Cities as the Industrial Districts of Housebuilding

MICHAEL BUZZELLI and RICHARD HARRIS

Abstract

In North America the housebuilding industry is ubiquitous and locally autonomous. In Ontario during the 1990s, 81% of urban single-family homes were erected by locally based builders, a proportion that varied with urban isolation. Urban areas may be regarded as the industrial districts of home builders: numerous small, specialized firms interact frequently within a rich, embedded market network; subcontracting is the norm; networks and firm boundaries are fluid. The theory of industrial districts offers a useful vocabulary for analysing the neglected building industry. Analytically, the building industry offers unequalled opportunities to explore the dynamics of industrial districts, and how economic globalization meets local limits.

Examples of regional conglomerations are the specialized industrial districts of northern and central Italy, the New York City garment district, and the construction industry in any number of U.S. cities (Piore and Sabel, 1984: 265).

The geography of housebuilding is unlike that of all other important forms of economic activity: it combines substantial features of manufacturing with many of the locational aspects of services. Some building — about a fifth of all new units in the United States, and less in Canada, Australia, Britain and Western Europe — occurs in factories, in much the same way that automobiles and many other goods are produced. Most, however, still takes place on site. This means that, like personal services, it is ubiquitous, occurring wherever there are buyers. The assembly of dwellings on site can take advantage of the efficient, factory fabrication of materials and subassemblies, but dispersed sites limit the builder’s capacity to realize economies of scale. As a result, for many decades observers of the industry have debated how such limits might be overcome. At the same time, they have puzzled over how it is that, faced with factory competition from larger and apparently more efficient producers, the traditional builder has persisted. This article proposes a new way to answer to that question.

We argue that on-site housebuilding is efficient because it operates in much the same way as those manufacturing industries that cluster in manufacturing districts. The classic manufacturing district consists of a fluid network of small, interdependent firms in a particular industry that operate within a limited area. This, we suggest, describes the housebuilding industry in any North American city: most builders are small, relying on

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1 Manufactured housing accounts for about a quarter of all single family units produced in the United States each year (Wallis, 1998: 347).
numerous suppliers and subcontractors; apprentices learn on the job, tradesmen aspire to become subcontractors, and subcontractors to become builders; boundaries between firms blur and shift; inter-firm relations are socially embedded and depend on trust. Firms affiliate to wider provincial and national organizations that provide pipelines of information, but daily bind themselves within local networks that are articulated through local associations. The parallels between what Ball (2003: 904) has called the ‘institutional structure of housing provision’ and the operation of industries in industrial districts may be striking, but they have been overlooked. Housing researchers have not drawn upon the literature in industrial organization and economic geography; recent debates about industrial districts have ignored the building industry. Based on a survey of the entire literature on housebuilding in North America and Australia that has been published in the past 60 years, we compare the social organization of home building with accounts of the operation of industrial districts and argue that there are important similarities.\footnote{In this article we cite only those works that provide systematic evidence or, in its absence, well-informed commentary. For a fuller citation, especially of some of the earlier literature, see Harris and Buzzelli (2005).}

Our immediate concern is with companies that erect low-rise, single-family dwellings, whether detached, semi-detached, or in rows. On average, in North America these are responsible for about four-fifths of annual housing starts, more in the smaller urban centres and rural areas.\footnote{Cyclical fluctuations are considerable: between the mid-1980s and the mid-1990s, the annual market share of multi-family units ranged between 10\% and 30\% (Bookout, 1998: 374).} But, we suggest, our argument has broader implications. Some large housebuilders also erect multi-storey dwellings, and a few also build commercial and office space. Technology, financial, contracting and purchasing arrangements in the latter sectors are distinctive, must be understood in specific ways, and are the subject of their own trade and academic journals.\footnote{The distinctiveness of the two sectors is shown by the fact that many articles in Construction Management and Economics deal, at least in part, with builders of multi-family dwellings, but none concern builders of single family homes. The same is true of those articles in the International Journal of Project Management that deal with construction companies (cf. Themistocleous and Wearne, 2000).} In particular, companies are larger and many operate on a wider geographical scale than the average housebuilder. But the difference can be overstated. In recent years the extensive literature on globalization has persuaded many authors to suggest that the pressure to go global has affected all major industries, including construction and real estate development (Dicken, 2003). It is true that in some major and rapidly growing cities international flows of capital and corporate management have shaped real estate development. This is most obviously true in ‘world’ cities such as London and Shanghai, though it has also affected second-tier centres such as Toronto and Vancouver (e.g. Ley and Tutchener, 2001; Wu, 2001). It is also true that through imitation certain forms of development, which in the residential sector include gated, US-style subdivisions, have apparently become international (Webster \textit{et al.}, 2002). But imitation is a limited form of globalization, one which invariably takes on local inflections and meanings, while the experience of ‘world’ cities is untypical (Grant and Mittelsteadt, 2004; Salcedo and Torres, 2004). In the majority of urban areas, even in the commercial and office sectors, the development industry remains ‘stubbornly local’, being tied to the embeddedness and ‘thickness’ of local property markets (Wood, 2004: 121; Beauregard, 2005). Housebuilders are more parochial than other segments of the construction and development industries but some of their methods are widely shared and, as we suggest in a concluding discussion, may help us understand the basis of a wider structural resistance to the globalization of management.

The main problem in sustaining our argument is that on many issues the evidence is thin. Much has been written about real estate development, but in North America (as
opposed to some other countries) land development and housebuilding have been undertaken by different enterprises (Ball, 2003; Harris, 2005). Many aspects of the building industry are still poorly documented and trends, especially, remain the subject of anecdote and conjecture. For example, studies of the industry from the early nineteenth century to the present have routinely noted a ‘trend’ towards subcontracting, but in North America no longitudinal evidence has been available to test even such a basic proposition (Gillies and Mittelbach 1963: 92; Herzog 1963: 79; Rilling, 2000; Harris and Buzzelli, 2005). For present purposes the most important gap in our knowledge concerns the extent to which builders are localized. We know that most builders operate on a modest scale. In Ontario, Canada, in 1998, 98% of housebuilders erected fewer than 100 units a year; collectively they accounted for three-quarters of all starts (Buzzelli, 2001a: 546). This was, and remains, broadly typical of builders across Canada and the United States. We may infer that builders operating on this scale confine their activities to a limited geographical area, with important implications for the sorts of connections they make with suppliers, subcontractors, tradesmen and customers. Unfortunately, we know almost nothing systematic about the geographical range of on-site housebuilders. For that reason, before developing our main theoretical argument, in the section that follows this introduction we survey the published research on the geographical issue and present new evidence for the 19 metropolitan areas of Ontario. One of these centres, Toronto, has been a significant site of globalization: receiving immigration and capital flows into the development industry, and supporting major development companies including at least one, Olympia and York, with a global reach (Charney, 2001; Ley and Tutenhor, 2001). Yet, as we indicate, its housebuilders remain local. Appropriately, then, the evidence for Toronto and other Ontario cities grounds our subsequent argument.

One implication of our argument is that the literature on industrial districts can offer a framework for understanding the dynamics of on-site housebuilding, and especially the way local builders respond to outside competition. A second implication is that because housebuilding districts are so numerous, and variable in size, they offer unequalled opportunities to explore the structure and dynamics of industrial districts in general. Exploring these implications, in a concluding section we suggest some directions for research.

The localization of housebuilding

Like auto companies, builders can more precisely be described as ‘assemblers’ rather than ‘producers’. Bricks, cut lumber, wiring, pipes, shingles, wallboard, doors and window assemblies, roof trusses, hardware and sanitary ware are produced by suppliers, while builders themselves undertake limited fabrication. Assembly can happen in a factory. From the 1920s truck transportation made it possible to deliver complete, manufactured units from factory door to specific sites. By the 1930s some companies were doing this but in the United States the sustained growth of what is now known as manufactured housing did not begin until the 1970s (Bernhardt et al., 1980; Wallis, 1990). Production methods are akin to those of auto assembly, although in more locations: in 1992, for example, 85 companies produced houses in 234 factories (Wallis, 1998: 349). Factories are concentrated in the southern United States, exploiting non-union labour. Before this form of production gained a significant market share, some manufacturers sold house kits by mail order. In the early twentieth century the main manufacturers were based in the mid-west, especially northern Michigan. Three of the

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5 It is not clear whether site building operations are organized differently by those companies that are also involved in land development. To the extent that they are, that is probably due to the fact that vertically integrated companies are likely to be unusually large.

6 In this regard, Australian data are superior and show a clear post-war trend (Neutze, 1977: 165).
10 largest mail order companies — Aladdin, Sterling, and the Lewis Mfg Co. — were based in Bay City, Michigan (Schweitzer and Davis, 1990). When, in the 1940s, some companies experimented with new methods of prefabrication, many located in the mid-west. The largest of these was the Lustron Corporation, which had developed a method of steel-framing that it distributed as kits, and which established in Columbus, Ohio, a huge factory to serve an almost national market (Fetters and Kohler, 2002; Knerr, 2004).7

The location of the main off-site manufacturers of housing can be explained in terms of classic location theory, which emphasizes transportation costs (Gertler, 2000). During assembly, houses lose little weight, and factories can locate anywhere between their main sources of materials and their markets. Site assembly implies an orientation to market; kit manufacturers were drawn to the forests of northern Michigan; intermediate sites that are convenient to broad national or regional markets have been favoured by Lustron and by the companies that produce manufactured housing today. The balance among these possibilities depends on the balance between two considerations. First, finished dwellings are more bulky and fragile than parts, pulling assembly towards the market. Second, on-site work limits economies of scale, which favours the factory. The kit house, whether of lumber or steel, is a compromise that retains site assembly but maximizes the potential of factory production.

Transportation costs help explain why different locational strategies have at different times proven feasible, but they do not explain why site production remains the norm. How is it that site builders repelled first the kit manufacturers and then the challenge of manufactured housing in most regions and market segments? The question is especially intriguing since most site builders are small and, apparently, cannot reap economies of scale. Being small they are also likely to be local, and hence vulnerable to the vagaries of local housing markets and to the pricing policies of regional and national building suppliers. Clearly, the consequences of size and localization need to be probed. Although the former has been documented, if incompletely, the geographical range of the average site builder is a neglected topic that invites closer study.

Historically, the building industry in North America has always been localized. The two best case studies of the industry in the nineteenth century both assume that even the largest contractors in Philadelphia and Boston, respectively, were local (Warner, 1962; Rilling, 2000).8 This remained true into the second half of the twentieth century. The most detailed and authoritative study of builders in a modern metropolis is Maisel’s (1953) examination of the San Francisco Bay Area in the early 1950s. This region boasted 30 firms that were each erecting more than 100 homes a year; all were local. The same local range existed in Minneapolis-St Paul over a similar period (Smith, 1978). Indeed, within the Bay Area even the larger builders were remarkably parochial. This region contained 52 building permit districts. Only 10 firms, out of a total of 1,658, were active in five or more of these (Maisel, 1953: 350).

The building industry in San Francisco was broadly typical. The only national US survey to gather relevant information was undertaken at almost the same time as Maisel’s study, in 1949. Tabulating information on building activity in 24 metropolitan centres, it found that in 21 of these more than 98% of all builders operated exclusively in the urban area where they were based (US Department of Labor, 1953: 13). Two of the remaining three places were located in New England where ‘densely populated places of relatively small area are contiguous with one another’ (US Department of Labor, 1953: 13).9 The implication is that the places in question were within commuting distance.

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7 Fetters and Kohler (2002) report the location, by state, of approximately four-fifths of the Lustron homes that were sold. The distribution is extensive, with a concentration in the mid-west and gaps in western states where Lustron did not develop a dealer network.
8 A few housebuilders occasionally operated out of town, building country houses, lock-keepers houses and the like on a custom basis. Rilling (2003) is not aware that any out-of-town builders erected homes in Philadelphia in the first half of the nineteenth century.
9 To our knowledge the tabular data on which these statements are based have never been published.
There is a widespread perception that builders have grown substantially since the early 1950s (e.g. Checkoway, 1980). Certainly, the sorts of large land developers that emerged in the early twentieth century have become powerful in most metropolitan centres (cf. Lorimer, 1978; Weiss, 1987; Logan 1993). But land development is not the same as housebuilding. During the 1950s, some large companies experimented by combining land development with house construction. The Levitt brothers were the largest and most famous (Kelly, 1993). But this trend towards vertical integration and increasing scale was temporary. It is true that today the largest builders do also engage in land development, but the reverse is not true. Typically developers maintain a stable of builders, each specialized in particular house styles or market segments. We know little about the pace or the geography of this trend. It is clear, however, that the growth of large builders has been geographically uneven, affecting suburban Chicago, for example, earlier than it did New York, and being least apparent in the smaller and mid-sized centres in which most North Americans live (Denowitz, 1982). It is also clear that the trend has gathered momentum irregularly, first in the early 1950s, then the late 1960s and recently the 1990s, but that in intervening periods it has reversed. Even recent mergers have created national companies that erect only 15–20,000 units a year (Pollack, 1998; cf. Grebler, 1973). Significant in some markets, their national share remains small (Goodman, 1998). Most single-family homes, even in large metro areas, are apparently still assembled on site by local builders and contractors.

Location, as well as city size, influences what may be called the autonomy of local building districts. The best, if fragmentary, evidence is British. Whitehand and associates have shown that the British building industry remained localized until the post-war period (Whitehand and Whitehand, 1983; Whitehand, 1992; Whitehand and Carr, 2001). During the interwar years, builders active in selected suburban areas in Birmingham and London were not only based in these cities but close to the estates in question (Whitehand and Carr, 2001: 223–4). Whitehand has also presented evidence to suggest that the building industry in distinct towns, such as Northampton, was more self-contained than in places like Watford that lay within commuting distance of a larger metropolitan centre (Whitehand and Whitehand, 1983: 241–2; cf. Whitehand, 1992: 430). This may indicate that the most autonomous building districts are those of isolated, middle-sized cities. Larger centres may attract national builders, while satellite communities draw those from the adjacent metropolitan centre.

The localization of site builders is confirmed and amplified by the evidence for southern Ontario. This evidence pertains to the activities of all builders registered under the Ontario New Home Warranty Program (ONHWP), that is, virtually all professional builders of new homes in the province. It constitutes a census of builders, showing their base of operations, and the location of each unit they erected in each year. These data enabled us to determine, for each Census Metropolitan Area (CMA) in the province, which builders were locally based and which were non-local. When aggregated, they showed what proportion of homes in any metro area were erected by builders that were locally based, the definitive measure of local autonomy. For each CMA we then determined the base of operations of each non-local builder. These yielded a matrix of builder activities across all 19 CMAs in Ontario, from which it is possible to infer urban fields of influence. Some aspects of Ontario’s building industry, including its size structure and rates of firm entry and exit, varied with the building cycle (Buzzelli, 2001a; 2001b; 2001c).

10 North American builders may have remained more local since average distances between urban centres are greater. Also, because Canada and the United States are so large, it is more difficult for builders to operate on a national scale than in any European country (cf. Ball, 2003).

11 The database does not include owner builders, operating as general contractors, since owners cannot be expected to offer warranties to themselves (Buzzelli and Harris, 2003). Subcontractors are not counted. Many builders would also have operated as subcontractors, but this aspect of their operations would not be captured in the database.
Its geography, however, including the degree of local autonomy, remained stable through the 1990s, the period for which we have the best data. Accordingly, we present results averaged for 1991–8, since aggregation smoothes out annual fluctuations. This is useful in connection with the activity of non-local builders in smaller centres, especially in northern Ontario. The ONHWP data have been used previously to document the size distribution of builders, but not to show the geography of their operations (cf. Carroll, 1998). Coupled with interview data for Toronto, and surveys of trade journals and a local newspaper, they support a robust analysis of the geographical organization of the provincial housebuilding industry. Here we report only the findings of direct relevance to the present argument.

The warranty program data show how local the building industry is in most metropolitan areas. Across Ontario during the 1990s, 81% of all single-family homes

12 Rates of entry and exit were determined by constructing a linked, longitudinal file from annual data.
13 For a more detailed account of the data and methods see Buzzelli and Harris (2003).
were erected by builders that were locally based. To be sure, in some cases this could have entailed a substantial commute. The largest CMA, Toronto, contained over four million people and extended 100 km along the northern shore of Lake Ontario (Figure 1). Several of the 20 Toronto-based builders that we interviewed indicated that they had at various times erected homes in many parts of the Toronto area. Even here, then, and certainly in the other metropolitan centres of Ontario, most local builders were able to visit any site, although not necessarily all sites, on a daily basis.

If the average level of local autonomy was high by any standard, the statistic is also misleading. The range of variation was very great, extending from a high of 97% in Toronto to a low of 3% in Barrie, a bedroom community less than an hour by highway north of Toronto (Table 1). Even here, then, and certainly in the other metropolitan centres of Ontario, most local builders were able to visit any site, although not necessarily all sites, on a daily basis.

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Table 1 Descriptive statistics of CMA autonomy in housebuilding, 1991–8

<table>
<thead>
<tr>
<th>CMA</th>
<th>Unweighted Means, 1991–8</th>
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<tbody>
<tr>
<td></td>
<td>CMA Population, 1996</td>
</tr>
<tr>
<td>Toronto</td>
<td>4,263,757</td>
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<tr>
<td>Thunder Bay</td>
<td>125,562</td>
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<tr>
<td>Sarnia</td>
<td>86,480</td>
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<tr>
<td>Sault Ste. Marie</td>
<td>83,619</td>
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<tr>
<td>Kingston</td>
<td>143,416</td>
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<tr>
<td>North Bay</td>
<td>64,785</td>
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<tr>
<td>London</td>
<td>398,616</td>
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<tr>
<td>Belleville</td>
<td>93,442</td>
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<tr>
<td>Ottawa-Hull</td>
<td>1,010,498</td>
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<tr>
<td>Windsor</td>
<td>278,685</td>
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<tr>
<td>St Catharines – Niagara</td>
<td>372,406</td>
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<tr>
<td>Brantford</td>
<td>100,238</td>
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<tr>
<td>Peterborough</td>
<td>100,193</td>
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<tr>
<td>Hamilton</td>
<td>624,360</td>
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<tr>
<td>Guelph</td>
<td>105,420</td>
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<tr>
<td>Kitchener</td>
<td>382,940</td>
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<tr>
<td>Oshawa</td>
<td>268,773</td>
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<tr>
<td>Sudbury</td>
<td>160,488</td>
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<tr>
<td>Barrie</td>
<td>118,695</td>
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<tr>
<td>Mean</td>
<td>462,230</td>
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</table>

a Weighted mean proportion is 81%. Calculated by CMA size indexed to the mean.
b Calculated using the unweighted proportion of local units/builders.

14 Interviews undertaken in the spring of 2000. Most interviews lasted for 1–2 hours. The database would support an analysis at the intra-urban scale, but this is not directly relevant to the present argument.
15 Many commuters from Barrie would have worked in the northern suburbs of Toronto, less than 50 km away.
tended to be the most isolated, not just from each other but also from Toronto. The other seven constituted a tail of declining autonomy that extended downwards from 73% to 29%. In Ontario, then, during the 1990s most builders operated primarily or exclusively within a single metropolitan district. The same is still true and, since southern Ontario is one of the more densely settled regions in North America, its experience is almost certainly typical of large parts of the US and Canada. The homebuilding industry in North America, then, is strikingly local in character.

**Industrial districts**

Local builders buy from local suppliers and employ local contractors, who in turn hire local tradesmen. Together, they make business for local professionals, including architects and brokers. The autonomy and tight organization of these networks suggests that urban centres function like industrial districts of housebuilding. To probe this claim, we survey the features of industrial districts in general before considering which are apparent in the building industry.

The concept of the industrial district, attributed to Alfred Marshall (1922), has been widely discussed. Some writers, notably Markusen (1996), have broadened the concept to include all situations where linked industries are congregated. Most observers, however, retain the original notion, while deepening it by developing a more explicit conceptualization of the processes at work. In Marshallian districts, the interdependence of pattern and process takes a particular form. In geographical terms, they are defined by a clustering of firms in a specific industry, and of workers with relevant skills. It is understood that this clustering reflects, favours, and enables certain types of interaction among firms, and between firms and workers.

At any time, firms in industrial districts frequently do business with one another, communicating, negotiating, and shipping goods. Interaction is frequent because firms are small and specialized: economies of scale are limited, production chains are fragmented and subcontracting is common, and many entrepreneurs operate ‘virtual’ businesses from a desk and a phone (Enright, 1995). Production, then, is managed through the market rather than internal hierarchies or, more precisely, through network forms of organization (Powell, 1990; cf. Williamson, 1975). Interaction between firms is close and rich, in ways that routinely go beyond formal contracts. Each party shares an unwritten understanding of normal practise, acknowledging complex mutual, often cooperative, obligations. The boundaries of firms are blurred, extending, as Badaracco (1991) has described, from a core, through alliances, to a vague but significant penumbra of ‘influence’. Such influence, and unwritten norms, are not unique to firms in industrial districts. Many writers have argued that all firms are socially ‘embedded’, though in varying degrees. They accumulate social as well as financial debts and credits; interdependence and trust inform their economic calculations, improving a small firm’s chance of survival, up to a point (Granovetter, 1985; Sabel, 1992; Grabher 1993; Uzzi, 1996). But embedding is especially common in industrial districts where firms interact frequently, and as physical neighbours: a common way for embedded relations to develop is serendipitously, through personal contact (Uzzi, 1996: 679; cf. Powell, 1990: 326). In industrial districts, then, the rich interconnection of firms constitutes a dense, loosely coupled local network, although the existence of true networks, as opposed to numerous bilateral ties, has more often been asserted than demonstrated (Staber, 2001).

The strength of local industrial networks is their fluid adaptability. Boundaries blur and shift, as firms experiment by internalizing, and then externalizing functions,
constantly trying to determine what, in changing circumstances, works best (Coase, 1937: 396, 404; Enright, 1995: 139). Firms recognize the value of establishing customary ties with suppliers and contractors, but the presence of many others offers a bargaining tool and potential resource. When companies wish to grow, they can tap a local pool of skilled labour; contracting, they release workers who can expect to find work elsewhere. The boundaries between workers and employers thus blur. In prosperous times, workers set up as subcontractors, while subcontractors may take on larger functions. Such fluidity enables districts, and the firms that constitute them, to respond flexibly to changes in the level or character of demand. Firms that rely on contractors can downsize quickly. Loosely coupled industrial districts are also nimble in adapting to new types of demand. A few may respond through technological innovation: Silicon Valley is an obvious example. The peculiar strength of industrial districts, however, may be their capacity to restructure by drawing on the accumulation of practical knowledge shared by workers and employers (Amin, 2000: 164).

The potential weakness of the industrial district is that firms may become parochial and inbred, oblivious or resistant to change. This can be overcome by building ‘pipelines’ to companies or centres of innovation elsewhere (Bathelt et al., 2004). Individual companies can do this; better, local institutions can serve as channels and agents of change in a process of inter-regional learning (Hassink and Lagendijk, 2001; Molina-Morales et al., 2002). The ideal, it seems, is to combine local ‘buzz’ inside the district with linkages beyond, and perhaps to balance within the district a mix of embedded and arm’s-length firms (Uzzi, 1996: 694; Bathelt et al., 2004). What determines the appropriate mix, however, remains unclear.

The merits and significance of industrial districts can be overstated. They have been around for centuries; specific districts have survived for decades; some have emerged in the past two decades (Piore and Sabel, 1984; Scott, 1988; Scranton, 1991; Enright, 1995; Lewis, 2000). But even the most flexible are vulnerable; many industries are not, and have never been, organized in this fashion and questions may be raised as to whether their recent resurgence will last (cf. Amin, 2000). They are simply one way in which some industries have found it effective to organize. Among these we believe that housebuilding is a prime example.

Cities as the industrial districts of housebuilders

Given its size, especially in terms of employment, housebuilding has received little attention from academics. This is especially true in North America, for which there is no survey or history of the building industry in the twentieth century (DiPasquale, 1997). The richest and most thorough local case study is still Maisel’s (1953) work on San Francisco, now half a century old. Then again, the few writers to examine the industry have rarely drawn on the concepts developed to interpret other industries (e.g. Checkoway, 1980; Schlesinger and Erlich, 1986). It was once fashionable to damn builders for failing to conform to an idealized model of mass production, but no analyst of the North American building industry has consistently applied other, more recent and appropriate, conceptualizations of industrial organization.17

From the other side, as Somerville (1999: 672) notes, theoretically informed research on industrial organization has largely bypassed the housebuilding industry.18 This

17 The discussion in Britain and Europe has been more sophisticated. See, for example, Gann (1998), Barlow (1999), Naim and Barlow (2003), Ball (2003) and in general the researchers associated with the International Group for Lean Construction (http://cic.vtt.fi/lean/).
18 Much of the specialized literature on project management deals with civil engineering but its relevance to housebuilding has not been explored and remains unclear (cf. Themistocleous and Wearne, 2000).
neglect is not surprising among students of the modern corporation, and of mass production (e.g. Chandler, 1977; Hounshell, 1984). To these writers, construction was an anomaly or laggard. More surprisingly, most of those who have examined the ‘other paths’ to industrialization, including flexible specialization and mass customization, have also passed over the building industry in silence (e.g. Scranton, 1991; 1994; Pine, 1993). Our epigraph shows that Piore and Sabel (1984: 114) acknowledged construction as an exemplar of flexible production in localized districts, but neither they nor any other writer developed this insight. Other writers have occasionally used construction to explore related concepts. Notably, as we discuss below, Eccles (1981a; 1981b) has framed an argument that builders and subcontractors together constitute ‘quasifirms’ (cf. Stinchcombe, 1959). Eccles’ work has been used by Powell (1990: 306–7) and Granovetter (1985: 497–8) to illustrate influential arguments about network forms of organization and the embeddedness of market relations, the latter being explored by Waldinger (1995) through a case study of subcontracting in New York City. These writers have offered intriguing glimpses of how studies of the building industry can illuminate larger issues of industrial organization, but these glimpses are fragmented. A recent survey of the geography of production by Richard Walker is telling, because it is authoritative and typical. Walker (2000: 113) advocates a broad definition of industry that emphasizes its importance and diversity even in postindustrial economies. He notes examples of industries in which workers move from one site to another, and those that are immobile, and hence ubiquitous (Walker, 2000: 113, 124). No industry exemplifies these features better than housebuilding, yet Walker does not mention it. The omission is symptomatic. To support our claim that housebuilding is organized through industrial districts, we need to establish, point by point, its similarities and differences with modern conceptualizations of the Marshallian model.

Builders and industrial districts: similarities

The best documented similarity between housebuilding and industries that organize through manufacturing districts is the prevalence of the small firm, and hence the frequency of market transactions. The building industry contains an extraordinary number of companies. In Ontario alone, for example, on average in any year during the 1990s more than 3,000 builders were active (Buzzelli, 2001a). Most were tiny. Almost three-quarters of those that were active in 1998, for example, erected fewer than 10 homes (Buzzelli, 2001a: 546). There are no equivalent data on subcontractors but Maisel (1953: 145) concluded that in the early 1950s there were as many subcontractors as builders. Suppliers were larger and less numerous. Even so, in the early 1950s San Francisco boasted 625 wholesalers and 800 retailers of building supplies (Maisel, 1953). Retailers and suppliers have since consolidated, but still today every major metropolitan centre contains thousands of firms that are largely engaged in some aspect of the building industry.

Builders proliferate because they enjoy limited economies of scale. A case study of Newcastle, Australia, in the early 1970s, where building methods were similar to those in North America, found few advantages to building more than 10 units per year. A decade later Ned Eichler, son of the second largest merchant builder in the United States, suggested that builders might reap economies up to 500 units a year, depending on how dispersed the building sites were (Eichler, 1982: 127; cf. Cassimatis, 1969: 66). In the early post-war years, economies of scale were limited chiefly to those of bulk

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19 Patchell (2002) has discussed the idea of mass customization in relation to the US housebuilding industry, but only as an incidental counterpoint to his analysis of the industry in Japan. For a discussion with reference to Britain, see Barlow and Ozaki (2003).

20 Housebuilding is also neglected in recent surveys of networks in organizational research (Borgatti and Foster, 2003), of one-off projects (Grabher, 2002), and of industrial districts and the geography of knowledge creation (Bathelt et al., 2004).
purchasing, since dealers undertook pre-cutting and prefabrication for small builders, and even these economies were balanced by the rising costs of administration (e.g. *American Builder*, 1945; Maisel, 1953: 209; *Washington Post and Tribune Herald*, 1954; cf. Ball, 2003: 899). The recent growth in regional and national builders in the US indicates that the inflection point has shifted. By the late 1990s, three US-based companies operated in multiple markets and erected up to 20,000 homes a year (Pollack, 1998; cf. Gertner, 2005). Even so, they did not dominate any metropolitan market. Small and medium-sized builders have remained competitive because most builders use similar methods, which involve site assembly of pre-cut framing and roof trusses, together with window and door subassemblies (Maisel, 1953).

Builders use similar methods because all rely on subcontractors. Historically, the rise of subcontracting brought the social relations of capitalism into the building industry (Ball, 1981; Satoh, 1995). Specialization of trades and contractors has been favoured by builders in order to limit the exercise of craft skills (Silver, 1986: 24–37). Fifty years ago, Maisel (1953: 122) found that all builders subcontracted most of the physical work of construction. A recent survey found that in Toronto in the late 1990s the same is now also true of many of the non-physical tasks (Buzzelli, 2001b). These include architectural design (89% outsourced), legal services (83%), sales (60%), advertising (50%), accounting (45%) and market research (35%). Only site supervision and executive management are core functions. Recently, a leading executive for one of the largest builders in the United States is quoted as saying that ‘we’re really a marketing company that happens to build houses’ (Gertner, 2005: 68; cf. Erlich and Grabelsky, 2005: 428). Significantly, Eccles (1981a: 343) argues that firms are small because they use subcontractors, not vice versa. Today builders, large and small, operate as virtual firms. Among those interviewed for the present study, many reported that they kept few people on staff and that they let subcontractors arrange supplies. As one commented of his subcontractors: ‘the majority is supply and install’.21 This was especially true for the smaller builders. One observed that:

> If I have to buy the material and install it myself, I mean I can do it, but I can’t do it for the cost. That’s I think where the economy of scale comes in. These guys, that’s all they do. I mean they have a warehouse just full of doors and lineal footage of casing and stuff, they buy it at such reduced rates. But they also work for a lot of builders, and therefore keep the costs down.22

There are some differences between large and small builders in how they obtain supplies. The smaller ones that do not negotiate supply and install contracts still use local retailers for pre-cutting and just-in-time deliveries (Colean, 1949: 4–5). Larger builders may deal directly with wholesalers or manufacturers. The divisions between suppliers, builders and subcontractors are fragmented by horizontal specialization, above all among subcontractors. Fifty years ago there were sharp distinctions between carpenters, bricklayers, plumbers, plasterers, electricians, painters, roofers and heating contractors. New technology, such as drywall, has wrought changes and there is now even greater specialization. The separation of painters from paperhangers was followed by subspecialization in vinyl, fabrics and metallics (Silver, 1986: 28; cf. Sobel, 1995). The vertical and horizontal segmentation of the building industry is an extreme form of the sort of industrial organization that characterizes firms in industrial districts.

The available evidence also indicates that in North America and Australia the interaction among building firms is richly embedded. Case studies speak about how builders nurture contractors (Ludwig, 1944: 172; Maisel, 1953: 58–9; Maggs, 1995: 85). A Canadian survey in the early 1970s, for example, found that one-third of builders always used the same contractors, and as many again ‘often’ did so (Roberts, 1971:

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21 Builder interview, 7 February 2000.
A56). A more recent study in Massachusetts found that firms did business with, on average, only 2.1 subcontractors within each specialization (e.g. plumbing) and that, again on average, they had done so for 9.2 years (Eccles, 1981a: 349, 351). The official line, promoted by government agencies, has been that competitive bidding is the norm (e.g. Dodge, 1959). In fact this has never been the case. Trade journals have told builders to hire on the basis of reliability, not price. In 1953, an article in the American Builder advised its readers ‘don’t shop for price alone when you’re looking for an earth-moving sub . . . If you want the most real value for your money hire the smartest’. Builders did not need to be told. In the Massachusetts study, only one-fifth tendered contracts; most negotiated (Eccles, 1981a: 353). On this evidence, Eccles (1981a: 351) has developed Maisel’s (1953: 142) insight that ‘together, the builder and his subcontractors form an organizational unit, albeit an informal one’. He suggests that such units constitute ‘quasifirms’, analogous to internal contracting arrangements within vertically integrated firms. He also argues that subcontracting arises from the nature of the production process, and especially the problems of supervision on scattered sites, not the cyclical character of the industry (Eccles, 1981b; cf. Colean and Newcombe, 1952; Winch, 1989: 337–8; Winch, 2001).

Because builders cannot supervise continuously they prefer fixed-price contracts with trusted subcontractors (Ball, 2003: 904). This is critical. Monarch Homes, a large Toronto-based builder in the 1990s, was punctilious in paying subcontractors, a notorious issue in the industry since many builders lack capital. The company claimed that this was the key to quality control and customer satisfaction, helping it to win an industry award in 1997 (Brennan, 1997).

Monarch was equally careful with suppliers, who have played a central, if again informal, role in managing local industries. Dealers are larger and better-capitalized than their builder customers. They routinely sell on 30- or 60-day credit, the management of which has long been a major headache (Butler, 1918; Yost, 1935; Harris, 2000; cf. Hillebrandt, 1974: 175; Agapiou et al., 1998). The terms of their credit, to whom they offer it, and the priority they assign to specific orders reflect informal and changing judgements about specific clients. In 1946, in federal testimony, the President of the National Retail Lumber Dealers’ Association claimed that dealers were ‘responsible’ for about 70% of new homes in the United States. He did not mean that dealers erected that many homes. Rather, he spoke of the dealer’s ‘influence’, exerted through the provision of advice and materials, the coordination of builders and subcontractors, and the judicious deployment of credit (Building Supply News, 1946; cf. Ludwig, 1944: 174–5; Tremblay, 1944). Dealers, more than most builders, had local clout, notably with local lenders. A survey of US lumber dealers that was undertaken in the late 1960s found that over a quarter of the 3,600 dealers who replied were on the board of directors of a local financial institution (National Lumber and Building Material Association, 1969: 8). Here, and in a myriad other ways, is the penumbra of influence to which Badaracco (1991) has directed our attention. The face of the building supply industry has changed since then. Consolidation has created behemoths, notably Home Depot and Lowe’s, so that power within the building industry is probably even more asymmetrically distributed. But the functions of the retail supplier are the same, ranging from provider of credit to informal employment centre (e.g. LeDuff, 2003). The interactions between dealers, builders, subcontractors and tradesmen remain strikingly informal and richly interconnected.

As is also typical of industrial districts, relationships within the local building industry are highly fluid, encouraging social mobility. This is most obviously true within ethnic networks. Unskilled immigrants have long viewed the building industry as a ready source of employment and then as an effective route to social mobility (Olson, 1991; Walton-Roberts and Hiebert, 1997). As Waldinger (1995: 577) observes, construction is ‘the quintessential ethnic niche’. Subcontracting foremen have usually had wide discretion over recruitment and have often favoured men from their own racial or ethnic communities (Meyers, 1946). In this way it has been possible for an unskilled worker
to learn a trade on the job and then, if capable and ambitious, to set himself up in business. (Most workers in the industry are male.) In his autobiography, Frank Colantonio, an Italian immigrant who arrived in Toronto in 1949 and began work by digging ditches, has described in vivid detail just such a trajectory (Colantonio, 1997). In post-war Toronto Italian-Canadians like Colantonio came to dominate large segments of the building industry, while on the west coast Indo-Canadians later played a similar role. In both cases, ethnic and family ties facilitated the development of trust and provided a matrix within which informal contractual relations held sway (Walton-Roberts and Hiebert, 1997). In such situations class boundaries are blurred. A survey of 36 contractors in Montreal in the early 1960s found that at that time some were self-employed, some also worked for others, while some employed a small staff (Rawin, 1964). Almost all had difficulty in identifying themselves exclusively as ‘worker’ or ‘employer’ (cf. Eccles, 1981a: 352). In part for the same reason, relationships between unions and employers have been unusually intimate, verging on ‘collusive’ (Bertram and Maisel, 1955: 68; cf. Applebaum, 1981: 120–1). The prevalence within it of immigrant and ethnic networks has probably shaped the building industry, reinforcing the tendency to rely on subcontracting and the encouragement of social and economic fluidity.

The fluidity extends to relationships between firms. As noted, builders like to develop stable relationships with particular suppliers and subcontractors; even so, with so many options available they sometimes opt for change. More importantly, the high level of churning within the industry means that new relationships are constantly being forged. In Ontario during the 1990s, on average only two-thirds of the builders in one year remained active in the following year; a correspondingly large number of firms entered (or re-entered) the market every year (Buzzelli and Harris, 2003: 375). Each of the latter would have had to establish (or re-establish) relationships with suppliers and subcontractors. In aggregate, it speaks of a bewildering flux. This has been reflected in the complex organization of industrial relations within the industry, with union providing a significant element of stability, for example through their active role in labour recruitment (Haber, 1930; Bertram and Maisel, 1955: 67–70; Haber and Levinson, 1956; Silver, 1986). Recruitment and bargaining has long been managed by local building trades councils, whose significance underlines the local organization of the building industry (Zieger et al., 2005: 517). The recent growth of large builders has challenged but not overthrown this arrangement (Erlich and Grabelsky, 2005; Weil, 2005: 459–60).

Relationships between firms are also fluid because firm boundaries are constantly being redrawn. Many of the builders who grow large eventually choose to buy their supplies directly from wholesalers. Some, including the famous Levitt brothers and A.V. Jennings, the first Australian builder to go national, purchased their own retail suppliers, and lumber mills to boot (Garden, 1992: 57; Kelly, 1993: 26–7; cf. Walsh, 1972). This is very unusual. Much more typical is, for example, the recent trend for larger builders to erect not only model homes but also ‘selection rooms’, showrooms that feature some of the variety of fixtures and fittings that customers may order (Brennan, 1998). For many decades, retail building suppliers provided this service, as they still do for smaller builders. If builders have sometimes taken on functions associated with suppliers, the reverse has also often been the case. At regular intervals throughout the twentieth century, and especially in smaller urban centres, dealers have turned themselves into contractors. Better capitalized, and with an intimate knowledge of the credit-worthiness of local subcontractors, they have usually been in a very good position to do so. The results of the national survey of dealers in the United States in the late 1960s suggests just how blurred and fluid firm categories could be. Of the 3,600 dealers who responded to the survey, 44% were ‘directly involved’ in (sub)contracting, and 32% in building (National Lumber and Building Material Dealers’ Association, 1969: 9). Almost a quarter were sufficiently committed to such activity that they had joined the National Association of Home Builders. At the same time, 41% reported that they were involved in ‘manufacturing’, mostly roof trusses, although about a tenth of this group made entire
pre-cut homes. This snapshot hints at the routine readjustment of firm boundaries (cf. Voordijk et al., 2000).

The existence of a myriad of frequent, rich, blurred and fluid interconnections among firms strongly indicates that local building industries function as flexible networks. Unfortunately, the task of describing any such network is daunting and, partly because the theoretical implications of such a description have not been recognized, no-one has attempted it. In this regard, as in many others, local building industries are similar to industrial districts. But there are some important differences.

**Builders and industrial districts: differences**

Their most obvious and fundamental difference with Marshallian districts is that local building industries are not only ubiquitous but also locally autonomous. Housebuilders do not rely on exports to distant markets; most do not even export project management skills to the nearest town. On the contrary, they function in effect as a non-basic activity, responding to local demand. As a result, on their own they do not dominate the local employment scene, and building does not saturate the social, cultural and political ‘atmosphere’ (cf. Marshall, 1922; Markusen, 1996; Amin 2000: 153, 162–3). In Becattini’s (1990: 38) terms, each industrial district of home building may occur in a ‘naturally and historically bounded area’, but community and firm do not ‘merge’. This might seem to limit the clout that builders can wield: they have some influence in every city, but are nowhere dominant. In fact, however, builders are part of a local network of groups that have interests in real estate. Apart from subcontractors, trades workers and suppliers, this network includes landlords, land developers, real estate agents and ancillary professionals. Collectively, in part because local governments depend on the local property tax, these groups play an important role in local politics, through what Molotch (1976) has conceptualized as the local ‘growth machine’. As part of this powerful lobby group, builders may have carried almost as much weight as those manufacturing industries that are concentrated in industrial districts. The comparison is at least plausible and merits closer study.

In other ways builders are more obviously different from other locally organized manufacturing industries. As an industry, home building involves a unique relation to place: production occurs at dispersed and ever-changing sites. Whether they proceed in coordinated waves, or whether they literally intermingle on site, subcontractors must all work at each location (cf. Maisel, 1953: 58; Eccles, 1981a). This creates unusual problems of accounting and supervision. This is well appreciated by industry insiders, including Frank Gilbreth, a founder of time and motion study, who worked for some years as a contractor. In addition to devising new scaffolds, and methods of performing routine tasks such as bricklaying, Gilbreth also proposed field procedures for management and accounting (Gilbreth, 1908a; 1908b; 1909). Close observers agree that it is above all the persistence of production on dispersed sites that has helped small builders remain competitive (Haber and Levinson, 1956: 20). This is especially true for construction on infill sites and in the booming renovation business.

The problems of supervision are enormously compounded on sites that lie beyond easy commuting range. Large builders have solved this problem in a variety of ways. The Levitt brothers concentrated their energies in a very small number of exceedingly large projects, which they developed in sequence. Although many observers have suggested that the Levitts led a post-war trend among large builder-developers, their strategy was unusual. In Australia, Jennings went national by collaborating with state governments on public projects (Garden, 1992). Except during the second world war, in the United States and Canada joint ventures have more commonly occurred entirely within the private sector. These have potential, but they multiply both the costs and the risks. Ned Eichler (1982: 114–5) states that his father’s company only ran into problems when it expanded its geographical range of operations (Cassimatis, 1969: 66–7). A recent business failure in Toronto exemplifies the point. In Toronto in the early 1990s,
a recession destroyed a joint venture between Bramalea, an Ottawa-based developer, and a local custom builder (Murray, 1991). It is likely that without the difficulties of joint management, this project would have survived, probably by slowing or suspending operations for a year or so. It is not surprising, then, that companies that wish to expand have often preferred to do so in ways that do not involve multi-city building operations. In the early years of the twentieth century, for example, kit manufacturers produced catalogues and shipped anywhere in continental North America (Schweitzer and Davis, 1990). Some were willing to supervise the construction of homes in their home communities. The Los Angeles Investment Company was one, but its 1912 catalogue made it clear that they would ‘not build outside of the immediate vicinity of Los Angeles’ (Los Angeles Investment Company, 1912: 3). Shipping kits was one thing, but home building quite another.

A further, major difficulty involved in producing homes on, or for, dispersed sites is the variation in local regulation. Despite continuing efforts to develop and promote national building codes, to this day standards vary from place to place. They pose a major barrier to the producers of manufactured homes, and are a significant problem for on-site builders who wish to move into new territory (Grebler, 1973: 70–1; Koch, 1958: 56–60; Manvel, 1968). There is some evidence that tight regulation favours small on-site builders over the large (Somerville, 1999). Other regulations govern, sometimes by prohibiting, non-union labour or tradesmen who are not registered locally. These do not prevent builders from entering new markets, but by requiring the use of local workers and contractors they do pose an additional barrier. As one Toronto-based observer has put it, outsiders need an enormous amount of ‘local knowledge’ of suppliers, subcontractors, union regulations and work rules, and building codes, all of which must be ‘fleshed out with much detailed data if that contractor is to be successful’ (Birrell, 1978: 553). More than mere data are required. Outsiders are unknowns: they must earn the trust of suppliers, subcontractors, lenders and building inspectors (cf. Grebler, 1973: 71). Given the complex embeddedness of local building industries, outsiders face an exceptionally steep learning curve. Significantly, one of the main tasks of those builders who operate in more than one place is the maintenance of a good working relationship with local municipal regulators (Gertner, 2005).

Implications for research

Housebuilding functions in many ways like the industries that cluster in manufacturing districts, but the ubiquity and local autonomy of the industry, very apparent in Ontario, undercuts its local influence. Other, unique features of the business equip it very well to defend its interests against outside competition. This way of thinking about housebuilding sheds important new light on the character of the industry. In particular, it helps us to characterize and identify the features that have enabled local housebuilders to resist, and adapt to, external competition. We believe that it also offers some intriguing possibilities to probe the character and resilience of industrial districts in general.

The building industry

Most North American observers have viewed the building industry as a conundrum. For decades they deplored its inefficiency and advocated mass production, yet small builders persisted (Harris and Buzzelli, 2005). How could this be? Some researchers have defended specific industry practices, notably subcontracting, but they have not offered a theoretical framework to explain the durability of localized production. Modern conceptualizations of the Marshallian industrial district would appear to be an excellent starting point. This model rationalizes subcontracting among many small, specialized firms, and it also links and explains other prominent features of the industry. These
include the persistence of occupational mobility and of blurred, fluid relations among firms. Moreover, the model relates these to geographical concentration at a particular scale, essentially that defined by the daily commute.

In such terms, it becomes possible to sketch a plausible account as to how the culture of local building has met external competition, usually from larger enterprises. Over the past century, local on-site builders in North America have faced two external threats. The more recent has come from the regional or national builder whose incursion into larger metropolitan markets has displaced some local builders and retailers. Given the key role that suppliers have always played in the industry, we may speculate that the recent growth of national builders has been aided and abetted by the parallel emergence of large retailer chains. We know little about how local builders have responded, but the literature on industrial districts indicates that we should look, in particular, to the embedded networks that coordinate the local industry, and to the informal relations of trust that sustain them. In this connection, a survey of the Star, the leading newspaper for the Toronto-centred region that we undertook for the 1990s, offers some tantalizing clues. In this period, as indicated previously, Barrie was the metropolitan centre that felt the brunt of competition from Toronto builders. There, in 2000 business was booming, and Toronto builders were finding it difficult to secure local tradesman. First View Properties Ltd, however, one of the largest local builders, claimed to be having no problem. The owner commented that ‘we’ve grown up with our trades and built up a loyalty that goes both ways’ (Avery, 2000). Local trust had been earned, and counted. Another example shows that it extended forwards to the customer as well as backwards to the subcontractor and supplier. In Elora, a town located about the same distance as Barrie from Toronto, Keating Construction was capitalizing on its reputation to meet Toronto competition. For 40 years it had hired only locals, and indeed had been using the same drywaller, framer and bricklayer for all that time (Naylor, 1998). As a result, they had built a local reputation. As Tom Keating commented ‘we’re not out-of-towners who disappear after the project goes up’ (Naylor, 1998). By creating networks of trust local builders contrive to survive, and sometimes even to thrive. Our evidence shows that this is no longer true in Barrie but, elsewhere in Ontario, networks still enable local builders to dominate the construction scene.

A more radical threat to local builders has come from manufacturers who ship whole homes into dispersed markets. In the early twentieth century the main initiative came from mail order businesses such as the Los Angeles Investment Company and, more importantly, Sears and Aladdin. The major threat was to retailers, but builders and tradesmen were affected too. Kit homes came with assembly manuals, and a significant minority were erected by owners. Even when buyers employed local contractors, less work, and especially less skilled work, was involved. Potentially, local jobs and indeed the whole local production network were threatened. At first, led by dealers and their regional associations, the response was defensive. Attempts were made to boycott the mills that supplied the kit manufacturers, and to exert local influence by pressuring newspapers not to carry advertisements for kits, and banks not to finance them (Bryant, 1922: 318–45; Yost, 1935: 5). The catalogue companies took them to court, and their reputation was tarnished. By the 1920s they were responding more positively. Urged by their associations and trade journals, they began to ‘sell homes not lumber’ (Butler, 1918; Southern Pine Sales Corporation, 1919; Hood, 1928). This meant ‘merchandizing’, stocking a wider range of building materials, constructing displays, and even producing their own kits. This trend gained momentum after 1945, when some reinvented themselves as large, one-stop building supply emporia, relocating away from freight yards and main streets to the new suburban auto strips (Wall Street Journal, 1954; Harris, 2000). In the long run, then, one of the industry’s main responses to the kit manufacturer has been Home Depot.

Although kits remained in the market for a time after 1945, the main post-war competition has come from the producers of manufactured homes. Here, clearly, was a
wholesale challenge. We do not know much about how local building industries have responded. It is likely that their first instincts were again defensive, to use their local influence to get municipalities to zone out mobile homes, or to enact and enforce regulations that prohibit specified materials or methods of construction. In parts of the Sun Belt, however, they have had to cede territory chiefly in the lower segments of the housing market. Here, the resilience and flexible efficiency of local networks have met their match.

Such local networks are more than plausible theoretical constructions: they are expressed in quite powerful local organizations. Toronto, for example, has had a homebuilders’ association since 1921. In the early years its membership reflected its name but, especially after 1945, it diversified. Today, 60% of its members are not in fact builders: they include suppliers and larger subcontractors, together with architects, lawyers and brokers (Usher, 1999). Such associations speak for the embedded local networks through which most homes are still built. Through their connections to provincial and national associations they have been important channels of communication, both in Canada and in the United States: they diffuse innovations, focus debate, and coordinate political pressure. They have surely played a leading role in enabling such networks to respond and adapt to change.

This historical sketch raises more questions than it is able to answer. How have builders and dealers viewed the continual adjustment of firm boundaries that each has undertaken? How have each adapted to the different types of external competition? Did kit manufacturers threaten the integrity of local networks because they posed so much more of a challenge to dealers than to contractors, an unwitting policy of divide and rule, and what does that say about the importance of trust and cooperation within such networks? More recently, how have regional and national builders entered local markets? Have they tapped local networks by negotiating joint ventures with local partners, who in turn hire tested local contractors, or have they bulldozed their way in? It is possible to ask some of these questions without reference to the conceptual model of an industrial district. But such a model greatly enriches even where it does not define such questions, offering insights into the dynamic operation of local building industries and suggesting comparisons with those other industries that have found it effective to organize in manufacturing districts.

Industrial districts

To the extent that it is reasonable to view the local building industry as operating in an industrial district, case studies of housebuilding have much to offer that might be of theoretical significance. The fact that housebuilding does not meet one of the usual criteria of an industrial district — production for export, coupled with local dominance — raises an intriguing question. It has often been assumed that local dominance has given firms in industrial districts an important competitive edge. The example of home building indicates that this point may have been overstated.

More importantly, housebuilding offers intriguing analytical possibilities. Among those industries that are organized, wholly or in part, in manufacturing districts, most are clustered in only a very few areas. For this reason, and because no two industries are comparable in terms of their firm size structure, level of specialization, capital requirements, orientation to market and so forth, it is impossible to determine how the organization and flexibility of such districts varies, for example with size. But there are as many industrial districts of home building as there are cities. Like cities, they vary continuously in size, as well as location in relation to one another. Case studies of the home building industry, then, may allow us to develop, test, and refine a range of arguments about the way in which industrial districts are organized and compete. The evidence for Ontario suggests that in relative terms small builders play at least as significant a role in large cities as in small. In absolute terms, then, the number and complexity of market interactions in large metropolitan areas is staggering. How do
sheer numbers affect the networked organization of industrial districts? Do trust, informal and customary relations become less important, or more? Is Eccles' quasifirm more common in small centres, where choice is limited, or in the larger centres, where it might be overwhelming? Do firms and subcontractors in the larger districts became more efficient, perhaps because more specialized, and in what ways? Some of the answers, of course, will be specific to the building industry. But some could throw light on all of those industries with which housebuilding shares at least some organizational features. The obvious examples include other sectors of the construction and development industries, which have recently been affected by globalizing forces but less than many writers have supposed.

One of the best reasons to think of cities as the industrial districts of housebuilding is that it potentially broadens our understanding of the nature of industrial districts, and of the significance of the literature on this subject. Classically, districts have been thought of as residuals or counter-currents to the trend towards larger and more geographically extensive forms of economic organization. As long as the housebuilding industry could be regarded — as it was for many years — as ‘backward’, then the present argument might seem to qualify this view in only a minor way, in effect by suggesting that it is possible for a residual industrial sector to persist everywhere. But recent discussions of housebuilding, and of the development industry more generally, have effectively challenged such a view. Fainstein (2001), for example, has suggested that property development is in the vanguard, as the epitome of flexible, project-based development, in which ‘concrete personal relations’ can count for a great deal (cf. Wood, 2004: 124). The case can be overstated. Each industry is unique. But to the extent that many urban industries, including those in personal and business services, share qualities with housebuilding, then the implication of our argument is that the discourse of industrial districts may help to illuminate how, and why, globalization encounters local limits.

In this connection, one of the most important messages to emerge from the literature on industrial districts is that the local–global encounter is best viewed historically. Forms of economic organization that are locally embedded depend on trust, and developing trust takes time. In that light, case studies of home building would also make it possible to address a series of questions about how local industrial networks respond to external competition (Grabher, 1993: 26). It appears that kits made their greatest inroads in rural areas and smaller urban centres. Was this because the smaller districts were organized differently and perhaps less effectively: were they slow to adapt because they did not develop or maintain ’pipelines’ to external sources of information? Did they respond differently to outside competition? In recent years, for obvious reasons, national builders have concentrated their energies in the larger markets. To the extent that their market penetration has varied, is this due to variations in the way that local building industries have been organized, and have mobilized through the efforts of their local associations? By addressing such questions it may be possible to extend our understanding of the manner in which industrial districts of all kinds have managed to thrive, and where globalization has met its match.

We have developed our argument with particular reference to the North American, and in passing the Australian, scene. There are geographical variations within these continental regions but, for the most part, site builders operate on a small scale, similar technologies are used everywhere and are organized in similar ways. In particular, and although systematic evidence is lacking, it is likely that in most cities the building industry shows a level of local autonomy that is similar to that of the metropolitan areas in Ontario that we described earlier. Elsewhere, for example in Japan, Britain and some parts of Europe, local builders play a smaller role (Patchell, 2002; Ball, 2003). In these countries, would it be useful to view housebuilding in terms of the concept of industrial districts? We believe that there is enough circumstantial evidence to suggest that it would be. There are a number of important institutional differences between these countries, of course, ranging from the regulatory environment to the organization of finance. Even
so, in Britain and Japan small, local builders are still common. Site production is still the norm; almost all tradesmen and contractors, together with many suppliers, are also local. This is especially true in the renovation sector, which continues to grow. Local networks of building exist, then, though they take a different form than in North America. Even today they offer a valuable entry point for understanding not only the character of a neglected industry but also of a widespread form of industrial organization.

Michael Buzzelli (m.buzzelli@queensu.ca), Department of Geography, Queen's University, Kingston, Ontario K7L 3N6, Canada and Richard Harris (harrisr@mcmaster.ca), School of Geography and Geology, McMaster University, Hamilton, Ontario L8S 4K1, Canada.

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Résumé

En Amérique du Nord, le secteur de la construction de logements est omniprésent et autonome au plan local. En Ontario, dans les années 1990, 81% des pavillons urbains étaient bâtis par des entrepreneurs locaux, la proportion variant selon l’isolement urbain. Les zones urbaines peuvent être pensées comme les districts industriels de constructeurs de maisons: de petites entreprises nombreuses et spécialisées collaborent souvent au sein d’un réseau de marché bien ancré et prospère; il est normal de sous-traiter; les réseaux et les limites des entreprises sont fluides. La théorie des districts industriels procure une terminologie pratique pour analyser ce secteur ignoré qu’est la construction. Sur le plan analytique, ce secteur offre des possibilités inégalées d’explorer la dynamique des districts industriels et d’observer comment mondialisation économique et limites locales se rencontrent.