failed to comprehend the real complexity behind the social construction of scale and therefore tells only part of a much more complex story.

Marston is concerned, then, to argue for a more multifaceted and complex understanding of the causal forces underlying the construction and transformation of geographical scales. Drawing upon Marxian and feminist social theory, Marston emphasizes the interdependencies between production, social reproduction and consumption under capitalism and suggests that they must be interrogated more directly by analysts of scale production and scale transformation (233–34).

Marston notes that recent theorists of geographical scale have not explored the scaling of social reproduction and consumption processes or, for that matter, the role of such processes in the production and reconfiguration of geographical scales. It can be argued, however, that these issues have long been analyzed in quite scale-sensitive ways by important figures in critical geographical political economy. A case in point is Manuel Castells' (1977 [1972]) famous treatise, *The urban question*, which defined the urban scale in terms of its role in the reproduction of labor-power and, more generally, in what he termed 'collective consumption'. As a number of researchers subsequently argued, this crystallization of collective consumption functions at the urban scale during the postwar period was closely intertwined with the historically specific scalar divisions of regulation that emerged under the Keynesian welfare national state, which relied heavily upon local and municipal state apparatuses as instruments of public service provision and infrastructural investment within a broader, nationally configured administrative geography (Martin and Sunley, 1997; Jessop, 1999; Saunders, 1979). The issues of labor-power reproduction and consumption likewise figured centrally in David Harvey's (1989) classic analysis of the tendency towards a structured coherence within urban and regional labor markets. According to Harvey's argument, place-specific regimes of social reproduction and consumption are a crucially important factor that enables or constrains capital accumulation at the urban and regional scales and, more generally, the capacity of territorial alliances within an urban region to compete effectively against other major urban regions for mobile capital investment.

As these examples indicate, urbanists and economic geographers have long noticed

the scale-specific patterns in which processes of social reproduction and consumption occur, well before the most recent round of debates on the social construction of those geographical scales. More important to Marston's argument, however, is the systematic neglect of patriarchal gender relations in the construction of geographical scale both within and beyond the spheres of social reproduction and consumption. Indeed, much of Marston's argument can be read as a forceful critique of approaches to geographical political economy that neglect to examine the constitutive role of gender power relations – specifically, of patriarchy – in the reproduction and regulation of capitalism. Marston implies that a 'domestic mode of production' (Delphy and Leonard, 1992), grounded upon the unpaid exploitation of feminized domestic labor, has long provided a key socioinstitutional pillar of the capitalist wage relation.

In this context, Marston's central concern is to reconceptualize recent feminist-Marxist research on domesticity and patriarchy by resituating it within the parameters of contemporary discourses on geographical scale. To this end, Marston introduces the key concept of the *household as a geographical scale*. Whereas Neil Smith (1992: 76; 1993: 104–105) has occasionally referenced the role of the home as a geographical scale, Marston is among the first scholars to attempt to theorize this role systematically and historically (see also Taylor, 1999). The remainder of Marston's analysis (235–38) elaborates a brief case study of the transformation of household-level sociospatial practices among urban middle-class women in the USA during the late nineteenth and early twentieth centuries. I want to examine Marston's analysis of these household-level transformations somewhat more closely in order to specify what I view as a problematic overstretching of the concept of geographical scale in her analysis.<sup>2</sup>

It is useful, at this stage, to distinguish three analytically separate issues within Marston's discussion:

- 1) the *functional importance* of households as sites of diverse social institutions and processes – such as social reproduction, consumption, gender relations, patriarchal domination, women's resistance and so forth – within the US capitalist system;
- 2) the changing *internal sociospatial organization* of households;
- 3) the changing *scalar positionality* of households in relation to other geographical scales (for instance, the body, the neighborhood, the urban, the regional, the national and so forth).

On my reading, Marston's article provides an illuminating historical account of households under the first two aforementioned rubrics, but only a minimal and relatively underdeveloped account of why their changing scalar positionalities mattered during the period in question.

First, drawing upon the rich tradition of feminist social history and historical geography, Marston (235–36) situates the late-nineteenth and early twentieth-century US household in the context of broader shifts in the capitalist industrial order that entailed (a) an increasing separation of work and home, (b) a concomitant differentiation of public and private spheres of social relations, (c) an increasing feminization and privatization of a quasi-autonomous domestic sphere, and (d) an increasing differentiation of bourgeois consumption practices that were focused upon the household as a site of private nurturance and sociability. In this manner, Marston highlights the crucial importance of the household as a socioinstitutional unit within US industrial

capitalism. Second, as Marston indicates, these transformations of the household during the early twentieth century had a number of profoundly geographical expressions, including, most prominently, the internal spatial reorganization of the household (e.g., kitchens) through the introduction of new Taylorist technologies (such as heating, refrigeration, stoves and washing machines) in order to facilitate domestic values such as efficiency, economy, sanitation and nutrition (236–37). In this manner, Marston demonstrates that spatiality figured quite crucially within this fundamental redefinition of the household into an insulated realm of privatized, feminized domestic labor.

In what ways did the *scalar* dimension of the household accompany and mold the aforementioned historical shifts? Paradoxically, although Marston frames her theoretical analysis primarily around the role of the household as a geographical scale, the transformations she discusses pertain largely to the two issues summarized above, to which the specifically scalar properties of households appear to have been relatively inconsequential. Only on the concluding page of her discussion does Marston allude to the ways in which the restructuring of US middle-class households was in turn embedded within broader scalar hierarchies and relations. Here Marston provides two examples to illuminate the changing scalar positionalities of the household (237). First, she argues that debates on domesticity frequently invoked notions of women's citizenship – and thus, by implication, the embeddedness of the household within a broader *national* community. Second, Marston argues that such references were in turn intertwined with conceptions of how households served as a spatial microcosm of public life and thus were seen to play an important role in counteracting various *urban* problems. On this basis Marston (238) concludes:

Nineteenth century middle class women altered the prevailing 'Gestalt of scale' by altering the structures and practices of social reproduction and consumption. The scale transformations that were enacted were profound, with effects that reached out beyond the home to the city, the country and the global.

At this juncture, a number of questions can be raised regarding the theoretical conceptualization of geographical scale that underpins Marston's interpretation of household space. Geographical scale is arguably merely one *dimension* – albeit a particularly crucial one – of the multifaceted and polymorphic geographies of capitalist modernity: it is tied intrinsically to what Chris Collinge (1999) has termed the 'vertical ordering' of social systems and relations within a hierarchical scaffolding of intertwined territorial units stretching from the global/worldwide, the supranational/triadic and the national downwards to the regional, the metropolitan, the urban, the local and the body (see also Brenner, 1998a).<sup>3</sup> From this perspective, it seems particularly crucial that scholars attempt to distinguish the specific properties of geographical scale from other important dimensions of capitalist spatiality – such as space, place, locale, location, territoriality, distanciation, network formation and so forth – which may involve very different geographical properties such as (for example) extension, embeddedness, situatedness, immobility, enclosure, dispersion or connectivity (Agnew, 1987; Entrikin, 1991; Giddens, 1985; Gregory and Urry, 1985; Massey, 1985; Sack, 1980, 1986; Whatmore and Thorne, 1997; Werlen, 1995). In the case at hand, therefore, it is crucial to conceptualize the specifically scalar properties and causal effects of the household-level social relations in question as merely one dimension of their multifaceted and polymorphic geographies. In order to sustain the thesis that these household-level social relations

'altered the prevailing *Gestalt* of scale' (32), the importance of their scalar dimension cannot be presupposed but would itself need to become an object of inquiry.

I would argue, however, that Marston's characterization of transformations within the household in terms of a 'politics of scale' rests upon an overstretching of the concept of geographical scale to a point at which it becomes fundamentally indistinguishable from other key geographical concepts, such as territory, locale and place. As noted above, Marston's analysis does indeed indicate at least two specific, and potentially significant, ways in which 'scale mattered' to household politics in the historical-geographical context under investigation. Yet, by framing her discussion so closely around the theme of scale production, Marston appears to subsume all geographical aspects of the household under the rubric of the '*Gestalt* of scale', when her own analysis implies that the scalar properties of households – their positionalities within a broader, hierarchical ordering of sociospatial relations within US industrial capitalism – were frequently no more than relatively stable background structures to many of the sociospatial transformations in question. Indeed, insofar as the bulk of Marston's analysis focuses upon sociospatial shifts internal to the domestic sphere, it remains unclear how the debates on domesticity and household reorganization she describes actually altered the *Gestalt* of scale associated with the industrial capitalist city and the nation-state form, as implied in the statement quoted above. Marston's use of the lexicon of geographical scale to theorize the diverse transformations of household space described in her article thus appears to entail a problematic overextension of this singular dimension of capitalist spatiality to encompass the totality of sociospatial relations.<sup>4</sup>

In other words, even though it is repeatedly *labeled* as a geographical scale, the household operates more prominently in Marston's analysis as a sociospatial arena, territory, locale or place rather than as a geographical scale in the technical sense of the term proposed above. To be sure, the household *does* operate as a geographical scale in Marston's case study, but arguably in less causally significant and transformative ways than her conceptual vocabulary implies. The notion of geographical scale thereby becomes an overgeneralized and underspecified term which is used to describe nearly any qualitative shift within 'a complex geographical structure of social practices and political and economic processes shaped by gender, class and ethnic systems as well as by location' (238).

In focusing so closely upon this specific aspect of Marston's article, I am concerned less to suggest an alternative reading of her fascinating and highly suggestive historical material than to draw attention to a broader methodological dilemma. The conceptual problems outlined above are not specific to Marston's work on the theme of geographical scale, but have arguably become increasingly prevalent within many contemporary writings on geographical political economy. On the basis of the preceding discussion, a fundamental ambiguity within the scale debates of the last decade can be explored more directly: the theoretical status of the word 'of' in the widely influential notion of the 'politics of scale'.

### III In what sense a politics 'of' scale?

Neil Smith (1990: 172) coined the phrase 'politics of scale' in the 'Afterword' to the second edition of *Uneven development*. Whereas Smith (1984) had previously analyzed geographical scales primarily as platforms for capital circulation and uneven spatial development, as of the early 1990s he began to broaden this politico-economic approach to scale production in order to theorize the role of geographical scales as frameworks for a broad range of social activities and struggles, from capital accumulation and state regulation to social reproduction, gender relations, oppositional mobilization ('jumping scales') and subjective identity (Smith, 1992; 1993; 1995). It was in this context that Smith introduced and developed the concept of a politics of scale.

The notion of the politics of scale has subsequently been deployed by Smith, Swyngedouw and other radical geographers with reference to an immense range of concrete sociopolitical processes, strategies and struggles (see, for instance, Adams, 1996; Agnew, 1997; Cox, 1998; Herod, 1997; Jonas, 1994; Kelly, 1997; Leitner, 1997; Miller, 1997; Silvern, 1999; Swyngedouw, 1996; 1997; 2000; Williams, 1999). On the most general level, the phrase has been used to summarize the proposition that scales are socially constructed and thus historically changeable through sociopolitical contestation (Smith, 1993; Swyngedouw, 1997). As indicated at the outset of this paper, this aspect of the production of scale thesis can now be considered an established truism within contemporary human geography. Beyond this level of generality, however, the notion of the politics of scale has been deployed by human geographers to describe a number of quite different aspects of sociospatial practices within contemporary capitalism. Much of the resultant conceptual slippage has hinged upon differing interpretations of the deceptively unobjectionable word 'of' in this phrase. For present purposes, simplifying a complex and multifaceted discussion, I would like to focus upon two fundamentally different meanings that have been ascribed to this notion during the last decade. I shall refer to these two meanings of the 'politics of scale' as its *singular* and its *plural* connotations.

In the first, or singular, meaning, the notion of a politics of scale denotes the production, reconfiguration or contestation of some aspect of sociospatial organization *within* a relatively bounded geographical arena – usually labeled the local, the urban, the regional, the national and so forth. In this singular aspect of the 'politics of scale', the word 'of' connotes a relatively differentiated and self-enclosed geographical *unit*. Here scale is understood essentially as a *boundary* separating the unit in question – be it a place, a locality, a territory or any other spatial form – from other geographical units or locations. As we have seen, this is the primary sense in which Marston (2000) has analyzed the politics of scale within households. Other noteworthy examples of this singular understanding of scale production in human geography include Cox and Mair's (1991) work on the 'agentive' qualities of places and localities, Paasi's (1991) four-staged theorization of the institutionalization of regions, Smith and Dennis' (1987) analysis of the remaking of the Northern manufacturing belt in the USA and Agnew's (1997) discussion of the divergent visions of 'Italy' developed by major contemporary Italian political parties. In each instance, the analyst focuses upon the diverse sociohistorical processes through which a particular spatial form – a household, a place, a locality, a region, a nation and so forth – is established as a differentiated unit of sociospatial organization, activity, conflict, struggle, discourse and/or imagination.

By contrast, in the second, or plural, meaning, the notion of a politics of scale refers to the production, reconfiguration or contestation of particular differentiations, orderings and hierarchies *among* geographical scales. In this plural aspect, the word 'of' connotes not only the production of differentiated spatial units as such, but also, more generally, their embeddedness and positionalities in relation to a multitude of smaller or larger spatial units within a multitiered, hierarchically configured geographical scaffolding. The referent here is thus the *process of scaling* through which multiple spatial units are established, differentiated, hierarchized and, under certain conditions, rejigged, reorganized and recalibrated in relation to one another. Here, then, geographical scale is understood primarily as a modality of *hierarchization* and *rehierarchization* through which processes of sociospatial differentiation unfold both materially and discursively. Paradigmatic examples of this aspect of the politics of scale include Swyngedouw's (1992) classic essay on flexible accumulation as a 'glocal' rescaling of political-economic space, Peck and Tickell's (1994) analysis of neoliberalism as a 'global-local disorder', Smith's (1997) interpretation of globalization as a new scalar configuration of worldwide uneven development, Herod's (1997) analysis of the rescaling of class relations in the US longshore industry, Kelly's (1997) account of the strategic use of scalar narratives in the political construction of globalization in the Philippines, as well as most contributions to the rapidly growing literature on the rescaling of state spatiality (see, for example, Brenner, 1998b; 1999; Cox, 1993; Eisenschitz and Gough, 1996; Jessop, 1999; 2000; Jones, 1999; Leitner, 1997; MacLeod, 1999; 2000; MacLeod and Goodwin, 1999; Swyngedouw, 1996; 1997). In each instance, the analyst focuses on the shifting organizational, strategic, discursive and symbolic relationships between a range of intertwined geographical scales and on the ramifications of such interscalar transformations for the representations, meanings, functions and organizational structures of each of those scales.<sup>5</sup>

I believe that the second, plural usage of the 'politics of scale' demarcates the primary theoretical and empirical terrain for research on scale production. This usage effectively captures not only the intrinsic relationality of all geographical scales (as emphasized, for instance, by Howitt, 1998) but also their determinate, if continually changing, positions as differentiated units within multitiered sociospatial hierarchies (as emphasized, for instance, by Smith, 1984, and Collinge, 1999).<sup>6</sup> As suggested in the discussion of Marston's work above, it is advisable to deploy the phrase 'politics of scale' in its singular connotation with considerable caution because the distinctively scalar 'content' of the sociospatial relations referenced in such cases cannot be presupposed, but must itself be treated as an object of inquiry. Indeed, in the absence of an explicit causal argument linking the substantive social content of the spatial unit in question to its *embeddedness* or *positionality* within a broader scalar hierarchy, there is little reason to theorize the issues connoted by the singular usage of the 'politics of scale' in a scalar terminology rather than through an alternative geographical lexicon, such as that of place, locality, territoriality or networks. Moreover, in most instances of the singular usage of the politics of scale that can be excavated from the literature, the issue of geographical scale is closely intertwined – generally in theoretically unacknowledged or underspecified ways – with other, equally significant dimensions of social spatiality. I would argue, consequently, that singular uses of the politics of scale are methodologically defensible only to the extent that the distinctive scalar content of the sociospatial form in question is explicitly investigated and set into relief over and

against its other geographical dimensions.<sup>7</sup>

The central hypothesis that emerges from these considerations is that geographical scale appears to 'matter' most to social outcomes – that is, to have the most obvious and far-reaching causal impacts – in those social processes or transformations which are described through a plural rather than through a singular notion of a politics of scale. While it would be problematic to deny categorically the possibility that scale effects might also emerge in those social processes or transformations which are described under the rubric of a singular notion of a politics of scale, I would suggest that such effects are generally less significant, and are in any case considerably more difficult to demonstrate, in those instances. The key methodological point, in the present context, is that the mere *existence* of scalar organization does not, *ipso facto*, result in sociologically or politically relevant *scale effects*. The overextension of scalar concepts within contemporary sociospatial theory has contributed to a pervasive bracketing of this essentially empirical question through an unreflexive choice of theoretical vocabulary.

I suggested previously that a slippage between the concept of geographical scale and other geographical concepts such as place, locale and territory underpins Sallie Marston's (2000) account of household space in late nineteenth century US cities. John Agnew's (1997) otherwise highly illuminating discussion of the 'reconstruction of Italy' by Italian political parties, classified above as an instance of a singular usage of the politics of scale, provides a second useful illustration of this point. On the one hand, as Agnew indicates, each of the four major Italian political parties constructed a rhetorical vision of 'Italy' that entailed a highly specific scaling of the relations between local, regional and national levels of government. In this sense, a politics of scale was clearly quite essential to the production of new visions of Italy as a national space during the political turmoil of the early 1990s. On the other hand, however, a careful reading of Agnew's account reveals that such scalar reshufflings and reimaginings represented only one aspect of a series of more complex transformations within the dominant representations of national political spatiality during this period. Two additional dimensions of sociospatial restructuring, in particular, appear quite essential to Agnew's narrative, even though they are not theorized explicitly as such in this particular text (but see Agnew, 1994; 1987).

First, Agnew's (1997: 111–17) discussion implies that the major *geographical locations* of each political party's targeted electoral constituencies (e.g., North versus South, urban versus rural) played an extremely important role in the development of each party's vision of Italy: the PDS (Democratic Party of the Left) appealed predominantly to the central regions, the Northern League to the urbanized North, the AN (National Alliance) to southern urban voters; and Forza Italia (Go Italy) to middle class, television-watching soccer fans throughout the national territory. In this manner, in each party's vision of a reconstructed Italy, questions of scale were densely superimposed upon a horizontally articulated geography of differentiated areas, locations and places. Second, Agnew's (1997: 111–17) account implies that the political parties also mobilized highly specific visions of Italy as a *political territory*, grounded upon qualitatively opposed conceptions of territorial community, identity and belonging: the PDS embraced a democratic/welfarist federalism, the Northern League an anti-immigrant/anti-statist entrepreneurialism, the National Alliance a nationalist/statist conservatism and Forza Italia a postmodern form of consumerism and economic liberalism. In this manner, in each party's vision of a reconstructed Italy, questions of

scale were also tightly intertwined with certain idealized geographies of political identity and inclusion/exclusion in terms of which national space was to be (re)configured.

The 'dramaturgy of horizons' described in Agnew's article appears, therefore, to have involved not only the rescaling of political parties' rhetorical visions, but also a range of organizational and discursive projects through which the parties attempted to reforge places, to reshuffle locations and to reterritorialize political identities throughout Italian national state space. Agnew's analysis thus implies that the 'mundane spatiality inherent in "ordinary" national politics' (Agnew, 1997: 118) was reconstituted, during this period, through an extremely complex amalgamation of intersecting political-geographical projects – a politics of scale, a politics of location and a politics of territorial identity. Agnew's article lucidly and consistently demonstrates the role of scale effects in the political parties' electoral strategies, but devotes less explicit theoretical attention to the other types of sociospatial dynamics and effects with which these strategies were intertwined. In this sense – as with Marston's scalar analysis of the household, as discussed above – I would suggest that Agnew's theoretical framing of his case study so prominently in terms of scalar concepts does not fully capture the extraordinarily rich spatialities that are actually implicit within his empirical narrative.

The tendency to blend scalar concepts into other geographical categories continues to be quite prevalent in contemporary human geography, as is strikingly evident from the long succession of debates on the localities question, the urban question, the regional question, the national question and so forth. Although its intellectual origins are undoubtedly multifaceted (Agnew, 1989; 1993; Taylor, 1996; Gulbenkian Commission, 1996), I believe the problem results in no small measure from the circumstance that our most elementary scalar terms (e.g., local, urban, regional, national and global) are also commonly used as spatial qualifiers to connote the substantive sociological *content* of particular social, political and economic processes (Cox, 1996). The pervasiveness of this tendency is exemplified, for instance, in the equation of the neighborhood scale with community cohesion or ethnic identity in the urban sociology of the Chicago School, in the equation of the local scale with contextual particularity in British locality studies during the 1980s, in Castells' (1977 [1972]) definition of the urban scale as a receptacle for collective consumption processes or in conventional modernization-theoretical understandings of the national scale as the ontologically necessary arena for economic development and political democracy (for further examples and discussion of these problems, see Agnew, 1989; Sayer, 1991; Taylor, 1996; Walker, 1994). Unfortunately, this grammatical inconvenience has significantly compromised the theoretical precision of many otherwise highly illuminating contributions to sociospatial theory.

Most importantly for my purposes here, it is crucial to recognize that the singular meaning of the politics of scale, as defined above, has been investigated quite exhaustively, albeit in a different conceptual vocabulary, in the debates of the 1970s and 1980s on the production of space, territory, locality and place (Agnew, 1987; Harvey, 1982; Soja, 1989; Gottdiener, 1985; Gregory and Urry, 1985; Massey, 1985; Massey and Allen, 1984; Werlen, 1995). The preceding discussion suggests, in fact, that many contemporary discussions of the production of geographical scale are beginning to revisit unreflexively the intellectual terrain already covered quite thoroughly in the academic debates on the production of capitalist spatiality that were initiated over three decades ago by the founders of radical sociospatial theory. In that context, scholars debated

extensively in what ways 'geography matters' and developed a number of powerful arguments about how and why spatiality structures social relations (of class, gender, race, nationality and so forth) under capitalism. New, spatialized theories of accumulation, urbanization, regulation and politicocultural identity were developed to grasp the complex and power-laden historical geographies of capitalist modernity; and notions such as spatial divisions of labor, uneven geographical development, the spatial fix, structured coherence, spatial restructuring, territorial alliances, territorial non-correspondence, deterritorialization/reterritorialization, spatial difference and spatial effects were introduced to describe some of the specific patterns, processes and struggles associated with those geographies. Although the scaling of social, political and economic space arguably remained quite central to each of the latter issues even in the 1970s and 1980s, most scholars were more concerned during this period to analyze the sociospatial *content* of particular scales (from the local, the urban and the regional to the national and the global) as sites for specific kinds of political-economic and sociocultural activities (capitalist production, state regulation, social reproduction, political mobilization and so forth) than to explore their changing positionalities in relation to other geographical scales and scaling processes.<sup>8</sup>

The proliferation of explicit debates on geographical scale during the 1990s can be understood as an important extension and fine-tuning of the spatialized approaches to political economy developed during the preceding decade, provoked in no small measure by the post-1970s shaking-up of the scalar hierarchies and interdependencies associated with organized capitalism in a new round of crisis-induced sociospatial restructuring (Jessop, 1994; Peck and Tickell, 1994; Smith, 1997; Swyngedouw, 1992). Under these conditions, spatial scale has provided a more precise conceptual grammar for analyzing the continual geographical differentiation and redifferentiation of social relations among distinctive, if closely intertwined, spatial units within an increasingly globalized configuration of capitalism. Whereas a sophisticated analytical vocabulary was developed in the 1980s for grasping many other dimensions of capitalist spatiality – such as localization; the tension between geographical fixity and geographical mobility; the problematic of territoriality; and the phenomenon of uneven spatial development – the new lexicon of geographical scale of the 1990s has provided a powerful means to denaturalize, historicize and critically interrogate the very spatial units and hierarchies in which capitalist social relations are configured. More immediately, recent debates on geographical scale have provided scholars with an important theoretical lens through which to begin to decipher the dramatic and highly unsettling processes of rescaling – of capital, of the territorial state and of social power relations more generally – that are occurring throughout the world system in the current era of 'glocalization' (Swyngedouw, 1997; 2000; Brenner, 2000).

Recent contributions to the analysis of scale production and scale transformation thus hold the promise of providing scholars with a still more precise, differentiated and rigorous theoretical vocabulary for sociospatial analysis than that which had been developed during the preceding two decades. To realize this theoretical potential, however, it is crucial to distinguish what might be termed *scalar structurations* of social space – which, as indicated above, involve relations of hierarchization and rehierarchization among vertically differentiated spatial units – from other forms of sociospatial structuration, such as place-making, localization and territorialization, whose theoretical foundations are currently relatively well developed within human geography.<sup>9</sup>

I would thus advocate restricting the concept of the politics of scale to its most generic function as a catchphrase for summarizing the proposition that geographical scales and scalar configurations are socially produced and politically contested through human social struggle rather than being pre-given or fixed. The singular meaning of the phrase 'politics of scale' can then be redescribed through Jonas' (1994) notion of the 'scale politics of spatiality', provided the distinctively scalar content of the sociospatial practices in question is not presupposed but is investigated explicitly. Finally, I would propose to redescribe the plural connotation of the 'politics of scale' – which, as noted, arguably denotes the core analytical focus for any systematic account of scale production and scale transformation – as a politics of scalar structuration or, more simply, as a politics of scaling.

#### IV Conclusion: towards an investigation of scalar structuration

On my reading, then, studies of geographical scale and of rescaling processes – whether in contemporary or in historical contexts – are at their most powerful when they are situated within a broader sociospatial framework that is attuned to the rich multidimensionality of capitalist spatiality. As Henri Lefebvre (1991 [1974]: 88) once noted, 'each fragment of space [within modern capitalism] masks not just one social relationship but a host of them that analysis can potentially disclose.' Geographical scale is therefore not to be equated with the totality of sociospatial practices but must be recognized as one crucially important dimension of geographical differentiation, a hierarchically ordered system of provisionally bounded 'space envelopes' (Lefebvre, 1991 [1974]: 351) that are in turn situated within a broader, polymorphic and multi-faceted geographical field.<sup>10</sup>

I shall conclude this discussion by proposing eleven methodological hypotheses that might serve as general starting-points for the investigation of processes of scalar structuration. In developing these hypotheses, I draw upon and attempt to synthesize some of the key ideas that have been introduced and debated in the contemporary theoretical literature on scale production. Although the hypotheses are presented here in eleven distinct steps, they articulate mutually reinforcing rather than merely additive methodological assumptions.

- 1) *Scalar structuration is a dimension of sociospatial processes.* Scalar structuration is not a property of social spatiality 'as such', but is best understood, rather, as a dimension of particular sociospatial *processes* – such as capitalist production, social reproduction, state regulation, consumption and so forth. Insofar as a given social, political or economic process is internally differentiated into a vertical hierarchy of distinct spatial units, the problem of its scalar structuration arises.<sup>11</sup>
- 2) *Processes of scalar structuration are constituted and continually reworked through everyday social routines and struggles.* The concept of structuration connotes a developmental dynamic in which the basic structures of collective social action are continually reproduced, modified and transformed through collective social action (Giddens, 1985; Sewell, 1992). Insofar as it provides the 'partitioned geography' (Smith, 1993: 101) within which forms of social action are hierarchically embedded, scale is arguably a constitutive dimension of such societal structuration processes.

Crucially, however, the differentiation of social processes into determinate scalar hierarchies is never accomplished 'once and for all', but is continually forged and remade through everyday habits, routines, practices, negotiations, experiments, conflicts and struggles.

- 3) *Processes of scalar structuration are dialectically intertwined with other forms of sociospatial structuration.* The scaling of social relations represents only one dimension of their multifaceted geographies. The scalar differentiation of any given social process occurs in direct conjunction with other forms of sociospatial structuration, which likewise continually mold and transform the geographies of that process. For instance, the scalar differentiation of modern state power between national, regional and local tiers is closely intertwined with (a) its territorialization within self-enclosed boundaries, (b) the bounding of each of its scalar 'tiers' within territorially demarcated subnational jurisdictional units, and (c) the spatial centralization of state powers within a (national) territory (Mann, 1993; Taylor, 1993). The scalar structuration of state spatiality has thus been linked inextricably (but not exclusively) to its territorialization and its geographical centralization. Analogous arguments could be made for other social processes, such as capitalist production or consumption, whose scalar differentiations are inextricably intertwined with other forms of sociospatial structuration such as place-making, localization, distanciation, network formation and so forth. Scalar structuration must thus be examined as one among many structuration processes which underpin the continual production and transformation of social spatiality. The development of a more sophisticated meta-language for the study of processes of sociospatial structuration under capitalism remains an important theoretical task. Nonetheless, I would argue that the relationship between scalar structuration and other forms of sociospatial structuration under capitalism may be explored most fruitfully through contextually specific yet theoretically self-reflexive investigations.
- 4) *There are multiple forms and patterns of scalar structuration.* Any systematic account of scalar structuration must begin with (a) an analysis of how, why and when the social process in question is subdivided into a vertical hierarchy of separate yet intertwined geographical scales. Concomitantly, such an account would then need to specify (b) the relevant spatial units within that hierarchy, (c) their specific and historically evolving role(s) within the hierarchy and (d) their specific and historically evolving relation(s) to other units within that hierarchy. Crucially, however, each sociospatial process may be grounded upon a highly specific form of scalar structuration. For instance, whereas the tension between the differentiation and equalization of profit rates illuminates essential aspects of capital's scalar differentiation (Smith, 1984), this analytical lens may be less useful in illuminating the scalar differentiation of state institutions, which continues to be a source of considerable theoretical and political controversy among state theorists, historical sociologists and political geographers (see, for instance, Collinge, 1998; Duncan and Goodwin, 1988; Jessop, 2000; Jones, 1999; Mann, 1993; Taylor, 1993).<sup>12</sup>
- 5) *Scales evolve relationally within tangled hierarchies and dispersed interscalar networks.* The meaning, function, history and dynamics of any one geographical scale can only be grasped relationally, in terms of its upwards, downwards and sideways links to other geographical scales situated within tangled scalar hierarchies and dispersed interscalar networks (Lefebvre, 1991 [1974]: 85–88). Scale, therefore,

cannot be construed adequately as a system of territorial containers defined by absolute geographic size (a 'Russian dolls' model of scales). Each geographical scale is constituted through its historically evolving positionality within a larger relational grid of vertically 'stretched' and horizontally 'dispersed' sociospatial processes, relations and interdependencies. Consequently, the very intelligibility of each scalar articulation of a social process hinges crucially upon its embeddedness within dense webs of relations to other scales and spaces.

- 6) *There are multiple spatialities of scale.* Scales are commonly described in areal terms, as relatively self-enclosed, Euclidian/Cartesian territorial containers. However, territoriality represents only one possible dimension of their rich sociospatiality (Cox, 1998; Low, 1997; Whatmore and Thorne, 1997). Whereas an analysis of the scale politics of spatiality (Jonas, 1994) can help demarcate the specific scalar frames in which sociospatial practices are enclosed, an analysis of the spatiality of scale is required in order to excavate their full sociospatial content. Accordingly, the complex sociospatiality of scale-making processes may be specified in terms of concepts of place, locale, location, area, territory, networks, connectivity, or, perhaps, on the basis of additional, still undeveloped geographical categories.<sup>13</sup>
- 7) *Scalar hierarchies constitute mosaics not pyramids.* Processes of scalar structuration do not produce a single nested scalar hierarchy, an absolute pyramid of neatly interlocking scales, but are better understood as a mosaic of unevenly superimposed and densely interlayered scalar geometries. For, as Allen, Massey and Cochrane (1998: 60) indicate, '... different kinds of social process have very different geographies and they do not all fit neatly into the same set of nested hierarchies' (see also Lefebvre, 1991 [1974]: 85–88). Hence the meaning of scalar terms such as global, national, regional and urban will differ qualitatively depending on the historically and contextually specific scalar partitionings of the sociospatial process in question. In this context, we can also speak of a 'kaleidoscope effect' (Smith, 1987: 64) in which the organization of scalar patterns changes qualitatively according to the perspective from which they are perceived and/or acted upon.
- 8) *Processes of scalar structuration generate contextually specific causal effects.* Whether or not the scalar structuration of a given social process generates sociologically or politically significant outcomes is an empirical question that can only be resolved through context-specific inquiries. In some instances – examples of which pervade the literature on the politics of scale – scalar articulation may indeed become an 'active progenitor of social processes' (Smith, 1993: 101). In other instances – examples of which may also be excavated from the scale literature – the scalar articulation of a social process serves as no more than a relatively stable background structure to its historical unfolding. An investigation of the contextually specific conditions under which scalar structuration – as opposed to other forms of sociospatial structuration – generates sociologically or politically significant social, spatial and scalar effects remains a crucially important, if largely neglected, research task.
- 9) *Processes of scalar structuration may crystallize into scalar fixes.* Processes of scalar structuration interact with one another intensely and continuously to produce 'nested hierarchical structures of organization' (Harvey, 1982: 422) that enframe significant aspects of everyday life within provisionally solidified 'scalar fixes' (Smith, 1995). Scalar fixes are composed of relatively stabilized geographical

hierarchies in which activities organized at some scales tend to predominate over others (Collinge, 1999). Such scalar hierarchies constitute relatively 'fixed geographical structures bounding political, economic and cultural activity in specific ways' (Smith, 1995: 63). Although the issue has yet to be analyzed systematically, it can be argued that the long-run historical geography of capitalist development has been premised upon a succession of determinate, if highly contradictory, scalar fixes in and through which the socioterritorial preconditions for accumulation have been continually secured, destabilized, junked and remade (Brenner, 1998a). In this context, state institutions have arguably played a particularly significant – but hardly exclusive – role in demarcating, reproducing, modifying, destroying and creating anew the major scalar hierarchies and partitions in which everyday life within capitalist society has been configured (Lefebvre, 1976; 1978; MacLeod and Goodwin, 1999).

- 10) *Established scalar fixes may constrain the subsequent evolution of scalar configurations.* To date, the bulk of the literature on scale production, with its empirical focus on the tumultuous post-1970s period, has emphasized the cataclysmic forms of scalar transformation which ensue during phases of systemic crisis. Under these conditions, a creative destruction of scalar hierarchies unfolds: extant scalar configurations are dismantled and rejigged, and following intense sociopolitical struggles, radically new hierarchies of scale may be established. It should be recognized, however, that scalar configurations are not infinitely malleable, even during phases of intensified, accelerated restructuring. Once scalar fixes are established within particular historical-geographical contexts, they frequently exercise powerful structuring effects upon the future evolution of scales. In general terms, these structuring effects represent a situation of 'path-dependency' in which entrenched social arrangements reinforce themselves and induce the development of complementary organizational forms (North, 1990). Properties of path-dependency have been observed in diverse forms of institutional evolution, from technological change and industrial location to state formation and welfare state retrenchment (for recent overviews, see Mahoney, 2000; Pierson, 2000). It can be argued that properties of path-dependency have also underpinned important aspects of the historical geography of spatial scales within modern capitalism. Extant scalar fixes may close off certain pathways of scalar evolution by circumscribing the production of new scales within determinate institutional-geographical parameters. In this scenario, scalar change is incremental: the dominant scalar fixes of one historical period impose a relatively inflexible, self-reinforcing geographical scaffolding within which scalar configurations and interscalar relations subsequently develop.<sup>14</sup> The path-dependent characteristics of historical and contemporary rescaling processes await further investigation. The interplay between path-dependency and creative destruction in the historical geography of spatial scales likewise represents a potentially fruitful focal point for future research in this field.
- 11) *Processes of scalar structuration constitute geographies and choreographies of social power.* The structuration of social processes by scale mediates, and is in turn mediated by, highly asymmetrical and thus conflict-laden social power relations (Berndt, 2000; Castree, 2000; Herod, 1997; Leitner, 1997; Swyngedouw, 1997; Smith, 1993). On the one hand, the establishment and reorganization of scalar hierarchies creates

geographies and choreographies of inclusion/exclusion and domination/subordination which empower some actors, alliances and organizations at the expense of others, according to criteria such as class, gender, race/ethnicity and nationality. On the other hand, such scalar hierarchies may operate not merely as arenas of social power struggles but also as their very objects insofar as they are challenged and unsettled in the course of sociopolitical struggles and conflicts. In this sense, as Swyngedouw (1997: 141) has suggested, 'the continuous reshuffling and reorganization of spatial scales is an integral part of social strategies and struggles for control and empowerment.' Concomitantly, in Smith's (1993: 101) concise formulation, 'The scale of struggle and the struggle over scale are two sides of the same coin.' The specification of the particular historical-geographical conditions under which scalar hierarchies may become stakes rather than mere settings of social struggle is a theoretical and empirical task that awaits more systematic investigation. In an epoch in which new, highly disempowering and increasingly authoritarian scalar arrangements are being forged and aggressively entrenched by the agents of transnational capital and US-dominated global neoliberalism, an analysis of this issue would appear to be one of the more urgently important political contributions that could be made by progressive theorists and analysts of rescaling processes (Swyngedouw, 2000).

The preceding hypotheses represent no more than a rudimentary attempt to confront some of the many exciting methodological challenges that have been opened up by recent theorizing on scale production and rescaling processes. The question of how best to conceptualize geographical scales and the tangled, multitiered hierarchies in which they are embedded has only just begun to be investigated explicitly and systematically. It is to be hoped, therefore, that debates on this potentially quite promising and politically salient realm of contemporary sociospatial analysis will continue to generate illuminating conceptual insights and empirical-historical research in the coming years.

Nonetheless, as our theoretical understanding of the production of geographical scale matures, it is worth reminding ourselves of Kevin Cox's (1996: 669) apt question, posed at the outset of this article: 'Scale seems to make a difference; but does it really?' In our zeal to explore the multiple ways in which scale serves as a 'metric of geographical differentiation' (Smith, 2000: 725), it is crucial to distinguish specifically scalar structurations of social relations from the many other forms of sociospatial structuration which underpin the geographies of modern capitalism. Only then, I believe, can we begin to determine whether, in what ways, and under what conditions, geographical scale really does make a difference.

#### Acknowledgements

I am grateful to Nick Entrikin, Manu Goswami, Bob Jessop, Gordon MacLeod, Anssi Paasi, Nathan Sayre and Nik Theodore for helpful discussions and critical comments. Three anonymous reviewers for *Progress in Human Geography* also provided a number of extremely helpful criticisms. Thanks, finally, to Peter Dicken for suggesting that I develop an earlier, abbreviated formulation of these ideas into a full-length article. Needless to say, I assume full responsibility for the arguments presented here.

## Notes

1. Unless otherwise noted, subsequent parenthetical page references refer to Marston (2000).
2. It should be noted that this aspect of Marston's argument – that the household constitutes a distinct geographical scale – is analytically independent of her contention that processes of social reproduction and consumption have important causal effects upon the production and reconstitution of geographical scales. The following discussion focuses largely upon Marston's account of the former claim, which is elaborated in the final four pages of her article.
3. This understanding of geographical scale, which builds upon an interpretation of Henri Lefebvre's (1976; 1978; 1991) approach to the issue, is broadly consistent with many of the definitions that have been proposed in the scale literature – such as Delaney and Leitner's (1997: 93) notion of scale as a 'nested hierarchy of bounded spaces of differing size', Agnew's (1997: 100) notion of scale as 'the level of geographical resolution at which a given phenomenon is thought of, acted on or studied' or Smith's (1993: 99) more specific notion of scale as the 'geographical resolution of contradictory processes of competition and co-operation.' In the conceptualization proposed here, however, it is the *hierarchization* of spaces in relation to one another which is the very essence of their scalar ordering/differentiation or 'scaling' (see following discussion).
4. Marston (220–21) states that she embraces Howitt's (1998) understanding of scale as a relation. Yet Howitt (1998: 51) argues explicitly against the attribution of 'conceptual primacy or conceptual independence' to geographical scale relative to other aspects of social spatiality. Rather, his main goal is to counteract the marginalization of scalar concerns within human geography (the so-called 'handmaiden' understanding of scale) and to suggest that scale deserves what he terms 'co-equal' status as a key component – along with place and environment – in the 'construction and dynamics of geographical totalities' (Howitt, 1998: 51, 56). On this reading, then, the critique developed in the preceding paragraphs appears to be consistent with Howitt's theorization.
5. Collinge (1999) has recently extended this plural usage of the politics of scale by distinguishing dominant and nodal (nondominant) scales within broader scalar hierarchies and scalar divisions of labor.
6. To be sure, the sociopolitical processes associated with the singular and plural meanings of the politics of scale may, under certain conditions, be tightly intertwined. For instance, Smith's (1993: 99) elegant definition of scales as the 'geographical resolution of contradictory processes of competition and co-operation' implies that the differentiation, bounding and stabilization of scales can occur only when cooperative relations provisionally countervail against competitive pressures within a determinate spatial unit. Concomitantly, Smith implies, once geographical scales are differentiated from one another through (internal) relations of cooperation, the (external) relations between them are mediated through competition. In this manner, Smith implicitly links the singular and plural connotations of the politics of scale through a specific causal mechanism: the geographical interplay between competitive and cooperative social relations. According to this argument, the differentiation of any single geographical scale (the singular connotation of the 'politics of scale') can be explained *in terms* of its role as a geographical pivot mediating between processes of internal cooperation and external competition within a multitiered scalar hierarchy (the plural connotation of the 'politics of scale'). Smith's work is exceptional, however, in linking the two meanings of the politics of scale through a specific causal mechanism.
7. A number of scholars have maneuvered skillfully around this problem by blending the lexicon of geographical scale directly into other geographical categories and metaphors. Swyngedouw (1997: 140, 144), for instance, speaks alternately of 'scaled spaces', 'scaled places', 'scalar spatial configurations', and the 'process of territorial "scalar" construction of space', whereas Jonas (1994) speaks of the 'scale politics of spatiality.' Paasi (1991; 1996), meanwhile, subtly weaves his discussion of the 'scales of spatial life' into a contextually, historically and locationally sensitive analysis of place-making and regionalization processes (see also Newman and Paasi, 1998). While I am sympathetic to these methodological strategies, my goal in the present context is to examine more directly the underlying theoretical problem to which they are a response.
8. As Soja (1989: 149) noted in his account of the development of sociospatial theory during the

1970s and 1980s, geographical scale remained an 'understudied subject' during this period, despite the 'initial probes' into the topic made by scholars such as Peter Taylor and Neil Smith.

9. My intention, in emphasizing the 'verticality' of scalar relations, is not to deny the importance of what might be termed 'horizontal' forms of interscalar interaction and interdependence – for instance, networks of relations between actors and organizations located within geographically dispersed cities, regions and so forth. It is worth inquiring in what specific sense the issue of geographical scale might be said to impact such 'horizontally networked' relations. In an extremely insightful recent essay on the global geographies of food, Sarah Whatmore and Lorraine Thorne (1997) contend that such horizontal networks cannot be grasped adequately through traditional, geometric scalar concepts, which are focused one-sidedly upon the 'geography of surfaces' rather than upon the 'geography of flows'. Drawing upon the work of Bruno Latour, Whatmore and Thorne (1997: 289) argue that 'power relations in space' must be reconceptualized as a 'frictional lengthening of networks of remote control'. From this point of view, they argue, '... the key question becomes not that of *scale*, encoded in a categorical distinction between the "local" and the "global", but of *connectivity*, marking lines of flow of varying length and which transgress these [scalar] categories' (Whatmore and Thorne, 1997: 289–90; italics added; for an analogous approach to scale, which likewise draws upon Latour's work, see also Murdoch, 1997).

I would argue, however, that geographical scales and networks of spatial connectivity are mutually constitutive rather than mutually exclusive aspects of social spatiality. Networks of spatial connectivity are directly structured by geographical scale insofar as the latter serves to demarcate (a) the specific, if often rather amorphous, spatial *units* between which the networks in question are interconnected; and (b) the spatial *orbits* of the networks in question. In any case, the relationship between scales and networks might be understood in a number of different ways: it could be argued (a) that geographical scales produce networks of connectivity, (b) that networks of connectivity produce geographical scales, or – more dialectically – (c) that geographical scales and networks of connectivity co-constitute one another in a complex mutual interaction. Each of these propositions might have some validity in specific historical-geographical contexts, but more systematic inquiry is needed in order to explore them. In my view, Whatmore and Thorne are quite correct to call into question the appropriateness of standard Euclidian/Cartesian scalar concepts for analyzing horizontally networked forms of sociospatial interdependence and interaction. Geographical scale may structure such relations of horizontal connectivity, but scalar categories hardly provide a complete description of the complex, overdetermined spatialities inherent within these relations. Drawing upon the writings of Deleuze and Guattari, Ngai-Ling Sum (2001) has recently described such horizontal interscalar linkages as expressions of a newly formed 'rhizomatic' layer of social spatiality within the emergent configuration of global capitalism (for additional studies of the horizontal aspect of interscalar relations see, for instance, Hocking, 1999; Sum, 1997).

10. Two particularly admirable illustrations of how the production of scale can be conceptualized in this manner are Anssi Paasi's *Territories, boundaries and consciousness* (1996) and John Allen, Doreen Massey and Allan Cochrane's *Rethinking the region* (1998).

11. Drawing upon Doreen Massey's (1985) framework, Kevin Cox (1993) has usefully described this phenomenon in terms of scalar divisions of labor. According to Cox, geographical scales exist insofar as actors within an organization – for instance, a capitalist firm or the state – depend upon resources that are immobilized within a particular spatial arena in order to pursue their essential goals (see also Cox and Mair, 1991). Scalar divisions of labor emerge when different actors within an organization depend upon resources that are immobilized at divergent spatial scales in order to pursue their essential goals. Cox's work on scale divisions of labor can therefore be read as providing strategic microfoundations for Smith's (1984) more structuralist understanding of scale differentiation in terms of the interplay between competition and cooperation (see note 6 above).

12. Swyngedouw (1997) has elaborated a helpful first cut at these issues by showing how a number of key axes of capitalist regulation – the wage relation, the form of competition, monetary and financial regulation, the international configuration, and the state form – are differentiated internally among distinct spatial scales. In a neglected but extraordinarily insightful section of *Limits to capital*, David Harvey (1982: 417–24) has likewise examined the scale differentiation of a broad range of 'hierarchical arrangements', including corporations, state institutions, territorial alliances, financial

systems and urban hierarchies. On the scale differentiation of regulation, see also Collinge (1999). As discussed, Marston (2000) has argued convincingly that processes of social reproduction and consumption should also be understood in scale-differentiated terms. There are, no doubt, many additional sociospatial processes within contemporary capitalist society that are likewise differentiated by scale and that could thus also be explored through the methodological lens of scalar structuration.

13. It should be noted that this proposition is a direct corollary of proposition (3).

14. In Collinge's (1999) terms, such a situation obtains insofar as dominant scales impose the geographical hierarchies within which nodal (nondominant) scales evolve. According to Collinge's analysis, the resultant scale divisions of labor are calibrated to be 'optimal' for establishing a viable regime of accumulation. While Collinge's theorization provides a useful structuralist critique of certain voluntarist strands within regulation theory, the assumption that processes of scalar evolution directly reflect the changing historical requirements of capital accumulation is problematic. First, as the literature on path-dependency suggests, inefficient or suboptimal institutional configurations are frequently locked in due to their higher payoffs ('increasing returns') as they become more prevalent. These tendencies may also entail the entrenchment of scalar arrangements which permit accumulation to continue along pathways which are suboptimal for dominant factions of capital. Second, the selection of a dominant scale cannot be understood in purely systemic terms. As Collinge emphasizes, the search for an 'optimal' scale under capitalism is subject to a systemic 'accumulatory imperative'. It can be argued, however, that this 'imperative' is mediated through contradictory class relations and other opposing sociopolitical forces which likewise frequently generate outcomes that are suboptimal from the standpoint of capital.

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