

The social construction of scale

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Abstract: Over the last ten years, scholars in human geography have been paying increasing theoretical and empirical attention to understanding the ways in which the production of *scale* is implicated in the production of *space*. Overwhelmingly, this work reflects a social constructionist approach, which situates capitalist production (and the role of the state, capital, labor and nonstate political actors) as of central concern. What is missing from this discussion about the social construction of scale is serious attention to the relevance of social reproduction and consumption. In this article I review the important literature on scale construction and argue for enlarging our scope for understanding scale to include the complex processes of social reproduction and consumption. I base my critique on a short case study which illustrates that attention to other processes besides production and other systems of domination besides capitalism can enhance our theorizing and improve our attempts to effect real social change.

Key words: consumption, difference, gender, home, scale, social reproduction, space.

I Introduction

Since the early 1990s, human geographers with social theory interests have paid increasing attention to understanding the ways in which the production of *scale* is implicated in the production of *space*. There now exists in a number of scholarly outlets a variety of studies meant to advocate that scale is socially constructed. While I review and assess these studies in a subsequent section, there is a significant commonality among these studies that is particularly relevant to the critique I wish to advance. The commonality is that questions now driving the scholarship on scale tend to focus on capitalist production while, at best, only tacitly acknowledging and, at worst, outrightly ignoring social reproduction and consumption.

As most of the recent studies note, interest in scale in human geography is not new, nor is it confined to human geography. Indeed, in physical geography and in GIS and remote sensing, questions about scale are at the forefront. For example, physical geographers Quattrochi and Goodchild's (1997: 5) edited volume is dedicated to seeking answers 'to a host of interrelated questions, in the interests of providing a formal structure for the management and manipulation of scale'. For physical

geographers and remote sensing and GIS methodologists, scale is absolutely central to the questions they seek to address.¹ For instance, in a 1992 article, Lam and Quattrochi provide a summary of several connotations of scale used to describe geographic data issues. *Cartographic scale* is the relationship between the distance on a map to the corresponding distance 'on the ground'. *Geographic scale* refers to the spatial extent of a phenomenon or a study. *Operational scale* corresponds to the level at which relevant processes operate. Finally, scale also refers to measurement or the level of resolution, such that large-scale studies incorporate coarse resolution while small-scale studies are based upon fine resolution. Lam and Quattrochi (1992) and Quattrochi and Goodchild (1997) provide very useful overviews of how questions of scale are being addressed in physical geography and attendant methodologies such as GIS, remote sensing and even statistical analysis. Clearly, scale is central to the research agenda of the entire discipline of geography, though the approaches that are being taken are quite varied. In this article I assemble the many attempts that are currently being made to understand how scale is socially produced in order to distill an overarching coherence from the varied endeavors. I also attempt to show the strengths and weaknesses of its many applications. My ultimate aim is that a wider dialogue might be generated among geographers in general about how and why scale matters so much to our disciplinary endeavors at this point in time – and how we might enhance our theorizing about it.

What is consistent about the recent interest in scale among social theorists in geography is the commitment to a *constructionist* framework and the rejection of scale as an ontologically given category. In these recent social theoretical studies, the fundamental point being made is that scale is not necessarily a preordained hierarchical framework for ordering the world – local, regional, national and global. It is instead a contingent outcome of the tensions that exist between structural forces and the practices of human agents. Indeed, although problems of resolution and cartographic and geographic connotations of scale may inform some of the *empirical* issues that social theorists must work out in their attempts to understand scale, they are certainly not of central *theoretical* concern. Instead, social theorists' attempts to address scale focus on understanding the processes that shape and constitute social practices at different levels of analysis. In this regard, their conceptualization of scale is closest to the operational connotation of physical geographers Lam and Quattrochi (1992).

The simplest definition of scale that is given in *The dictionary of human geography* (Johnston *et al.*, 1994) is that it is a 'level of representation'. This dictionary also provides definitions of scale that derive from the spatial science preoccupations of the 1960s and 1970s. Unfortunately, no substantive definition of scale as it is used by social theorists within the discipline is given. In this article I follow Howitt (1998), who recognizes that in geography scale has been treated as possessing three facets: size, level and relation. He finds the first two treatments problematic because, alone, they oversimplify scale. Understanding scale as relational, however, enables recognition of all three facets of scale, thereby complicating the concept. Howitt uses the metaphor of a musical scale to explain his conceptualization of scale as relational. His central aim is to argue that scale should be understood '... as a factor in the construction and dynamics of geographical totalities – rather than simply as a product of geographical relations' (1998: 56). Scale, like environment, space or place, is one of the elements from which geographical totalities are built. Rather than accept scale as a naturalized category, Howitt insists that we see scale not as size (census tract, province, continent) and level (local, regional,

national) but 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. To put it more succinctly, as Erik Swyngedouw (1997: 169) has, scaled places are ‘the embodiment of social relations of empowerment and disempowerment and the arena through and in which they operate’. As geographers, then, our goal with respect to scale should be to understand how particular scales become constituted and transformed in response to social-spatial dynamics. In this article I want to argue further that scale is constituted and reconstituted around relations of capitalist production, social reproduction and consumption, and that attention to all three sets of relations is critical to understanding fully the social construction of scale.

Nearly all the recent studies I review below focus upon the power of capital, labor or the state – or some combination – as primary sites of scale construction. Although there is nothing fundamentally incorrect about attending to this triumvirate theoretically or empirically, these studies slight the other two important structural forces that shape the production of space and scale. And, while understanding the role of capitalist production is critical to understanding scale production, I want to argue that there can be and has to be more to the story, and I use patriarchy and the gendering of social relations of consumption and social reproduction to make my case.²

II Social constructionist approaches to scale

The recent spate of articles devoted to the theoretical question of the social construction of scale are mostly attempts to unravel the particulars of Henri Lefebvre’s theorizations about the production of space (Lefebvre, 1991). Lefebvre is largely responsible for the simple but powerful observation that space is a social product. Using this observation as a touchstone, a number of scholars have attempted to illuminate the ways in which Lefebvre treated the question of scale, as well as how the intricacies of the construction of scale might be illuminated through case studies. A minority of these scholars has attempted the task of abstract theory-building through close readings of Lefebvre or Marx. Both case studies and abstract theorizing have been valuable in their own ways and, taken together, they suggest that there are at least three central tenets that currently constitute our understanding of scale production. The first is that scale ‘. . . is not simply an external fact awaiting discovery but a way of framing conceptions of reality’ (Delaney and Leitner, 1997: 94–95). Or as Neil Smith (1992b: 73) put it: ‘[t]here is nothing ontologically given about the traditional division between home and locality, urban and regional, national and global scales’: rather, ‘[t]he differentiation of geographical scales establishes and is established through the geographical structure of social interactions’.³ The second observation is that the outcomes of these framings – the particular ways in which scale is constructed – are tangible and have material consequence. In other words, scale-making is not only a rhetorical practice; its consequences are inscribed in, and are the outcome of, both everyday life and macro-level social structures. Finally, the framings of scale – framings that can have both rhetorical *and* material consequences – are often contradictory and contested and are not necessarily enduring. In short, scale construction is a political process endemic to capitalism, the outcome of which is always potentially open to further transformation.

Understanding the ways in which scales are constructed appears to be very much

bound up with understanding the impacts and implications of globalization – which I take to mean the restructuring of world capitalism engendered by the economic crises of the 1970s (for a more complete discussion, see Harvey, 1990). In attempting to render the details of scale production, scholars have focused on how globalization has been both a cause and a consequence of changing state forms and practices, as well as how political groups have responded to the changing circumstances in which they find themselves. Through their attachment to globalization, these studies seek to show how different scales have been constructed by way of the structural transformations that have effected a capitalist political economy that is truly global in its scope and impact. While the developing body of scholarship on the social construction of scale is still rather small (but growing), there already appears to be a great deal of concurrence about what structural components a theory of scale would need to take into account. These components currently include the state, capital and nonstate-level political actors such as labor, political parties and political activists with an emphasis upon the interactions among them.

They also make the point, as Lynn Staeheli (1994: 388) asserts, that ‘To the extent that oppositional movements can move across scales – that is, to the extent that they can take advantage of the resources at one scale to overcome the constraints encountered at different scales in the way that more powerful actors can do – they may have greater potential for pressing their claims’.

1 Case studies of the social construction of scale

Several scholars have looked at the role of political actors, but there are two whose work is especially developed and that demonstrates how the actions of particularly well organized political groups can be seen to contain explicit understandings of the importance of scale to negotiating power relations. In his continuing work on political parties in Italy, John Agnew (1993; 1995; 1997) has shown how the collapse of the old party system during 1992–94 enabled the rhetorical and spatial reorganization of parties along lines reflecting the current fragmentation of society and the economy there. In his most recent piece on this topic, Agnew demonstrates that political parties are central players in the ‘politics of scale’ in Italy. What he means is that understandings of geography – especially the tensions that exist around national, regional and local issues and identities – have shaped the ideology and organization of the main political parties in Italy as they have reconstructed themselves in the wake of the collapse of the old party system in the early 1990s (when the old mechanisms for national integration disintegrated). The central conceptual point Agnew seeks to make through his attention to contemporary Italian politics is that political parties must be seen as central to the process of scale construction in all electoral democracies. As he writes (1997: 118): ‘Political parties organize themselves and their messages through the ways in which they divide and order space. The boundaries they draw, tentative and contingent as they may be, define the geographical scales that channel and limit their political horizons.’

Although focusing upon a different political constituency, Andrew Herod’s (1995; 1997a; 1997b) work on the International Longshoremen’s Association (and, more recently, the International Metalworkers’ Federation (1998)) complements and

reinforces the arguments about scale made by Agnew. In his more comprehensive project, Herod examines how struggles over the scale at which contract bargaining can occur have been central to shaping the new geography of the longshore industry in the USA. Beginning his history in the mid-1950s, Herod shows how the restructuring of the longshore industry over the last five decades – through technological change and spatial integration – has been met by a response from unions and employers that is acutely sensitive to the geographical diversity of industry conditions.

Tracing the differences in working conditions that exist among and between regions in the longshore industry, Herod shows how labor unions have negotiated national as well as regional and local contracts that attempt to provide the greatest protection for workers with respect to local labor conditions at the same time that they attempt to maintain important national level standards. Herod's central aim is to insist that: 1) it is not only capital that is remaking economic landscapes but it is labor as well; and 2), just as important, labor unions have understood their advantages and disadvantages in geographic terms and have attempted to manipulate scale in order to strengthen their bargaining positions.

Paul Adams examines three examples of oppositional movements to explore how actors have been able to employ telecommunications infrastructure to broadcast their grievances to a larger audience and thereby influence the balance of power in their struggle against oppression. His focus is on the 1989 student protests in China's Tiananmen Square, the mid-1980s Filipino protests against the regime of Ferdinand Marcos and the 1950s/1960s civil rights protests in the USA south. Through an analysis of these three cases, Adams (1996: 421) provides a very insightful account of the scale politics of communications by showing how political actors are able to construct their own ideas and ideologies about scale, as well as how they are able to take advantage of important communication links that enable them to overcome the constraints of their geographically anchored struggles.

Although he does not look at the central role of telecommunications as Adams does, Michael Brown (1995) shows how the case of AIDS politics in Vancouver, Canada, is an illustration of political actors exploiting local-global linkages and constructing scale in the process. Brown explores how the politics of local economic development, linked to the global restructuring of capital and the imposition of new investment patterns in Vancouver, is mediated by the politics of AIDS activists and AIDS-related activities in the neighborhood of Yaletown. He argues that in order to understand the 'new urban politics' that are involved in the construction of localities, it is necessary to examine how local groups, not typically encompassed by either the local state or the market, intervene in the production of place at the same time that they connect to other spatial scales beyond the local.

Other scholars have focused on the state to understand scale construction, specifically by examining state structures and the operations of government institutions as they act to facilitate economic production. For example, Helga Leitner (1997) examines the tensions among nation-states that have emerged around assigning roles and responsibilities to the new governing institutions that are being created through the European Union (EU). Her analysis focuses explicitly on the contemporary debates over immigration in the supranational context of the EU by carefully tracing out the different sides of the debates and how they parallel anxieties over the role of the traditional nation-state in the 'new Europe'. On one side of the debate are right-wing nationalist

parties who advocate strict immigration controls and opposition to any policies that might improve the rights of noncitizens. On the other are transnational human rights organizations that argue for strengthening policies that would enable the smooth integration of immigrants into the EU community. As Leitner shows, it is a geographically diverse, though politically consonant, group of political actors who have been able most effectively to translate their positions into EU policy. Thus, nationalist groups operating at various scales – national, regional and local – have helped to construct, at the supranational scale, an immigration framework, orchestrated through ‘a complex, multi-layered process of intergovernmental cooperation’ (Leitner, 1997: 139) across a range of nation-states. Through the opportunities provided by the emerging supranational state apparatus, stricter policies about who belongs and who does not belong to particular national communities have been effected.

In another case study that looks at political action around defense investment by the state, Byron Miller, in two related pieces, shows how scale is critically important to the strategies of both social movements and state actors. In the first piece, Miller (1994) examines the way in which the peace movement in Cambridge, Massachusetts, exploited different political opportunity structures at the local and central state level in order to assert their anti-nuclear agenda. He points out (1994: 397) that:

Even though coalitions of groups and classes controlling local states do not affect central state policies directly, they can affect political mobilization aimed at the central state. Conversely, central state politics and actions may indirectly affect political mobilization aimed at local states. Interactions among local states, moreover, may play a significant role in the diffusion of locally focused political mobilizations.

In short, state-generated opportunities for mobilization (political opportunity structures) may or may not exist at a particular time at different scales of the state – national or local. When one scale is relatively closed, social movements may approach the scale that is more open. This is indeed what occurred in the Cambridge, Massachusetts, anti-nuclear weapons movement, which was prompted by grievances directed at the national state but was organized as a local movement where grievances at the symbolic level were relatively widespread. Eventually, however, both the local and the national state political opportunity structure became closed off as the movement advanced from symbolic successes to ones that could have had significant economic impacts on a wide portion of the population and firms in the Cambridge area, as well as in many other parts of the USA.

In a second and highly related piece, Miller (1997) shows how different state actors in Massachusetts – including federal congressmen, the governor and local politicians – represented defense spending to their constituencies and thus affected the construction of grievances. State actors represented the economic recovery of Massachusetts in the 1980s as predicated upon the actions of local actors, not federal defense spending. Anti-nuclear activists responded to this representation by directing their organizing efforts at local constituencies to challenge the arms race of the 1980s as it was stimulated by local firms. Miller’s conceptual argument in both pieces is premised on the need to recognize that social movements have multiple scales of opportunity for mobilization, as do institutional political actors. The state, at different scales, enables or constrains these opportunities based on the particulars of the historical moment in which the social movements emerge.

Neil Brenner has recently published an extended theoretical piece on the social

production of scale, which I will examine in the next subsection. In this section I want to turn to the specifics of his case study on urban and regional planning policies in the Federal Republic of Germany (FRG), which is a very clearly articulated and theoretically sophisticated study of scale construction by the state (Brenner, 1997a). Brenner's aim is to use the case study to ground the Lefebvrian thesis (1976a; 1976b; 1977; 1978) that the capitalist state is preoccupied with the social production of space and that the state itself is a dynamic sociospatial configuration. His theoretical starting point is that globalization and state territorial restructuring are closely intertwined. He looks at 30 years of alterations in FRG urban and regional planning policy as a series of changing *spatial tactics* aimed at changing *spatial targets*. Spatial tactics are the '... techniques used by the state to regulate, produce and reproduce configurations of social space adequate to the continued accumulation of capital' (Brenner, 1997a: 280). Spatial targets are '... the local, regional and/or national territorial matrices within which state intervention is to occur' (1997a: 280). By examining changes in the spatial tactics (regional and urban planning policy) of the state over the three decades between 1960 and 1990, Brenner is able to show dramatic changes in the capacities of spatial targets (regions and cities), which he interprets as an illustration of how the scale of capitalist sociospatial organization is periodically reconfigured.

Since the 1960s, FRG regional and urban planning policy has been rearticulated from a Fordist ideology to a post-Fordist one. In the former regime, the state attempted to smooth out the differences among and between regions and cities through the redistribution of resources by an administratively primary central state. In the latter, the state has come to tolerate – perhaps even encourage – a high level of uneven geographical development as cities and regions participate in intensified competition over capital accumulation opportunities. In the FRG, new subnational (regional and urban) as well as supranational (local and regional political-economic linkages with the EU) territorial scales are emerging and becoming differently articulated with newly configured national and global state forms. Most importantly, instead of conceding simplistically that the nation-state is in decline, Brenner insists, *à la* Lefebvre, that the determinate spatial scale of the state is a product of a particular historical geographical moment of capitalist development. Thus, it is a mistake to see the nation-state as the primary trans-historical and geographical territorial form.

2 Theory-building: social construction of scale by capital and the state

While scale has been used as a conceptual framework, very few scholars have attempted to do any abstract theory-building around it. In this section I look primarily at two scholars whose work has been extensively and explicitly theoretical in its orientation. The work by Neil Brenner reviewed here treats the theoretical implications of the case study presented above and is very much orientated toward explicating the role of the state in assisting and leading the capitalist production of space. Neil Smith's work, scattered across a number of publication outlets over a decade, demonstrates the evolution of his attempts to lay out a theory of scale production which incorporates not only the role of state and capital, but also agency as it is articulated through social and cultural practices. I also attend to work by Peter Taylor and Kevin Cox, both of whom have also attempted theory-building, though to a much lesser extent than either

Brenner or Smith. I end this section with Smith's work, since his most recent formulations acknowledge the importance of other forces besides capitalist production relations in attempts to theorize the construction of scale.

During the last decade or so, Kevin Cox has produced a series of attempts to conceptualize how the production of localities is linked to the production of scales (Cox and Mair, 1989; Cox, 1995; 1996; 1998b). His most recent piece, appearing in *Political Geography* and attended by a set of commentaries, is the most fully developed (1998b). In this and in previous publications, Cox is at pains to use the politics of scale as a way of understanding local politics, which is also an entry into thinking about the politics of space, more generally. Localities, as particular sorts of spaces, can be distinguished in two fundamental ways: as spaces of dependence and as spaces of engagement – though it is important to recognize the contingency inherent in both:

Spaces of dependence are defined by those more-or-less localized social relations upon which we depend for the realization of essential interests and for which there is no substitute elsewhere; they define place-specific conditions for our material well being and our sense of significance. These spaces are inserted in broader sets of relationships of a more global character and these constantly threaten to undermine or dissolve them . . . In so doing they construct a different form of space which I call here a space of engagement: the space in which the politics of securing a space of dependence unfolds (Cox, 1998a: 2).

The tension that exists between the spaces of dependence and engagement creates a politics of scale in which some localities are more or less engaged in networks of association beyond their immediate boundaries than are others. These networks of association can stretch across scales and, for Cox (1998a: 2), ' . . . signify unevenness in the penetration of areal forms'. Cox's aim is to use the politics of scale to enable a more complex understanding of the locality and local politics. Through a series of case studies he explores how locally situated agents, through networks of association, construct spaces of engagement. As with many of the case studies reviewed in previous sections, Cox attempts to demonstrate scale constructions by social agents, though he uses different and more conceptually complicated categories – spaces of dependence, spaces of engagement, networks of association – to comprehend these constructions.

Cox's critics have found his theorizations lacking in a number of ways, which I will only briefly address here. Katherine Jones (1998) questions Cox's construction of scale as an ontological category. Dennis Judd is concerned to point out that Cox underestimates the power of the state to construct scales, while Michael Peter Smith contends that Cox fails fully to conceptualize the global in his scale constructions (Judd, 1998; Smith, 1998). For my purposes, it is unimportant whether any of these are valid criticisms. The more important point – and to differing extents the point missed by all three reviewers – is that Cox's aim is not to construct a theory of scale but rather to understand local politics. What he offers is a conceptualization of local politics that recognizes its embeddedness in processes occurring at higher and lower levels of abstraction and reality. The relevance of this conceptualization to the questions about scale raised in this article is that, in attempting to understand local politics, Cox has also constructed a provocative framework for understanding the local scale.

As described in the previous section, Neil Brenner's work is an attempt to apply Lefebvre's theoretical formulations about scale to questions about the role of the state that occupy political geography and political theory more generally. Brenner depends to a great extent not upon the more frequently cited *The production of space* (1991) but upon Lefebvre's four-volume writings about the state (1976a; 1976b; 1977; 1978).⁴ His

work provides insightful interpretations of Lefebvre, which are worth describing at some length for Anglophone audiences since none of these volumes have been translated into English. Lefebvre's approach to understanding the state and capitalism is Marxist and he brings unique interpretations to his analyses by emphasizing and explicating the spatial implications of twentieth-century capitalist political and economic development. Invoking Lefebvre's thorough and thoughtful exegeses of the capitalist state, Brenner argues that the operations of the state at different scales are a response to and a result of political and economic restructuring – most vividly illustrated via the political and economic restructuring that is a cause and consequence of globalization.

Brenner's argument focuses very much upon recognizing globalization as a complex process largely revolving around state interventions, which have identifiable and profound territorial implications. He believes it is the role of the state to organize the spatio-temporal bases of the economic system at all levels of its operation. The globalization of capital, which has occurred over the last several decades, has required a significant reorganization of the world-economy, which has been accomplished through the *rescaling* of state territorial power. Most importantly, globalization must be conceptualized as '... a reconfiguration and re-territorialization of superimposed spatial scales, and not as a mono-directional implosion of global forces into sub-global realms, the relation between global, state-level and urban-regional processes can no longer be conceived as one that obtains among mutually exclusive levels of analysis or forces' (Brenner, 1997b: 159). For Lefebvre, the globalization of capital and the rescaling of state territorial power go hand in hand, facilitated by as well as driving urbanization. Thus urbanization is as much a component of globalization as the emergence of suprastate forms like the EU or NAFTA. Scales are not unilinearly ordered – with the global theoretically and empirically superior to the local – but rather they interpenetrate and are superimposed through a 'scaffolding of spatial scales'. Brenner (1997b: 145) recognizes this scaffolding of scales as constituting a 'hierarchical stratified morphology' and argues, '... from this perspective, the historical geography of capitalism should be understood as a multi-layered scaffolding of intertwined, co-evolving spatial scales upon which historically specific interlinkages between processes of capital accumulation, forms of state territorial organization and patterns of urbanization have been crystallized'.

Brenner interprets Lefebvre as conceptualizing the state itself as a sociospatial configuration engaged in the production of 'matrices of social space' that enable the extension of power and control and enabling the circulation of capital. Indeed, Lefebvre sees the central role of the state to organize and maintain a co-ordinated scaffolding of places, functions and institutions, '... a task that entails at once *biological reproduction, the reproduction of the labor force, the reproduction of the means of production and the reproduction of the social relations of production and domination*' (as cited in Brenner, 1997b: 149, emphasis added). Additionally, Brenner translates Lefebvre as recognizing that that multiplicity of the scales that the state produces and maintains should also be seen as an opportunity for progressive political organizing against capital and the state.

Although Brenner does not develop this application of Lefebvre's theory of scale to the FRG, the fact that Lefebvre points to the importance of social reproduction in understanding the role of the state in contemporary capitalism should not be ignored. Lefebvre is clearly recognizing that it is not only the means of *economic production* that

must be theorized in order to understand the state's construction of space and scale, *social reproduction* should also be central to our theorizing. Secondly, the multiplicity of scale involved in the sociospatial organization of capitalism also enables multiple opportunities for resistance or opportunities to create linkages across and among scales. Neil Smith identifies this tension in sociospatial organization as the 'politics of scale', where the territorial requirements of capitalism articulate extensions of power at the same time that these manifold scales provide openings to resist that power. The chief theoretical difference between Brenner and Smith is that Brenner emphasizes the state mode of production in his analysis of scale and sociospatial organization, whereas Smith, to whom I turn next, looks at the political economy of capitalism and the scales that it makes.

The most thorough-going of the attempts to theorize scale have come from Neil Smith, who first approached the question in *Uneven development* (1984) and has gone on to refine and revisit the issue of scale in several more recent pieces. Folded into about a dozen pages of the book-length discussion of the social production of space, Smith provides a sketch of a theory of scale that is a central plank in his theory of uneven development. This sketch draws upon Peter Taylor's (1982; 1984; 1987) adaptation of Wallerstein's (1975) division of world space into three realms and it is therefore useful to examine Taylor briefly here. His 'materialist framework for political geography' provides a well-spring for nearly all the work on scale in geography that has been produced since the early 1980s (for recent comments on Taylor's, 1982, piece, see also Dodds, 1997; Smith, 1997; Taylor, 1997).

Taylor had a very specific aim when outlining his materialist framework in the early 1980s. It was to direct the traditional focus of political geography away from the state and toward the political economy of capital accumulation. Scale is the vehicle for this move and Taylor (1982) calls his framework 'a political economy of scale'. Drawing fundamentally from world-systems theory, he provides a more explicitly spatial articulation of Wallerstein's division of the world-economy into three realms. He points to the world-economy scale – or the scale of 'reality', the scale that 'really matters' – as the starting point for analysis because it is at the global level that capital accumulation is ultimately organized. His other scales include the urban scale – or the scale of 'experience' – where the individual encounters particular manifestations of the world-economy and the scale that intervenes between world-economy and the urban, the nation-state scale – or the scale of 'ideology' – because of the ideological nature of nationalism and state formation. The important dynamic motivating the world-economy scale (the scale of reality) is the accumulation process as it is expressed through growth cycles that affect the 'changing pattern of the spatial division of labor and the changing pattern of political power' (Taylor, 1982: 26). The nation-state scale (the scale of ideology) is the result of a fragmented capitalist world market predicated on the ideological constructions of statism and nationalism. The urban scale (the scale of experience) is orientated around the daily urban system and the particular ways in which accumulation (and investment and disinvestment) are manifested in places and affect how the inhabitants live out their daily lives.

As these very brief 'captions' illustrate, Taylor's early and insightful attention to scale is largely descriptive, providing historical background on the emergence and constitution of the three scales. He provides little detail as to how they are actually produced or how they shape and transform each other.⁵ In a recent piece, however, Taylor (1999)

performs an interesting move by both downplaying his previous commitment to the three scales at the same time that he extends them by dissolving them into 'space-place tensions'. In this new formulation, the power of scale to explain political geography is backgrounded as space and place are foregrounded, becoming 'the fundamental concepts for answering where and what questions' (1999: 1). Using nation-state and home-household as illustrations of space-place tensions, Taylor shows how setting these two terms in binary opposition enables us to recognize different scales as at once *both* space and place, thus highlighting them as politically ambiguous and suggesting their progressive possibilities. Taylor intends both nation-state and home-household to represent different scales of abstraction as well as different political scales. Within the context of space-place tension, scale is a matrix which helps to reveal the ways in which sites as apparently different as the urban and the global can impinge upon each other and be both space and place simultaneously. Most importantly for the critique I am making, Taylor points to the significant role of consumption in place and space-making. I will return to his discussion of this point in the final section. For the moment, it is necessary to proceed with the discussion of scale, recognizing that nearly all the authors in this review have tried to enlarge Taylor's earlier 'materialist framework for political geography' in provocative and insightful ways.

Whereas Taylor identifies his three categories as the world-economy, the nation-state and the urban, Smith nominally alters the first category from 'world-economy' to 'global space' but maintains the other two unchanged. And while he applauds Taylor's materialist approach to describing scale, he moves beyond it by attempting to develop conceptually and empirically the dimensions and functions of the three categories. Like Taylor, Smith argues that although historically given before the emergence of capitalism, each of the scales is transformed by capitalist processes such that each is part of a systematic hierarchy that maintains and facilitates the different processes involved in the accumulation and circulation of capital in a fully integrated space-economy. Smith uses the dialectic of equalization and differentiation to describe how each of the scales is produced in practice.

The urban scale is a manifestation of the centralization of productive capital. The dialectic of equalization and differentiation works at the urban scale in such a way that the geographical unity of the labor market affects the equalization of urban space. The internal differentiation of urban space is the result of divisions between productive capital and other land uses (such as residential and recreational), mediated by the ground-rent system. Ultimately, the differentiation process dominates in the development of the urban scales as the ground-rent system sorts competing land uses with the state standing by to rationalize as well as provide for collective consumption facilities such as water supply, roads, etc.

Smith argues that while capitalist production of the urban scale is largely the result of differentiation, the production of the global scale is a product of the tendency of the capitalist system toward equalization. This equalization is accomplished through the universalization of the wage-labor relation through both formal and real spatial integration into a global system. At the same time that the wage-labor relation is being deployed throughout the globe in a process of equalization, however, geographical differentiation comes into play by way of the differential value of labor power which results in an international division of labor.

In attending to the production of the nation-state scale, Smith (1984: 142) argues:

If, respectively, the urban and the global scales represent the consummate geographical expression of the contradictory tendencies toward differentiation and equalization, the scale of the nation-state is less a direct product of this contradiction. The impetus for the production of this scale comes from the circulation of capital, more specifically from the dictates of the competition between different capitals in the world market.

The traditional role of the nation-state scale in capitalism has been to protect the collective interests of one nation's capital from other national capitals, to defend capital militarily and to regulate and guarantee the maintenance of the working class. While the emergence and growing strength of international institutions such as the World Bank and the World Trade Organization may obviate the economic need for the nation-state, Smith argues that a political need for the nation-state persists to maintain control over the working class, which is still nationally and regionally fractured.

The regional scale is treated in *Uneven development* (Smith, 1984) as both a subnational as well as a supranational space differentiated largely according to the territorial division of labor. At the level of separate nation-states, the regional concentration of economic activities is a result of capital's tendency toward spatial concentration in terms of individual capitalists as well as particular economic sectors:

... the crystallization of distinct geographical regions at the national scale has the same function as the global division between the developed and the underdeveloped world. Both provide geographically fixed (relatively) sources of wage labor, one at the international scale and the other under the more direct control of the national capital (Smith, 1984: 145).

Most importantly, it is wage rate differentials that drive the process of the concentration of capital in particular subnational and supranational regions; less important, though not insignificant, is the existing pattern of labor skills. In short, the organization of capital into different sectoral divisions – research and development, manufacturing, corporate administration and management – will result in geographical separation. For example, the research and development activities of the computer industry can be concentrated in locations where technically trained laborers abound, whereas manufacturing of chips and assembly of computers can occur in regions with an abundance of unskilled labor. Whereas the production of regional spaces can occur within both the nation-state and the global scale, Smith (1984: 147) asks, particularly in light of what he sees as the 'fossilization' of nation-state boundaries, '... whether differentiation of geographical space at the level of separate regions will remain a subset of the national scale, or whether, as seems more likely, the division of global space into regions will be more directly determined at the international scale as part of the new international division of labor'.

Smith (1984: 147, emphasis in original) goes on to note that:

... the drive toward universality under capitalism brings only a limited equalization of levels and conditions of development. Capital produces distinct spatial scales – absolute spaces – within which the drive toward equalization is concentrated. But it can do this only by an acute differentiation and continued redifferentiation of relative space, both between and within scales. The scales themselves are not fixed but develop (growing pains and all) within the development of capital itself. And they are not impervious; the urban scales are products of world capital and continue to be shaped by it. But the necessity of discrete scales and of their internal differentiation *is* fixed.

In a series of articles that have appeared in the 14 years since the publication of *Uneven development*, Smith has elaborated upon and refined his theorizations about the production of scale. While not attempting to articulate a more fully elaborated grand

theory, Smith has very carefully addressed his attention to the individual levels within his larger theory of scale.

In a piece co-authored with Ward Dennis and published in *Economic Geography* in 1987, Smith explores more carefully the regional scale, outlining in greater empirical detail what regions are and how they are produced. Arguing that the region is the resolution of the opposing forces of equalization and differentiation, Smith and Dennis, through a case study of the old industrial core of the USA, develop 'a more rigorous language' for describing the rationale for the constitution of regions. Using three levels of abstraction for conceptualizing regions, Smith and Dennis first identify them as absolute economic spaces; and more concretely as 'geographical platforms of production'. Importantly, these production platforms are both stable and unstable, fixed and fluid, which means that although they are territorially fixed at any one time, they are also continually changing in either the direction of decline or growth.

Finally, regions are the outcome of a geographical compromise in the inherent anarchy of capitalism manifested in the forces of competition and co-operation among producers: 'Regional difference reduces internal competition among producers in favor of cooperation, while it increases external competition at the expense of cooperation' (1987: 168). Although Smith and Dennis insist that regions are made within the broad and particular context of capitalism, including both political-economic *and* social relations, it is not until the publications of the 1990s that Smith begins to articulate how these social relations are implicated in the production of scale (see also Paasi, 1991, for an alternative view on the production of regions).

In his analysis of the new geography of Europe, Smith (1995) examines the role the nation-state plays in co-ordinating the competitive and co-operative aspects of different national capitals. The historical boundaries of the many nation-states of Europe in the last several decades have come to be seen as hampering both competition and opportunities for co-operation among various national capitals. The result is the emergence of a new suprastate that must attempt to co-ordinate and facilitate economic integration among them. In this moment, a new scale of political and economic organization is being created and creating effects which resonate through social and cultural groups whose boundaries were synonymous with, and lend integrity to, the historically established nation-state. Indeed, the initial establishment of the nation-state in Europe was very much about fostering and creating these identities in order to establish its political legitimacy. Thus the existing scale of the nation-state resulted in a clear geographical demarcation of the compromises that had been struck between competition and co-operation among various capitals. With the more intense globalization of capital that has occurred over the last several decades, these geographical boundaries, which also contain social and cultural identities, may in some cases have to be remade in order to resolve a very different set of issues around competition and co-operation of more globalized capitals. The scales that facilitated the less globalized capital of an earlier period are no longer adequate to the contemporary one:

Far from neutral and fixed, therefore, geographical scales are the products of economic, political and social activities and relationships; as such, they are as changeable as those relationships themselves. At the very least, different kinds of society produce different kinds of geographical scale for containing and enabling particular forms of social interaction (Smith, 1995: 60-61).

In the remainder of his more recent writings about scale, Smith has attempted to continue to recognize scale as the geographical resolution of the contradictory processes of a capitalist economic system. In a 1992a piece, Smith pushes into new theoretical terrain by attempting to move beyond capital and political-economic structures to argue for the incorporation of subjectivity into a theory of scale construction. Addressing the increasing – and often rather careless – attention being paid to space in social theory, Smith identifies the negotiation between difference and different subject positions as one of the central challenges of postmodernism. He suggests that a theory of the politics of scale can help to address this challenge because scale is the main axis around which *geographical* difference is organized. Rather than yield to difference as an individual-level construction, Smith insists upon materially anchoring difference and the subject through a theory of scale where positionality is the product of contest and negotiation around socially demarcated boundaries: boundaries that are established at a particular scale and that may be permeable or not. Once identity is seen as being dependent upon the scale at which it is established ‘. . . the question of who is included and who includes themselves as “black” [for example] can be recast as a question of the socially constructed scale at which a black social and political identity is established’ (1992a: 74).

Smith enlarges upon these arguments about difference and links them more carefully back to his theorizations about the construction of the scale in three related pieces about homelessness (1992b; 1993; 1996). These pieces very deliberately link the production of the scale of the body, the urban and the nation-state to processes of political and economic globalization. Although he treats several scales in these pieces, it is the level of the urban where most of his new insights about scale are articulated. Smith demonstrates that the scale construction of the urban is perhaps the most intense site of political struggle because this is where the processes of capitalist competition and co-operation play themselves out in ways that have often immediate and palpable impacts upon different social groups. It is also in this set of pieces that Smith appreciates the possibilities for social groups to create their own politics of scale in order to resist capital-centered scale constructions. Indeed, he advocates the possibility of ‘jumping scales’, or moving to a wider geographical field, in order to counter the impacts of capitalism as they are played out in everyday life.

Each of the pieces by Smith reviewed here are important additions – and sometimes correctives – to his theory of scale first advanced in 1984 in *Uneven development*. Taken together they comprise a theory of scale more thoroughly elaborated and more explicitly attentive to cultural and social structures, as well as political and economic ones. Over the years, Smith has come to acknowledge that additional scales exist below the level of the urban, including the home and the body. He has also provided more detail as to how scale construction is accomplished by the nation-state and capital.

Most important for my purposes, Smith acknowledges that the relations of *social reproduction* (and their confrontation with gender systems and patriarchy) are as important as capitalist *economic production* to understanding the politics of scale. And, although he has yet to follow up in any substantive way on his conceptualization of the home as ‘established by units of social reproduction and . . . internally differentiated primarily according to relations of gender construction and social reproduction’ (Smith, 1992b: 75), he identifies the home as a socially produced scale – a scale that is thoroughly implicated in wider social, political and economic processes.

In nearly all the work I have reviewed thus far, attempts to understand the social construction of scale have highlighted the social relations of production as central to theorizing. What is implicit – but still highly significant when read differently – in all these pieces is that relations of social reproduction and consumption also play a theoretically central role in the social construction of scale. 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. In the next section I attempt to demonstrate how current social theoretical writing about the processes of social reproduction and consumption must be incorporated into social theoretical accounts of scale construction. I do this through a brief examination of my own work on nineteenth-century American domestic feminism. I focus on the scale of the household, as it is the site where the interactions among the relations of production, social reproduction and consumption have received the most thorough scholarly attention.

III Social reproduction, consumption and the social construction of scale

Social reproduction entails both the reproduction of the social relations that maintain capitalism as well as the reproduction of the material bases upon which social life is premised (Katz and Monk, 1993). Marx conceptualized social reproduction as implicated in both the relations of production – such as between worker and owner of the means of production within capitalism, or between master and slave within slavery, for example – and the forces of production – which is labor power as well as its instruments and objects. The material basis of society is also implicated in social reproduction and, by this term, Marxist and other theorists, particularly feminists, mean the social relations, objects and instruments that enable the maintenance of everyday life within capitalism.

Within contemporary capitalism in the core countries of the world, social reproduction of the material bases of society involves not only the large-scale physical infrastructure of capitalism, such as the delivery of services and the building of schools and roads, but the small-scale social, physical, cultural and emotional infrastructure of the household where labor power is reproduced on a daily basis. The social relations of the household are not entirely mediated by capitalism, however. For instance, the gender relations that inform most heterosexual households and that are constituted usually through marriage and the family are also important mediators (which is not to say that gender relations are not also important mediators in the workplace or that other relations such as those based on age or sexuality are not relevant). I am including gender relations under the larger system of patriarchy, which I take to mean the unequal distribution of power and resources in society based on sex and gender. In the household, capitalism is interlarded with patriarchy directly and indirectly, shaping social relations in large and small ways – ways that are theoretically and empirically central to our understanding of the production of scale but which have yet to be explicitly articulated.

In addition to the household as a site of social reproduction, it is also necessary to recognize this scale as one where capitalist consumption practices are also entrained. The household, as the site of micro-level social processes, is an especially complex one

in that it involves not only relations of social reproduction, biological reproduction and consumption, but in some cases it may also include relations of economic production, where the home is both a paid and unpaid work space and a living space.

Feminist theorists have been in the forefront of explicating the complexities of the home as a site of social reproduction, drawing out its connection to economic production outside of the home, the gender system that maintains and enables social reproduction, and the way in which consumption practices are gendered as well as how they crosscut social reproduction. For the purposes of my argument, it is important to note that the separation of work and home that accompanied capitalist industrialization and the cultural ideals and practices that emerged as part of this separation have been enacted along class and gender, as well as sexuality, race, ethnicity and locational axes. Women, through their social roles as wives, mothers and managers of the household, participate in the maintenance as well as (at times) the alteration of the cultural systems that reinforce and require these roles. As Cindi Katz (1993: 94) describes it:

The work of reproduction, which includes the production, provision and preparation of the means of existence; the production, sustenance and socialization of children; and the production and exchange of social knowledge, is tied inextricably to the work of production and the social relations of production and reproduction that underlie it . . . Webs of social power relations are implicated in the particular constellations by which the work of production and reproduction are carried out at historically and geographically specific junctures. Within households, for example, there is a particular balance between men and women in carrying out this work. This balance, as well as the social contract that supports it, differs between and among classes, ethnic groups, nations and individuals.

An aspect of social reproduction that needs further explication is the role that consumption plays in identity formation. Feminist theorist Victoria de Grazia contends that, beginning in the eighteenth century and accelerating in the nineteenth, the middle class used consumption as a way of constituting its identity. As she writes: ‘. . . the making of nineteenth century class society was not only about transformations in the relations of people to the means of production but also about their massively changing relations to systems of commodity exchange and styles of consumption’ (1996: 18). De Grazia argues for more work to be done on developing a notion of the bourgeois mode of consumption as a counterpart to the bourgeois mode of production. She cites evidence from France and England that suggests that by the mid-nineteenth century ‘. . . the bourgeoisie was transformed from a purchasing class – or a group merely provisioning for its needs – into a consuming class that constituted its identity through a shared pattern of acquiring goods and a common structure of taste’ (1996: 18). De Grazia describes this bourgeois mode of consumption as enduring and effecting a pyramidal social stratification of European society through at least the great depression and perhaps into the 1950s and 1960s. An important point de Grazia and other feminist theorists make is that the development of a bourgeois mode of consumption was predicated upon women as heads of household: ‘To make a home in the bourgeois manner, female heads of household not only performed tasks of nurturance and sociability but also spent money for food, clothing, and furnishings, both to provide for their own establishment and to set up their adult children’ (de Grazia, 1996: 9). Theorists of consumption insist that industrialization, urbanization and the growth of the middle class’s disposable income enabled a situation in which ‘. . . goods came to represent and even constitute people, groups and institutions in a new way. That is, class, gender, nation, and even self were constructed through the acquisition and use of

goods' (Auslander, 1996: 81). The scale of the household, it can be argued, is also constituted in this way.

Recently I have become interested in the ways in which late nineteenth and early twentieth-century USA urban middle-class women constructed a politics of scale through their roles as mothers and housewives – identities that were (and still are) widely implicated in the practices of social reproduction and consumption. Using 1870 as a starting point and ending in the 1920s, I examine how women used or constructed scale in negotiating new and extant cultural ideas about their proper 'place' in social life. My empirical focus is on a number of women's movements and popular domestic practices that came to redefine the gender content of public and private life by advocating explicit female control over childbearing and the household, as well as municipal, state and federal government affairs, including organizing for the franchise and opposing the impending first world war. These movements and social practices revolved around social reproduction and consumption processes and embodied an important transformation in middle-class women's political identities which, though based on culturally acceptable notions of femininity, were amplified to justify new, more encompassing identities as 'female citizens'. Eventually, greater political empowerment proceeded from the reconstitution and reclamation of the social geography of daily life. A discourse about women as 'female citizens' operated among and between scales from the household out to the globe and provided these subjects with a consciousness that enabled a particular negotiation of patriarchal subordination and began a gender transformation of the public sphere through a reconstitution of the private sphere of the home. In short, the home was utilized as a scale of social and political identity formation that eventually enabled American middle-class urban women to extend their influence beyond the home to other scales of social life, enabling them to influence issues of production, social reproduction and consumption in the process.

It is important to recognize that the turn of the nineteenth century was a period of substantial economic, political and spatial transformation as new social – gender, race, class – relations were being wrought around an emergent form of mature industrial corporate capitalism. In the woman's movement and its related strands – including voluntary motherhood, scientific domestic management, later known as home economics, municipal housekeeping, the suffrage movement and the peace movement – American women, largely though not always exclusively from the middle class, utilized a number of spatial scales as sites of engagement with some of the structural opportunities that a transforming society and culture presented to them. The contours of this complex period of American women's history have already been drawn by feminist historians in studies ranging from birth control and women's sexuality (Gordon, 1977; Smith-Rosenberg, 1985), to illuminating treatments of women's clubs (Blair, 1980; Flanagan, 1990), suffrage (Kraditor, 1971; Buhle & Buhle 1978), and the international peace movement (Greenwald, 1980). These histories reveal a broad cultural consensus about the proper roles of men and women and public and private life. Ideally, men and women occupied separate, naturally ordained, nonoverlapping spheres of influence and operation: the public one men's and the private women's. In reality, however, while bourgeois patriarchal ideology constructed a role for women in the private sphere, the two spheres tended more to overlap than to exist in isolation (Ryan, 1990). In fact, a women's culture, based upon a female consciousness,

established metaphorical and literal spaces for women that undermined the artificial distinction between the public and the private at the same time that it seriously weakened much of the dominant hegemony, both capitalist and patriarchal, that naturalized the existence of the two spheres. The spaces, inscribed and constituted by a separate women's consciousness, existed at multiple scales, but the home provides the most compelling example as it was the site from which other scales were addressed and occupied.

Invoking the emerging scientific principles of domestic management, turn-of-the-century American urban middle-class women adopted new conceptualizations of the home and the household. Guidebooks, pamphlets, magazines and full-length treatises circulated widely admonishing women as household managers to new efficiency, economy, sanitation and nutritional standards that required organizational and mechanical transformations in all the rooms of the home, but especially the kitchen. While popular publications on domestic management were a well established part of nineteenth-century women's culture – as Catharine Beecher's *A treatise on domestic economy* first published in 1841 and reprinted every year until 1856 testifies – the turn-of-the-century publications were markedly different. The two primary points of departure revolved around the wide embrace of Frederick W. Taylor's principles of scientific management as applied to domestic work, and expert counsel urging the adoption of economy, efficiency and sanitary standards of housekeeping. While the former involved structuring spaces to reduce wasted time and motion in performing household tasks, the latter in large part depended upon the adoption of new practices – often hygienic and nutritional – as well as the introduction of new domestic technologies from furnace, heating and lighting systems, to refrigerators, stoves and washing machines.

Much of the influence for both these approaches came from industrialization and technological advancements, as well as the emerging trend toward the municipal provision of services. Increasingly women came to regard the home as a sort of small-scale manufacturing site with directly delivered utilities and new technologies and products reducing the need for live-in servants. These innovations had the impact of transforming women's roles within the household, as they came to take more of a direct responsibility for housekeeping and, in the process, saw themselves as professional domestic managers.

An especially influential individual in encouraging women to apply efficiency, economy and laboratory standards of cleanliness to a more complicated housekeeping was Ellen Richards. Trained at MIT as a chemist – and the first woman to be admitted there – she earned the contemporary equivalent of a PhD, though one was never granted to her. Active in the life of the MIT chemistry department as a laboratory instructor, Richards increasingly turned her attention to chemistry's domestic applications (1881; 1887; 1899; 1901; 1905; see also Yost, 1943; Hunt, 1980), advocating a new type of housekeeping that was a practical response to scientific discoveries and technological advancements.⁶

Significant, though not as influential as Richards, was Christine Frederick, who produced popular texts on scientific housekeeping and home management. Frederick, National Secretary of the Associated Clubs of Domestic Science, was best known for her application of the practices of industrial efficiency to the home. The title of her first book, *The new housekeeping: efficiency studies in home management* (1913), as well as a later

publication, *Household engineering* (1919), where Frederick used Frank Gilbreth, author of *Primer of scientific management* (1914) as a consultant, illustrates her sense of the connections between industrial efficiency and domestic efficiency. In addition to book-length treatises by Frederick, Richards, and others, manuals, pamphlets and popular magazines, like *The Homemaker*, the *American Kitchen Magazine* and *Ladies Home Journal*, circulated widely during the period.

Under the influence of scientific housekeeping texts, the vocabulary of female household arts began to be transformed to a lexicon of science as women came to be reconstructed as domestic professionals. The middle-class home was physically restructured and housekeeping was heavily influenced by new practices. The role of wife/mother/housekeeper increasingly became modeled upon the technical and managerial skills that were emerging under the corporate forms of industrialization. More interesting, however, is the fact that these texts also contained an explicitly political vocabulary that reconditioned the relationship between private and public/male and female spheres.

At one level, late nineteenth-century domestic management texts offered sensible advice in clear and practical language. Women were instructed about the whole range of household chores, from the proper storage of food and cleaning of furnaces to the most efficient – that is time and motion saving – way to arrange the new kitchen. This pragmatic prose, however, was subscripted with a political grammar that constructed women as active players within the context of a developing democracy. The politics of the new domestic spaces – and women's roles in reconfiguring them – was deployed in at least three separate but overlapping ways. The first was through a transformation in the traditional constructions of citizenship. The second and third focused on directly linking the home to the wider community *and* reconceptualizing the home not as a private space, but as a unique form of public space.

References to citizenship and women's role as citizens appear often in the domestic management texts. In addition to the ubiquitous bourgeois didacticism about the links between better homes, better citizens and better government, alternative social constructions of a 'female citizen' were formulated. Ellen Richards called the homemaker: 'a productive citizen of the state, not a social debtor'. Importantly, this new form of citizenship was predicated upon reorganizing power, status and interest within the home and projecting it outward to effect similar reorganization within the wider urban environment (Blair, 1980; Baker, 1984; Flanagan, 1990). The texts thus reflected a notion of citizenship that revolved around women's *right* to negotiate the deployment of a particularly female construction of home and community and their *responsibility* to be active in shaping both.

Related to notions of citizenship was an explicit linking of the home to the wider community. Indeed, the prevailing conviction was that an efficient, standardized and sanitary home would lessen the injurious impacts of urban growth and change on society. Thus, renovating or reorganizing all the rooms of the home – or building completely new ones – to incorporate the new standards and technologies of domestic science would create a new space, the positive impact of which would resonate, household after household, throughout the community.

In the same way that the domestic management texts specifically connected home and community, they also, quite deliberately, acknowledged the interplay of private and public life and, in doing so, relied upon their new version of citizenship to justify

their role within these conjoined spheres. The home (and homemaking) was seen not as 'a private undertaking, but as a public function' (Pattison, 1915). At the practical level, the private and the public became linked through the interaction of sound domestic management and responsible municipal housekeeping. At the political level, private and public were conjoined around the belief that private behaviors had linear repercussions on the operations of the public sphere and that 'home, the miniature world – [is] the new democracy' (Pattison, 1915).⁷

Nineteenth-century American urban middle-class women were clearly active agents in the social construction of the scale of the home, where the relations of production and social reproduction converged and shaped access to social power and resources. The nineteenth-century home was unquestionably a complex geographical structure of social practices and political and economic processes shaped by gender, class and ethnic systems as well as by location.

Erik Swyngedouw (1997: 169) writes:

Geographical configurations as a set of interacting and nested scales (the 'gestalt of scale') become produced as temporary stand-offs in a perpetual transformative, and on occasion transgressive, social-spatial power struggle. These struggles change the importance and role of certain geographical scales, reassert the importance of others, and sometimes create entirely new significant scales, but – most importantly – these scale redefinitions alter and express changes in the geometry of social power by strengthening power and control by some while disempowering others.

The case of nineteenth-century urban middle-class women very explicitly illustrates this argument. The case also points out the weaknesses of focusing our theorizations about scale construction only on relations of production. 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 globe.

IV Summary

My aim in this piece has been two-fold. First, I have tried to provide a thorough review of current research and theorizing about scale within the social theory stream of human geography. This research has been characterized by an exclusive emphasis on the relations of capitalist production and how those relations influence the social construction of scale. It has also been largely unresponsive to questions of difference in human agents and how power relations outside the relations of capital and labor might also influence scale-making. My second aim has been to use my own work to suggest a way of addressing the limitations of contemporary theorizing about scale construction so as to motivate others to move in new research directions. At present, there is nothing in the geographical literature, except for Peter Taylor's recent contribution (1999), that *explicitly* links scale construction to either social reproduction or consumption. As I pointed out above, Taylor situates consumption at the very heart of his analysis, arguing that the production of spaces and places by capital supplies the context for contemporary modernity. He insists that understanding mercantilism/consumerism and the role of the home/household is central to understanding the social construction of space-place tensions as they have unfolded over the last hundred years (though I

would say over the last two hundred years, at least!). Research and theorizing about the social construction of scale are of growing importance in the discipline – both in human and physical geography. With so much exciting work appearing in the last several years, it is time to evaluate where we are as human geographer-social theorists and how we might more productively proceed. Understanding the role that social reproduction and consumption play in scale-making (as well as in space and place-making) can only enhance our theories and our ability to effect change.

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Notes

1. Although scale is clearly of central concern to biogeographers, geomorphologists, climatologists and other physical geographers, I was chagrined to find when consulting the second edition of *The encyclopedic dictionary of physical geography* (Goudie *et al.*, 1994) for a definition of scale, none was there (in contrast to the *Dictionary of Human Geography* (3rd edn), where the definition takes up nearly two pages (Johnston *et al.*, 1994: 543–45).

2. While several authors, especially Neil Smith and Andrew Herod, emphasize the importance of theorizing the ways in which scale is constructed through cultural processes such as gender systems, neither provides much insight into how this theorizing might proceed. The most extended example of an attempt to deal with the cultural construction of scale comes out of Smith's description of the homeless vehicle discussed in a subsequent section of the article.

3. Taylor (1987: 3) makes a similar point when he states that: 'The three scales do not, of course "present" themselves to us, they are made by the men and women who have constructed the institutions of the modern world. And there is nothing neutral about their construction.'

4. These are not the only sources by Lefebvre that Brenner employs. These are simply the ones most relevant to the arguments I am making here.

5. In a piece that is premised on a close reading of Marx, Taylor (1987) describes 'The paradox of geographical scale in Marx's politics'. His aim in this piece is to show how political actions are largely constrained by state boundaries thus disabling the potential for effective worldwide socialist transformation. Directing himself to Marx's concern with the classes *fur sich* versus classes *an sich* contradiction, Taylor (1987: 287) identifies the paradox of geographical scale as: '... a surface manifestation of a basic antinomy in the capitalist world-economy ... Since classes express their consciousness at a geographical scale that does not reflect their objective economic roles there will be a general tendency for political behavior to be contradictory.' The piece is a well argued narrative about how Marx recognized that the potential for global socialism embedded in powerful anti-capitalism revolutionary moments of the nineteenth century was undermined by this paradox. While the piece is an interesting and provocative one, it remains descriptive, not explanatory, about the ways scales interact or are produced.

6. Richards was the popularizer of the term 'euthenics', which was known as the study of environmental adjustment and manipulation in order to improve health and well-being. In 1899, at 'The First Lake Placid Conference on Home Economics', she founded and was elected to be the first president of the American Home Economics Association. What began as a scholarly passion became translated into a practical movement, which eventually transformed American institutions of higher learning.

7. In *Sanitation in daily life*, Richards (1910) describes the 'pathways' that connect private and public. See also Flanagan (1990) for an extended discussion of the Woman's City Club of Chicago and the way in which its publications offer a reciprocal depiction that 'city hall' invades every aspect of private life.

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