



## The Sociality of Domestic Environments

### 1. The Historical Shaping of the Home

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# The Sociality of Domestic Environments

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**Abstract.** This deliverable, the first in a series investigating the sociality of the domestic environment, sets out explicate the historical shaping of the home. We attend in particular to the socio-historical factors through the influence of which the modern domestic space has come to assume its recognisable form. Particular attention is paid to the role of architecture, technology, and the formative character of social interaction. We suggest that these three factors constitute a distinct domestic legacy, which it is important for design to build upon in constructing the home of the future.

## Background to the study

The following study has been undertaken as part of the EPSRC funded Interdisciplinary Research Collaboration *Equator*.<sup>1</sup> The central goal of the Equator IRC is to promote the integration of physical and digital environments with the express aim of improving the quality of everyday life by building and adapting technologies for a range of user groups and application domains. The home is one of those domains and household members constitute the range of user groups. The purpose of this study is to identify significant social factors that shape the domestic environment and the everyday activities that occur there. The emphasis on social factors derives from the recognition by designers that the success of systems relies on the social contexts in which they are placed and used. The aim of this deliverable is to investigate the socio-historical context of the domestic environment in Britain, which has shaped the home largely as a result of the process of industrialisation. The assumption here is that, as in the workplace, this historical legacy will have profound impact on design and that developing an appreciation of that legacy will serve to inform the design of appropriate technologies for the home.

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<sup>1</sup> <http://www.equator.ac.uk>

## **Introduction to the study**

The category “house” is one that we use to describe the space that we “live in” and, in so doing, we distinguish that space from others in the world.<sup>2</sup> Most, but not all, houses are sub-divided in order to provide spaces for a common range of social activities. We call these spaces “rooms”. We take our meals in some of them, and entertain, bathe, sleep, cook, etc., in others. A major problem encountered when undertaking an analytical investigation of such concepts as “house” and “rooms” is that they play a fundamental role in everyone’s lives and yet, notwithstanding this importance, both they and the common activities that are tied to these categories, are largely taken for granted. The sheer ubiquity of the house coupled with its overwhelmingly subjective nature make the house and home poor material for abstraction.

Conventional sociological research into the domestic environment often forms part of broader undertaking designed to understand the nature of modern society. Consequently, studies of involving the home and technology have regularly been employed as a resource to support a theoretically driven perspective. Recurring themes in this kind of study of the home or household include: the social construction of the home, the gendering of domestic labour, the family and children, and the consumption of technology in the home. While professionally defensible, many such studies fail to resonate with people’s ordinary everyday experiences of the home however, and a theoretical approach (as that notion is understood in the social sciences) is therefore eschewed here.

For many people the home is construed of as a space where they may retreat from the hustle and bustle of everyday life, a place for rest, relaxation, leisure, and entertainment; a safe haven constructed to promote the well being of its members. The common sense maxim “an Englishman’s home is his castle” illustrates the unique sense the domestic space has for the British, conveying a notions of privacy and a degree of autonomy and independence from other more public settings. Despite its uniqueness, the home is nevertheless a known in common social institution, governed by tacit rules and meanings and protected by the laws of trespass and nuisance. Although statutory rights of entry are granted to the members of a number of

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<sup>2</sup> House here is used as a term designed to incorporate an indeterminate range of residential constructions which including: apartment, flat, tenement, cottage, maisonette, bungalow, mill, barn, oast house, penthouse etc, etc, etc.

organizations, such as the fire brigade or authorised personnel from utility suppliers in certain emergency situations, uninvited entry even in cases of an emergency may not be attempted without exposing the trespasser to the risk of legal sanction. For the members of society, the privacy of the home is commonly known to be sacrosanct.

Despite being a global phenomenon, albeit one that assumes varying forms, the home is a little understood environment. It is especially so with regards to its social organization and the commensurate development of computer-based technologies. One of the primary reasons for this absence in the literature may be attributed to the difficulty of accessing the home in order to study it. The “private” character of the home makes “public” investigation a troublesome enterprise. The public-private dichotomy masks a deeper source of trouble, however, namely the tension that exists between the practical attitude that underpins everyday activities in the home and the Rational attitude that underpins scientific activities (Schutz 1964).<sup>3</sup> Simply put, the home is a troublesome investigative site as it is not readily amenable to “scientific” methods of study. Almost by its very nature, the home is the antithesis of the controlled environment and it does not, as such, lend itself easily to the rigours of Rational inquiry. For our part, we have no interest in “scientific” approaches. We are not interested in conducting experiments, establishing control groups, or constructing theories and other general representational formats with which to account for the social organization of the home. This is not to say that we have no interest in science, whatever that might be, but that we have no interest in “scientism”. No interest, that is, in the misguided believe that everything – the sociality of the home included – may be studied through the methods of natural science. This is not to say that the sociality of the home cannot be studied through the use of the methods of natural science. Rather, it is to draw attention to the fact that the inappropriate use of the methods of natural science serves to

impose, by fiat, a version of reality insensitive to the ways in which the social world is a meaningful one and one constructed by those who live within it. In other words, [the] methods produce or construct the social reality they intend to investigate ... through the [use of the]

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<sup>3</sup> Schutz, A. (1953) “Common Sense and Scientific Interpretation of Human Action”, *Philosophy and Phenomenological Research*, vol. 14, p. 1-38.

methods themselves; methods which do not so much discover facts about social life as construct a version of that life <sup>4</sup>

Methods, whether avowedly scientific or not, must be compatible with the subject-matter they set out to investigate. Accordingly, we reject the methods of natural scientific investigation and turn first to a consideration of the socio-historical character of the domestic environment in order to identify significant factors implicated in the shaping of the home and which are, we believe, of relevance to the design of computer-based technologies.

### **THE HISTORICAL SHAPING OF DOMESTIC SPACE**

The history of the home is as old and complex as the human species that built and inhabited such dwelling places. Even an attempt to provide a synthesis of the history of the home and urban change covering a period of 240 years must be seen as over ambitious. A further complication faces the authors of any introductory text: what to include and what to leave out? In this section of the deliverable we focus selectively on the development of the home in the Britain from around 1760 to the present day. This period is particularly relevant as it is characterised by the emergence of social processes that gave rise to industrialisation and developments in urban growth that have shaped the nature of modern day life. These fundamental societal changes are reflected in house building trends and the evolution of domestic space. The developments we identify in this historical synopsis should not be regarded as discrete phenomena. Rather they should be seen as convenient markers under which a discussion of significant aspects of the home's evolution in "modern" times is organised.

#### **Pre-industrial and early industrial development (1760-1840)**

The image often evoked of pre-industrial Britain is of a pastoral "golden age". Pre-industrial life was governed by very different daily rhythms to our own. Working for profit was not yet a driving concern. On the contrary, work got done as and when it needed to be done. Time, particularly mechanical time, had not yet been equated with profit (whether of the soul or the pocket), rather it was something to be enjoyed at

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<sup>4</sup> Hughes, J.A. (1993) *The Philosophy of Social Research*, London: Longman.

leisure. At the heart of this romantic idyll stood the country cottage. Built solidly of stone, with a thatched roof and mullioned windows offering a glimpse of roaring fires, rustic furnishings, and well-scrubbed floors. Jovial country squires and peasant labourers alike gathered round tables laden with game to eat hearty meals swilled down with copious amounts of local ale. Life it seems was idyllic and carefree in this mythical time gone by.

The reality of pre-industrial life was of course much harsher, especially for the vast majority of the population. The agricultural labourer in particular was among the worst paid, fed, and housed of all the workers in pre-industrial rural Britain.<sup>5</sup> The home of the labouring classes was, in general, anything but solidly built, rustically furnished and clean but, on the contrary, ramshackle, unsanitary, and very overcrowded. “Hovel” is a word that William Cobbett used to describe the average dwelling.

Look at the miserable sheds in which the labourers reside! Look at these hovels, made of mud and of straw; bits of glass, or of old, off-cast windows, without frames or hinges frequently, but merely stuck in the mud wall. Enter them, and look at the bits of chairs or stools; the wretched boards tacked together to serve for a table; the floor of pebble, broken brick, or of bare ground; look at the thing called a bed; and survey the rags on the backs of the wretched inhabitants; and then wonder if you can that the goals and dungeons and treadmills increase, and that a standing army and barracks are becoming the favourite establishments of England! <sup>6</sup>

This is not to say that all housing was grossly sub-standard, there still remains many well preserved and restored remnants of the nineteenth century and much older in both towns and rural settings. However, these are the exception rather than the norm, survivors are generally structures built by wealthier owners and are relatively rare examples of good craftsmanship and careful maintenance.

By way of contrast, pre-industrial working class homes were of vernacular construction, largely uninfluenced by the architectural. The labourer’s home was not, typically, a planned construction with regard to need, use and function, beyond minimal protection from the elements. Although craftsmen were employed if costs permitted for particular jobs of work, masonry, joinery and rendering, the basic

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<sup>5</sup> Heath, R. (1893) *The English Peasant: Studies Historical, Local and Biographic*, London: T. Fisher Unwin.

<sup>6</sup> Cobbett, W. (1927) *Rural Rides in the Southern, Western, and Eastern Counties of England*, vol. 1, Dent: Everyman. Originally published in Cobbett’s *Journal* (1821).

construction of the pre-industrial working class home was a matter of vernacular expertise that any labourer might be expected to possess.<sup>7</sup> Many dwellings consisted of a single storey and single room only, with slim partitions separating people from livestock. The standard, insofar as it makes sense to speak of such a thing, was probably the three-roomed house consisting of a single room downstairs – a kitchen in which the family lived, cooked and ate – and two small rooms upstairs used for sleeping a typically large family. Windows were few and small, running water virtually unknown, and indoor sanitation was non-existent. As Burnett (1978) describes the situation,

The chief defects of such structures were that they were often dark, damp and unsanitary, difficult to warm in winter or to ventilate in summer, inconvenient for cooking and cleaning and, above all, grossly overcrowded for the often large families who had to eat, cook, sleep and sometimes work at domestic industries in them. Yet, bad as they were by any civilised standard, the greatest complaint was that there simply not enough of them.

#### URBAN GROWTH AND CHANGE

What separates the eighteenth century from earlier periods in terms of both population and urban growth is the rate and spatial distribution of such growth. From the middle decades of the eighteenth century until the later decades of the twentieth, overall population growth and urban growth were to be closely linked. Prior to the eighteenth century, population growth had been slow but steady. Although overall population totals remain a matter of some speculation at such early dates in the absence of national censuses, it is broadly agreed that the population of England, for example, doubled from about 1551 to 1751 from *c.* 3 million to nearly 6 million. As late as 1700 the great mass of the population was rural, both in terms of location and occupation. Also, most of the population lived in the southern and eastern parts of England — reflecting a better climate and more productive soils, and a map of population distribution that had evidently changed little from the Roman period.

Estimates of the urban component of the population by 1700 vary considerably, partly because of the basic difficulty of differentiating between a small town and a large village. What was striking about the urban hierarchy of pre-industrial Britain was its extremely lopsided nature. There were perhaps 600 very small market towns

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<sup>7</sup> Burnett, J. (1978) *A Social History of Housing*, London: David and Charles.

scattered over the landscape, with populations of less than 5000 in 1700. Many of these were “towns” only through their market function or administrative significance, not through their population size. A second tier of towns, perhaps 100 in all, had populations of perhaps 7000-8000 in 1700, while a much smaller third tier in the hierarchy had populations in excess of 10,000 in 1700. This third group included Norwich, York, Bristol, Exeter and Newcastle. They were all important regional centres. Only Bristol was a relative newcomer to this list, reflecting its growing trade with the Americas. The others had retained their position since the medieval period.

Top of the pre-industrial hierarchy came London. As early as 1500 London’s population had been estimated to be as high as 60,000 — or at least six or seven times the size of the next towns in the hierarchy. Despite setbacks such as the Plague and the Fire in the seventeenth century, London continued to grow with what to contemporary observers was frightening rapidity, reaching 250,000 in 1600 and doubling that population to half a million by 1700. In 1700 London was the largest city in Europe, approached only by Amsterdam in size. Even before the clear onset of a new wave of population growth in the later decades of the eighteenth century, London was the object of suspicion and criticism. It certainly “absorbed” people (and killed them amidst its squalor) and its continued growth relied very heavily on migration from elsewhere in Britain. Indeed throughout the pre-industrial period, and well into the nineteenth century, urban mortality rates were twice those in rural areas, though urban birth rates were also significantly higher.

London also dominated the national economies of England, Wales and even Scotland. It was not only the focus of wealth and capital, its huge population required feeding. The influence of London and its need for food had effects on farming practices as far off as Scotland, while the growing consumption of coal in London involved some 650,000 tons being transported down the east coast from Tyneside and Wearside in 1750. The importance of London as a focus of urban population growth has diminished in relative terms, though it remains well over twice the size of any other urban area in Britain. Its importance as a focus of urban problems and in determining urban policies has, however, continued into the twentieth century. It has been estimated that by 1751 the population of Great Britain as a whole was about 7.4 million, of which the majority (some 5.8 million) lived in England. The great majority still lived in villages. Less than 17 per cent lived in towns with populations of 10,000

or more, and nearly two thirds of this urban population were to be found in London itself which had a population in 1751 approaching 700,000.

In 1751 the old hierarchy of urban centres under London still survived largely intact, though Birmingham was now the fifth largest town in England, and Liverpool the sixth, with about 23,000 people each. The new “order” was beginning to emerge, though to most contemporary observers in the later decades of the eighteenth century the pace of economic and demographic change would not have been particularly apparent. The physical impact on the landscape of mining, industrial and urban development would have been localised until the mid nineteenth century. By 1800, however changes were becoming apparent. Britain was experiencing a population explosion, and demand for housing outstripped supply. The lack of housing was underpinned by several other demographic factors. On the one hand, widespread seizure and private ownership of “common land” prevented the labouring classes from responding to the growing crisis by building their own homes, however inadequate they might have been. On the other hand, the average rural labourers wage was around eleven shillings a week. There was also little motivation for speculative builders to invest large sums of money in a widespread building programme, as the prospects of generating rewarding financial dividends were exceptionally poor.<sup>8</sup>

#### ECONOMIC CHANGE

Agricultural goods were now being produced through new techniques of intensive farming for the mass market rather than local needs, a shift that in turn transformed relations between landowners and labourers.<sup>9</sup> Hiring labour circa 1800 often involved a practice whereby food and lodging were provided as part and parcel of their working arrangement. Often termed “bread and boarded” this arrangement featured labours and their family living with their employer. The market shift brought about change in these practices. Agricultural goods became valuable commodities to be sold rather than exchanged for labour, and profit could be made in renting out lodging or accommodation. In short, the emergence of industrial capitalism brought with it not only technological changes in the means of production but also in the relations of production which saw the labourers “move out” of the farmstead into the surrounding

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<sup>8</sup> Eden, F.M. (1928) *The State of the Poor*, London: Routledge.

<sup>9</sup> Marx, K. (1973) *On Society and Social Change* (Smelser, N.J.), Chicago: University of Chicago Press.

villages. In turn, population growth, and more specifically the attraction of more people away from the villages and the land into growing towns and cities, led inexorably to the decline of old and long established order. The old order consisted of a strict vertically organized society, dominated by landownership. At the top were the landed aristocracy and under them, other levels occupied the gentry, squires and professional men - particularly doctors and the clergy. Tenant farmers, artisans and tradesmen, were placed lower down the hierarchy, while labours, paupers and vagrants occupied the lowest levels. This intricate structure had survived intact for centuries, held together by patronage and dependence.

The stress engendered by economic development and concomitant urbanisation led to the breakdown of the old order, though the process was nothing like as rapid as some commentators have suggested. The social structure in Britain in 1850 was closer to that of 1760 than 1900. With urbanisation, however, there gradually emerged a different social order, one of horizontal rather than vertical linkages, and so a set of “classes” slowly emerged out of the disruption. The new “working classes” consisted of the great majority of the newly urbanised population. By the 1840’s the widespread existence of defective slum housing throughout Britain was known and the term “slum” had assumed common usage. The Health of Towns Report 1840 referred to the “miserable and neglected state of the dwellings of the poor” and, with particular reference to working class housing in Liverpool and Manchester, where it was remarked that it was “scarcely possible to conceive any construction more prejudicial to the health of the inhabitants”. The “problem” of working class housing in mid-Victorian British towns and cities was not simply a matter of building more and better dwellings for artisans; it was rooted in the structure of the new industrial society itself.

As a direct result of population growth and significant changes in the means and relations of production, the proportion of people living in urban environments rose sharply from some twenty per cent at the turn of the nineteenth century to fifty-five percent by 1850. The population in England and Wales, for example, doubled in this period from some nine million to around eighteen million and people flocked to the newly emerging industrial centres: Manchester, Liverpool, and other towns and cities in the North East, the West Riding, and Black Country. Around fourteen per cent of the population inhabited London. Ten large urban environments of over one hundred thousand inhabitants emerged and accounted for another twenty-five per cent of the

population. Another one hundred and forty towns of between twenty thousand and one hundred thousand inhabitants accounted for a further thirteen per cent of the overall population in England and Wales by 1850.<sup>10</sup> These fundamental changes in the structure of society, brought about by the twin processes of industrialisation and urbanisation came to shape the domestic space of the “modern” home in some very recognisable ways.

This reshaping of domestic space did not happen overnight. The growth and developments in house numbers and design reflected the often sporadic and serendipitous changes in certain urban locations which characteristically followed the new economy. The city centre, once the domain of the wealthy, was abandoned to the working classes and the substantial houses at the heart of the city were sub-divided to form massively overcrowded “rookeries” (or “slums” as they came to be called later in the century).



**Figure 1.** The rookeries

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<sup>10</sup> Law, C.M. (1967) “The Growth of Urban Population in England and Wales: 1801-1911”, *Transactions of the British Institute of Geographers*, vol. XLI.

Immediate profit motivated the creation of the rookeries and it was a practice that quickly spread throughout the country. In 1842 the Poor Law Commission reported, for example, that thirty-four houses in one street in Leeds had been sub-divided to regularly contain some three hundred and forty people, and twice as many as that when itinerant labourers passed through the city.<sup>11</sup> The building of new housing was left to market forces, suggesting that speculative builders would be motivated by the same economic law as those that prompted entrepreneurs to built factories. In the absence of planed development, however, a number of distinct domestic urban forms emerged within and around the rookeries to house the working classes.

#### CELLAR-DWELLINGS

Without doubt the most squalid dwelling of all within the rookeries was the cellar dwelling. Invariably dark, damp, and without drains, the cellar dwelling was the breeding ground for much of the disease that plagued the industrial environment. Cellars were pressed into service with the rise of large-scale migration, particularly from Ireland in the 1820's. A typical cellar dwelling not only lacked the basic utilities of water and drainage but was also largely unfurnished in any recognisable sense of the word, and often housed livestock as well as people. Regularly flooded with effluent overflowing from the streets, the average life expectancy for the cellar dweller was fifteen years.<sup>12</sup> Fortunately cellar dwellings were not widespread, but restricted to the older industrial towns. The new emerging industrial towns had few if any cellar dwellings (Nottingham had only 200 in 1830 and Birmingham none, for example). The majority of cellars were located in Manchester and Liverpool, where it is estimated that some twenty per cent of the local labouring population lived, and died, in single-roomed subterranean mires.

#### COMMON LODGING HOUSES

Mass migration from the countryside saw the transformation of the Georgian town house into common lodging houses. These were originally employed to fill the short

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<sup>11</sup> *Inquiry into the Sanitary Condition of the Labouring Population of Great Britain* (1842) Report to Her Majesty's Principal Secretary of State for the Home Department from the Poor Law Commissioners.

<sup>12</sup> Chadwick, E. (1965) *The Sanitary Condition of the Labouring Population of Great Britain 1842*, Scotland: Edinburgh University Press.

term housing needs of migrant or transient workers. However, the general lack of housing, eventually transformed these common lodging houses from places offering temporary accommodation to long-term residences. Entire families came to live in lodging houses for extended periods, and they often became permanent residences for the near-destitute and criminal classes. Large families were crammed into small rooms (often less than fifteen feet square), and single people could expect even worse conditions, up to ten or more being obliged to share one room. Common lodging houses had little or no heating, cooking or sanitation facilities. People, and their linen, went largely unwashed and effluent accrued in the poorly ventilated rooms.

#### TENEMENTS

The alternative to the common lodging house was the tenement house. Sub-divided into separately occupied rooms on each floor, the tenement house was “designed” for longer-term tenancy. As with common lodgings, facilities in general and sanitation in particular were exceptionally poor, one water pump and “privy” per building was to be considered a luxury. Rooms again were massively overcrowded, however the tenements differed from the common lodging house insofar as it was possible for a family to rent two rooms. The renting of two rooms allowed the separation of living and sleeping, and marked a noticeable rise in a family’s living standards. Two rooms were considered the absolute minimum for maintaining an impression of social respectability and in so doing promoted a place of abode from a mere shelter to a home. Two rooms were generally the best that most working class families could afford and as long as there was work to be had the tenement would prosper throughout Britain. Respectable as they were, tenements were generally run to maximise profit from rents. Poor materials and construction methods required such buildings to be regularly repaired. However the provision of building maintenance was something that most absentee landlords neglected. Tenements, as with most other forms of rented accommodation, rapidly became run-down, and squalid.<sup>13</sup>

#### THE BACK-TO-BACK HOUSE

The back-to-back house was the first industrial dwelling intentionally constructed for the working classes by speculative builders and building associations alike. Originally

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<sup>13</sup> Dyos, H.J. and Wolff, M. (eds.) (1973) *The Victorian City: Images and Realities*, London: Routledge and Kegan Paul.

emerging in the sixteenth century, the back-to-back did not become common-place until the nineteenth century.<sup>14</sup> The rising fortunes of the back-to-back came in the wake of the growing trend to separate cooking and eating from sleeping - a trend which came to constitute a new “minimal standard of living” – and with the emergence of mass produced materials which afforded mass market building at a low cost. The back-to-back house offered either a one-up-one-down arrangement of rooms or smaller two-up-and-two-down arrangement. As the moniker suggests, such houses were built back-to-back (in terraces separated by narrow “courts” or “back streets”) with no back or sides (apart from the “gable end”). This arrangement meant that the house was only one room deep and had no rear door. While poorly constructed by modern standards, the back-to-back offered a kitchen with a cooking range and chimney, bedrooms reachable by a staircase (rather than a ladder), and storage space (either in a cellar or pantry). The back-to-back had good windows, was ventilated, and provided access to a privy and water pump (located on the back street) shared by as few as ten houses. Furthermore, the back-to-back afforded a degree of private space by way of a front door leading into the residents’ exclusive space. The back-to-back was a raging success among the working classes, particularly in the newly industrialised North where it was still being built up until the 1930’s.

#### THE THROUGH TERRACE

Inspired by the Georgian town house, once the dwelling of the wealthier classes, the through terrace characterised speculative building across the country in the 19<sup>th</sup> century. Largely built to house the skilled worker, the through terrace had in addition to two ground-floor rooms and two bedrooms, an attic, cellar, garden or yard, and provided access at both the front and rear. The through terrace was well ventilated, had good windows front and back, and provided access to a privy shared by only three or four houses. It provided a great deal more space than the back-to-back and in that, importantly, for the further social “segregation of functions”, a trend which was beginning to shape the domestic space (Burnett 1978). The two ground-floor “living rooms” allowed for the further segregation of domestic activities, for example, and saw the separation of cooking and washing on the one hand, and eating and living on the other. For many, the front ground-floor room became the “parlour” or “front

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<sup>14</sup> Barley, M.W. (1963) *The House and the Home*, London: Studio Vista.

room”, containing the best furnishings and used only on special occasions. The through terrace was a much more flexible and economical building than the back-to-back and lent itself well to the evolution of the domestic space. The space at the rear of the building was easily transformed for domestic purposes through the addition of a “scullery” annexe, into which washing activities migrated for example. Other architectural innovations saw the extension of the scullery to incorporate the kitchen, a third bedroom built on top of the scullery, and the addition of an individual privy on the end of the annexe. The through terrace was also made wider to allow the construction of a hallway. Modification to the position of the staircase, which led to the first floor, also provided a way also separating the front room from the kitchen and scullery. Ultimately, the through terrace represented the upper limit of working class housing by the 1850s.



**Figure 2.** Working class housing in the mid 1800s: back-to-backs and through terraces

At this level it was possible to accommodate a family in seemly decency, to enjoy the comfort of one or two rooms from which the dirtier, smellier household tasks had been banished, to entertain friends and visitors in a parlour which announced not only respectability but some degree of refinement – in short, to a pattern of home life along the lines which the early Victorian middle classes were busily creating for themselves. (Burnett 1978)

### **Industrialisation and the home (1840-1914)**

Driving the development of the domestic environment was the constant expansion of industry, at the centre of which stood the wealthier classes. With the boom in heavy industry came a boom in the professions. As weaving, mining, shipping building and the rest rapidly expanded then so too the demand for managers, engineers, designers, and others grew. With the industrial revolution the growth of the middle classes exploded, and like the working classes they too needed a place to live. Middle class

social aspirations shaped the design and construction of the domestic space. Both the external and interior appearance of their homes mimicked the styles, layout, proportions, furniture, etc., that were once found only in the homes of the landed gentry and great industrialists.

Abandoning the inner cities to the poor, the middle classes followed the pattern of industrial expansion outwards. As the scale of industrial activity increased so to did the desire to become distanced away from dirt, noise and pollution. More persuasively perhaps was the perceived threat of moral danger. Social inquiries of the time “showed” patent links between poverty and crime. That theft, assault, drunkenness, and prostitution were concentrated in the inner core of the city.

The hearts of great cities were no longer places where children could be reared in Christian innocence, where womenfolk could walk without fear or men find peace and ease after the toil of the day. (Burnett 1978)

The movement of the middle classes away from the urban centre was not simply to escape the “evils” of the masses. Rather, it was more a positive migration to a more wholesome environment underpinned a new set of values, at the heart of which stood social integrity enshrined in religious belief. Following Christian values became a way of life that permeated the home. At odds with both working class and ruling class values in its origins, the emergent “protestant ethic” was rapidly becoming the dominant moral force throughout the nation by the middle of the nineteenth century.<sup>15</sup> Emphasis on the moral virtue of industry saw the workplace become a male dominated arena and the home governed by women.

Middle class women were initially excluded from the workplace on the grounds that it was not becoming of their “refined” nature, however, this was not the case for the working class females. Formally enshrined in various Acts of Parliament a woman’s place was seen by many as “belonging at home”. Enscenced in a prudent marriage, her vocation and duty was configured to promote the procreation and rearing of children. As a result of the widespread reinterpretation of religious doctrine, the Victorian home came to be regarded as an almost sacred institution. A place dominated by moral rectitude, in which children could be brought up in accordance

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<sup>15</sup> Weber, M. (1930) *The Protestant Ethic and the Spirit of Capitalism*, London: Allen and Unwin.

with newly established Christian principles of duty, industry, thrift, and sobriety conducive not only to their own well-being but to that of the ordinary society at large.

This shift away from the urban centres and the configuration of the home as an environment for promoting the well being of the family engendered a restructuring of social relations. In the first instance it brought the physical separation of working life from domestic life and promoted the development of a new urban form of living: *suburbia*. The nineteenth century speculative development brought about four distinct types of suburban space in response to the rapid growth of the middle classes. The development of suburban “villages” and “country villas”, the domain of the wealthiest band of the middle class, which were often up to ten miles or more from many city centres. For the less well off was the suburban “estate” and “roadside ribbon”, which were usually within walking distance of the city centre and allowed middle class professionals to get to work without undue effort. Public transport rose with expansion of industry and saw the commensurate spread of suburban forms, particularly the roadside ribbon, which saw housing spring up around the new improved road system. Whatever the particular form suburbia took, building of the home was for the first time largely characterised by architectural concerns.

#### ARCHITECTURE AND NEW SUBURBAN DOMESTIC FORMS

Previously the prerogative of the very wealthy, building design based on the classical orders together with the new Gothic styles of architecture became affordable. Formally trained architects, surveyors, designers and engineers prospered under the patronage of the middle classes. The opportunity to express one’s personality and individuality in house style and ornament became available to those who could afford it. Naturally, as with all fads and fashions, the “personal” and “individual” was thoroughly social in character and the architectural “style” and “ornament” of Victorian fashion marked the Romantic Revival. Paradoxically perhaps, with the austerity of the protestant ethic went a concern to break away from the well-ordered and symmetrical constraints of neo-classical form that characterised dominant Georgian architecture and ornament. The creation of suburbia afforded the opportunity to recreate a domestic life remote from the physical and moral dangers of the urban centre, which combined the advantages of urban life with those of a more rural existence but in a way that was distinctively different from both. The urge to escape the urban centre and return to nature was given concrete expression in the

revival of Gothic form. Underpinning the return of Gothic influence, and shedding some light on the urban paradox, was the popular belief that industrialisation ran the serious risk of becoming a dehumanising force, destroying not only the natural beauty of the land but more importantly the natural order of social life (which was certainly a great fear of Weber's).<sup>16</sup> Revival of the “natural” architectural form and ornament of Gothic Britain would, then, serve to balance the ugliness and inhumanity of widespread industrialisation.<sup>17</sup>

Nowhere was the potential of the Gothic more pronounced and clearly articulated than in the popular architectural copybooks of John Claudius Loudon.<sup>18</sup> Loudon drew up a wide range of landscape gardens, architectural styles, internal furnishings, and decorations for suburban homes, farmhouses, cottages, and public houses. His *Encyclopaedia* contained over two thousand illustrations, plans, and specifications for a wide variety of domestic forms built in the “romantic” style that characterised the Gothic Revival. The less extreme of these designs were widely copied and adapted by speculative builders. Sculptured gardens, pillared and pedimented porches, castellated parapets, decorative brickwork, ornate bay windows, together with a host of other architectural innovations became standard features of the suburban home. More than any other individual, Loudon was responsible for the demise of the classically proportioned Regency style that had dominated Georgian house building. Through the public appropriation of his designs, a different form of architecture became the order and new forms of elegance and internal comfort were established. The Romantic Revival saw the creation of a new sub-urban space predicated on the “gospel of individuality” (Dyos and Wolff 1973). Gone was the uniformity of the Georgian town-house terrace and communal town square, and in its place arose a new uniformity of individual homes set in private grounds, each personalised in accordance with the fashion of the times. The suburban environment segregated the middle classes from the working classes and created a new domain of “private” spaces, the internal social organization of which dramatically affected the shape of the modern home.

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<sup>16</sup> Pugin, A.W.N. (1841) *Contrasts*, London: Charles Dolman.

<sup>17</sup> Gloag, J. (1962) *Victorian Taste: Some Social Aspects of Architecture and Industrial Design*, London: Black.

<sup>18</sup> Gloag, J. (1970) *Mr Loudon's England: The Life and Work of John Claudius Loudon and His Influence on Architecture and Furniture Design*, Newcastle-upon-Tyne: Oriel.



**Figure 3.** Housing the middle classes: the rise of suburbia

#### THE SOCIAL ORGANIZATION OF THE PRIVATE SUBURBAN DOMESTIC SPACE

The emergence of suburbia brought with it new forms of social interaction in and through which the domestic space came to be organized. Separated from work, the home becomes the centre of social life for women in particular and new forms of interaction emerged as women reconstructed their place in the domestic space. Divorced from the political order of daily activities that characterised middle class life prior to industrialisation, women turned now to charitable activities, the arts, and other more “refined” concerns to fill their days. Isolated from the wider society, the middle class home became a place for the creation and playing out of new forms of “social intercourse”, which over time became ritualised and embodied within the very shape of the domestic space itself.<sup>19</sup> Acquaintances were often made and fostered at dinner-parties and further developed through a ritual of “calls”, for example, particular forms of conduct that saw the design and widespread implementation of the dining room and drawing room. Social interaction and the design of the domestic space were, and are, thoroughly interwoven then, and the private suburban domestic space saw the widespread creation of distinct “territories” of interaction (Burnett 1978). Responding to the new territorial needs of the middle classes, architects turned to the homes of the upper classes for inspiration, which had long been “devised for the conduct of an elaborate social parade”.<sup>20</sup> The great aristocratic house was a natural

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<sup>19</sup> Davidoff, L. (1973) *The Best Circles: Society, Etiquette and the Season*, London: Croom Helm

<sup>20</sup> Summerson, J. (1962) *Georgian London*, Harmondsworth: Penguin.

place to turn to in order to establish a sense of the architectural demands of social function on domestic space. And not for the first time had the revolutionary building of aristocrats affected the domestic life of the masses, the neo-classical style of grand construction inspiring common Georgian form. Although not built for domestic so much as public life, the aristocratic house nevertheless provided for the domestic needs of its residents. The aristocratic house mediated between public and private functionalities of space and saw the categorisation and segregation of the suburban home into discrete functional spaces.

Inspired by the great halls, receiving rooms, galleries, and other distinctions of space created by the architects of the aristocrats, the suburban home came to be categorised along two broad lines of segregation. On the one hand, according to the social relationships which maintained between household members, particularly between family members and domestic staff. And on the other, according to the needs of family members. The design of servants' rooms, kitchens, scullery's, vestibules and halls served not only to segregate the activities of household staff from those of family members but also, to segregate the domestic activities performed by household staff. Thus, and for example, the design of the kitchen and the scullery effected the separation of cooking and washing much as the design of the vestibule separated the visitor or tradesmen from the wider goings on of the house. Categorisation of the domestic environment saw the segregation of space into specific areas designed for the performance of particular activities, a trend that was reflected in the design of space for the purposes of family members. Thus, the dining room emerged strictly for purposes of eating, the drawing room for special social occasions, and the parlour or living room for the everyday needs of family members. Other distinct spaces catered for the more specialised needs of family members and saw the design of morning rooms or conservatories, nurseries, studies, and games rooms (etc.). Significantly, then, the emergence of the private suburban home brought with it the territorial separation of internal space to meet the demands of new forms of social interaction. Architectural response to middle class values not only saw the "privatisation" of domestic space in the development of suburbia but gave rise to the trend of "segregating domestic functions" within the home itself. A trend which shaped the homes of the middle classes and working classes alike, feeding through into the design of the back-to-back and more noticeably, the through terrace.

## MIDDLE CLASS VALUES AND REFORM

Although largely driven by speculative building, the relationship between middle class values and the shaping of the domestic space of the working classes was no accident. The concerns of the Victorian middle classes with the physical and moral dangers of the new urban landscape were not restricted to themselves but extended to all sectors of society. Thus, the gross overcrowding that characterised working class domesticity became a source of great concern and reform. Domestic overcrowding in the urban environment was perceived as a prime source of disease, crime, immorality, and intemperance. Having both a widespread moral and economic impact on society at large, the living conditions of the working classes prompted calls for a new legal machinery for the protection of the “public health”. 1840s Britain saw a large number of Commissioned *Reports* conducted into working life and identified the sanitary conditions of the working classes and sexual divisions between lodgers and family members alike as particular matters for reform.<sup>21</sup> Cellar-dwellings, common lodging houses, tenements, and even back-to-backs were widely condemned for the lack of lighting, heating, ventilation, water, and drainage, all of which propagated disease. Equally, if not more disturbing to the educated Victorian mind, were the diseases that afflicted the moral order brought about through massive overcrowding. Not only sharing rooms but beds, the mixing of the sexes promoted “licentiousness” on a hitherto unrecognised scale, not to mention the turn to drink taken to escape the miseries of domestic life in working class Britain. Not only was good sanitation required if the public health was to be protected but so too was the creation of a civilised domestic space promoting the moral well being of residents and family members.<sup>22</sup>

In order to combat the perceived “evils” of the times the Health of Towns Committee of 1842 proposed to

appoint surveyors who would have to be notified before any new house was built ... that back-to-backs should be banned, that no cellar be used for human habitation which did not possess a window, a fireplace and an open area, that houses were not to be built in close alleys, that streets were to be at least thirty feet wide, that no house was to be built until the site was drained, and that drains were to be constructed for houses already built. (Burnett 1978)

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<sup>21</sup> The Health of Towns Committee 1840.

<sup>22</sup> Hole, J. (1985) *The Homes of the Working Classes, With Suggestions for their Improvement*, New York: Garland.

The proposal to ban back-to-backs was rejected, largely through the lobbying of property developers, on the basis that their abolition would raise the cost of housing dramatically and with it the price of rents. The remaining propositions were postponed pending the Report of the Royal Commission of 1844, which was primarily concerned with drainage and water supply. Minimal legislation was passed in the Public Health Act of 1848. Despite the failure of the Health of Towns Committee to radically alter the domestic conditions of the working classes, the investigations of the 1840s began to propel improvement at local level. Private Acts saw local authorities ban the building of close courts, regulate room and window sizes, and implement the mandatory provision of privies in Birkenhead, for example. In Manchester from 1844 onwards every house was to be provided with a privy and ash-pit (used to deal with human waste prior to the design and implementation of water closets and sewers, and emptied every few weeks by “night men”). In Nottingham back-to-backs were banned, the provision of three-bedrooms made compulsory, along with a privy and back yard or garden. In Liverpool, and besides a host of planning regulations, the country’s first Medical Officer of Public Health was appointed to monitor the domestic situation of the working classes.<sup>23</sup>

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<sup>2323</sup> It is worth noting an interesting methodological aside with regards to the study of the home brought about through the Victorian urge to reform. Both private investigations and government commissions of the early industrial period were predicated on *first-hand observation and reportage* of the domestic situations of the working classes. The home was “studied”, in other words, through “ethnographic” reportage on members’ forms of life and practical conduct. This naturalistic form of study provided the basis and warrant for widespread reform. The widespread turn to quantification as a means of accounting for social organizational matters of relevance to the state in the latter part of the 19<sup>th</sup> century saw the study of the home, like so many other areas of social life, transformed into a numerical concern (Hacking 1990); at governmental level through the development of the census, for example. At the same time, the social shift towards quantification corresponded with the rise of science and saw the social sciences adapt the methods of natural science in the development of “moral statistics” (Durkheim 1897) and “variable analysis” (Lazarsfeld and Rosenberg 1955). Today, the study of the home is dominated by a preoccupation with the production of numbers, with counting, and inferring adequate relationships between counted objects. For our part, and for sound methodological reasons that will be discussed in due course, we reject the quantification of social life. Instead, and in keeping with the *Mass Observation* study of the mid 1900s, we turn back towards naturalistic inquiry in an attempt to ground the design of emerging technologies in the forms of life and practical conduct that comprise the contemporary domestic environment. In attending to the practicalities of domestic life we hope to inform and shape the design of technologies that are relevant to the practical day-to-day needs of residents, much as the naturalistic investigations of the early industrial era informed and shaped efforts towards reform. Scientific adequacy (whatever that might mean) is not the important factor here – relevant and effective change *is*.

Hacking, I. (1990) *The Taming of Chance*, Cambridge: Cambridge University Press.

Durkheim, E. (1897) *Le Suicide*, Paris: Alcan.

Lazarsfeld, P.F. and Rosenberg, M. (1955) *The Language of Social Research*, New York: Free Press.

*Mass Observation* (1937-1950) <http://www.sussex.ac.uk/library/massobs/homearch.html>

## TURNING VALUES INTO SHAPES ON THE GROUND

Victorian concerns with disease and moral value saw local councils and charitable organizations set about reform across the country and the 1850s saw those values turned into concrete shapes on the ground, primarily assuming two distinct architectural forms that are very familiar today. On the one hand, the urge to reform saw the regeneration of urban centres through the development of the block tenement in particular. The Metropolitan Association for Improving the Dwellings of the Industrious Classes, a charitable society largely driven by philanthropic concerns, initiated an active building programme to improve the domestic lot of the working classes in London, for example. This programme saw the development of multi-storey blocks. The programme came to an end in 1874 with the construction of five six-storey blocks which provided two hundred and sixty dwellings and shops, bringing the total of homes provided by the association to 1100 with rents based on a very modest five per cent dividend per annum. The relative successes of the Metropolitan Association and other similar groups, which demonstrated that cost-effective housing could be provided for the working classes, inspired the formation of housing “societies” around the country. Multi-storey blocks were widely constructed from standard plans which made them relatively cheap to build as parts could be assembled *en masse* and were easily adaptable to local situations (Hole 1985).

With the block tenement, the modern day notion of a “flat” or “apartment” came into being, an innovation in urban housing design for the working classes of 19<sup>th</sup> century Britain. The block tenement composed of self-contained flats provided a highly effective means of housing large numbers of people in areas where lateral expansion was impossible and land value was, therefore, relatively high. Furthermore, the new tenements provided a high standard of service, containing a kitchen with cooking facilities and-or a living room, water supply, water heating, water closet, refuse chute, and shared wash house. All in all the block tenement brought new standards of decency and comfort to a wider section of the working classes and their design has become a staple feature of the urban domestic landscape. So much so that in contemporary times the inner city and neglected urban areas are being reclaimed by speculative building primarily for the middle classes.



**Figure 4.** The block tenement

At the same time as the block tenement and apartment came into being, a quite different solution to “evils” of industrialisation was being developed, one that emphasised dispersal rather than regeneration and which was championed by leading industrialists of the Victorian era. Driven by the need to have a local workforce to-hand and by genuine philanthropic concerns alike, the rise of industrialisation brought with it the development of “model communities” or “the garden village”. Industrial employer housing first emerged in the first half of the 19<sup>th</sup> century, particularly in Lancashire and the West Riding, but it was not until the 1850’s that the model community emerged as significant form of domestic architecture. With the rise of industrialisation the concept of employer housing was radically transformed, involving the total planning, design and implementation of new urban communities along “utopian” lines. The utopia of the matter posited the creation of a physical environment that ensured an efficient and content labour force would be to-hand to meet the needs of industrialisation. “Man” and machine would live side by side in a physically manifest relationship of industrial and domestic harmony embodied in the design of “the garden village”.

The first concrete expression of the garden village was constructed in Copley under the instruction of Edward Akroyd, a West Yorkshire worsted manufacturer. Today Copley and Akroydon, a subsequent garden village instantiated by Ackroyd, have been absorbed by the city of Halifax. At the time of their construction they were located in the green belt of the Yorkshire Dales. Copley and Akroydon are in many respects the forerunners to the garden village, the first prototypes as it were. Akroyd commissioned George Gilbert Scott, a renowned architect of the day, to plan and

design these model communities in the Domestic Gothic style of Halifax town in an important effort to create a sense of place, of belonging, and continuity. More importantly for Akroyd was the emphasis placed upon the character of the home.

A clean, fresh, well-ordered house exercises on its inmates a moral no less than a physical influence, and has the direct tendency to make the members of a family sober, peaceable, and considerate of the feelings and happiness of each other. (Akroyd cited in Burnett 1978)

Scott's brief was to design a physical environment meeting these aesthetic, social, and moral imperatives. Thus, houses were constructed around a village green, a common focal point for the community. Built solidly of stone with slate roofs they offered a generous amount of space for occupants. In keeping with the trends of middle class housing design, their internal layout was characterised by a segregation of function. Even the smallest houses provided a sizeable living room, a scullery where food could be cooked and washing done, a main bedroom and a children's bedroom. The larger houses provided a parlour and extra bedroom. All had a backyard, and each terrace was separated by a back lane.

Akroyd's simple model inspired other philanthropic industrialists. Under the instruction of the candle-makers James and George Wilson, the Wirral peninsula saw the development of Price's Village consisting, radically, in small terraces and semi-detached houses for the working classes at Bromborough Pool.<sup>24</sup> Each had front and rear gardens and water-borne sanitation, a real revolution of the times. The 1860s saw the construction of the finest and most influential "model village" – Saltaire, again in West Yorkshire, much of which is still lived in today.<sup>25</sup> Saltaire was constructed under the instruction of the industrialist Titus Salt in a neo-Venetian Gothic style. Eight hundred and five "cottages" were built in parallel terraces around Salt's alpaca wool factory. Forty houses were built to the acre and monotony avoided through the use of a variety of styles and decorations. Salt instructed the architects that "nothing should be spared to render the dwellings of the operatives a pattern to the country" (Burnett 1978). With the construction of Saltaire, Salt meant to set a standard not only for his workers but the nation. In meeting this ambition, and radically for the times,

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<sup>24</sup> <http://www.vwlowen.demon.co.uk/navigation/wirraltext.htm>

<sup>25</sup> <http://www.bradford.gov.uk/tourism/trails/saltaire/saltaire.html>

Salt actually consulted his workers as to their domestic needs and wants and, in response, built a variety of differently sized houses to meet the requirements of the labour force. All the houses were well ventilated and drained. Each house had gas and water supplies, a private yard and privy, a coal store and an ash pit. The shopfloor worker's cottage provided a basement consisting of a cellar and a pantry, a ground floor living room, a kitchen and wash room, storage space, and three upstairs bedrooms. The larger houses, designed for the "overseers" or foremen, provided an additional basement washhouse, a ground floor parlour, and up to six bedrooms. Salt also provided forty-five almshouse rent free with a pension of ten shillings a week for retired workers "of good moral character".

Importantly, Salt's "national pattern" did not stop at the front door but extended out onto the street. Naturally churches and chapels were provided but so too were shops, allotments to supplement diet, cultural facilities, and other services. Saltaire provided its inhabitants with a park, a library, an art gallery, a public hall, a hospital, a school, a gymnasium, public baths, and washhouses with washing machines and dryers! Through the actions of Titus Salt in particular Britain saw not only the production of the first large-scale model of domestic design for the working classes, but with it the extension of the very concept of domesticity itself, from the isolated dwelling to what might be called the "living space". With the design of Saltaire not only were high dwelling standards implemented but in the provision of local services, high living standards were implemented too. Importantly, then, Saltaire situates the newly designed working class home in a newly designed social environment constructed to meet and otherwise foster the practical, educational, health, and cultural needs of its inhabitants. Salt's efforts did not pass unnoticed - he was even awarded the Legion d'Honneur by Napoleon III in 1867 for his significant contribution to human welfare – and the model village soon became the "model town" and with the turn of the century, the "garden city".

The 1880's saw the development of Port Sunlight,<sup>26</sup> a one hundred and eighty acre model town built on the banks of the Mersey under the instruction of the soap magnet William Lever. The 1890's saw the development of Bournville,<sup>27</sup> a one hundred and forty acre model town near Birmingham sponsored by the chocolate-

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<sup>26</sup> <http://www.portsunlight.org.uk/>

<sup>27</sup> [http://www.birmingham.gov.uk/epislive/citywide.nsf/\(Exlinks\)/BEOFBOURN?OpenDocument](http://www.birmingham.gov.uk/epislive/citywide.nsf/(Exlinks)/BEOFBOURN?OpenDocument)

maker George Cadbury. And the turn of the century saw the development of New Earswick,<sup>28</sup> a one hundred and fifty acre model town sponsored by the confectioner Joseph Rowntree, for example. With model towns springing up all around the country, Titus Salt set a precedent, widely emulated, to provide housing which offered the amenities available to, and which approached the standards of, the middle classes at an attainable cost to the ordinary wage-earner. Following the successes of industrial philanthropists, the planning concepts underpinning the garden village were soon adopted by local authority housing schemes, as were those informing the design of the block tenement. Significantly, and for the first time, social demands, architecture, and technology were starting to come together to meet the mass housing needs brought about through industrialisation. The rise of industrial Britain brought with it radical changes in the shape of the domestic space then, both for the middle and working classes, a trend that continued up to the outbreak of a distinct period of “total war”.



**Figure 5.** Saltaire: the model town

### **Radical times and the domestic revolution (1914 forwards)**

Following what has widely been described as an “idyllic” summer, August the 4<sup>th</sup> 1914 saw the outbreak of the “Great War”, which brought with it four years of utter human carnage, waste and “useless slaughter” on a scale hitherto unimaginable.<sup>29</sup>

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<sup>28</sup> <http://www.jrf.org.uk/housingtrust/newearswick/>

<sup>29</sup> Fussell, P. (2000) *The Great War and Modern Memory*, Oxford: Oxford University Press.

Some four million British troops were sacrificed in the Great War and such abhorrent loss was not without consequence, *motivating* widespread social change.<sup>30</sup> From the trenches on the Western Front a new awareness of the plight of the working classes began to emerge. As the soldier and poet Siegfried Sassoon described his experience of the Western Front, for example,

I was only beginning to learn that life, for the majority of the population, is an unlovely struggle against unfair odds, culminating in a cheap funeral.<sup>31</sup>

War was but a continuation, a bitter extension, of an already harsh life for the working masses. Sassoon was not alone in recognising the poor state that was the working man and woman's lot. As the war grew to involve the whole population and demanded ever greater sacrifices of them, a new political awareness arose. One that suggested that the only possible reason for waging total war was the prospect of a better world offering a better way of life for its survivors. In short, the war changed the British populaces' conception of government and what the people expected it to deliver. With the most able men stationed at the Western Front, women were compelled to return to the workplace in order to support of the war effort and women's emancipation was duly expected, for example. Indeed a whole host of social reforms from education to health and welfare became policy matters as a direct consequence of the Great War.<sup>32</sup> At the top of the policy-makers list was widespread improvement in housing.

A national housing programme came to be regarded as the pivot of post-war social policy. As Walter Long, President of the Local Government Board described matters,

To let them [the troops] come home from horrible, water-logged trenches to something little better than a pigsty here would, indeed, be criminal ... and a negation of all we have said during the war ... we can never repay those men for what they have done for us.<sup>33</sup>

Despite the revolutions in housing that characterised the latter part of the 19<sup>th</sup> century, there was still a pressing need to provide adequate housing for the working classes,

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<sup>30</sup> Marwick, A. (1988) *Total War and Social Change*, London: Macmillan.

<sup>31</sup> Sassoon, S. (1930) *Memoirs of an Infantry Officer*, p. 201, London: Faber.

<sup>32</sup> Titmuss, R.M. (1976) *Essays on the Welfare State: War and Social Policy*, London: Allen and Unwin.

<sup>33</sup> Cited in Reiss, R. (1918) *The Home I Want*, London: Hodder.

largely as a result of increases in land taxation and mortgage restrictions which discouraged speculative building for this sector of the market.<sup>34</sup> Significantly, the Great War changed the perception that the housing need could be met almost entirely by private building. Spurred on by Benjamin Seebohm Rowntree's inquiries into poverty in particular, the Advisory Housing Panel of 1917 approved the proposal that three hundred thousand houses should be built in the first year of peace for the working classes in a state aid partnership with local authorities. A radical shift in building trends was under way, sponsored by government subsidies and local authorities through rate increases.

Peace brought with it the most radical piece of social policy with regards housing to date. The Tudor Walters Committee of 1918 drew expressly upon the ideas of the model town and garden city movement, being particularly influenced by the planning and design concepts developed by Ebenezer Howard (Welwyn Garden City),<sup>35</sup> and Raymond Unwin (Letchworth Garden City).<sup>36</sup> The Committee recommended that state funded houses should contain a minimum of three rooms on the ground floor – a living room, parlour, and scullery – three bedrooms – two of which could contain at least two beds – a larder, bathroom, and water closet. Minimum. The Committee also recommended that no more than twelve houses should be built to the acre in towns and eight in rural areas. Cul-de-sacs were encouraged to deter through traffic. There was to be variation in house styles to prevent monotony. There was to be a minimum of seventy feet between terraces. Terraces were not to be longer than eight houses, preferably four to six. The houses themselves were to be wider than before – around twenty-two feet to provide more garden space, air, and light, indeed the living room was to be sited with reference to sun light rather than convention to maximise natural light.

The committee drew up three standard plans to support the implementation of these goals. The basic plan provided three bedrooms, a living room with a range for cooking, a scullery equipped with a gas cooker (for occasional use), a bath and washing facilities, and a water closet. Plan two removed the range from the living room and removed the bath from the scullery to a separate room downstairs. Plan

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<sup>34</sup> The 42<sup>nd</sup> *Annual Report* of the Local Government Board 1912-13.

<sup>35</sup> <http://www.rickmansworthherts.freereserve.co.uk/howard1.htm>

<sup>36</sup> <http://www.letchworthgardencity.net/>

three was much like plan two but provided a bathroom upstairs. An additional fourth plan added a parlour to the ground floor. Underpinning these standard plans was the Victorian notion of segregating functions. The Committee believed that as living standards rose the trend to develop dedicated spaces for particular activities would increase. Thus, cooking and washing would be confined to the scullery, eating to the living room, bathing in the bathroom rather than in a tin tub in front of the living room fire. The Committee furthermore laid down guidelines as to the size of houses not including storage space (outhouse, coal shed, etc.). A three-bedroomed non-parlour home was to be some eight hundred and fifty-five square feet in size. With parlour, one thousand and fifty-five square feet. More precisely, the main bedroom was to be one hundred square feet. Of the other two, one was to be one hundred square feet and the third not less than sixty-five square feet. The living room in a non-parlour home was to be one hundred and eighty square feet. The parlour reduced the size of the living room but provided one hundred and twenty square feet of space for receiving visitors, reading, writing, or just relaxing. Innovatively, heating was to be provided through utilising waste heat from power stations wherever possible. Gardens were to be provided front and back and houses were to be located on tree-lined lanes in new, low-density suburban estates. Public transport was to be organized to support mobility. Standardised components and economies of scale were advocated to the building industry and the large-scale production of standard materials and fittings ensued. All in all the Tudor Committee initiated radically new standards of practical town planning in Great Britain that remained intact throughout the inter-war years and continued to inspire planning and design thereafter. The brief post-war boom saw the creation of some two hundred and fourteen thousand new suburban homes constructed for the working classes of a quality not previously imagined – a considerable shortfall of the projected half million.

The cause of the shortfall was the unexpectedly high cost of building, around four times that of pre-war construction. At the same time the general cost of housing had only doubled and the country was, in 1922, beginning to experience a deep economic depression. Government funding waned and the newly elected Conservative government repealed state subsidies in 1923, placing the burden of housing once more on the shoulders of the private sector. In 1924 the Labour party was elected into office for the first time. Government subsidies and the role of local authorities as housing providers were reinstated. In particular, the Wheatley Act sought to encourage a

fifteen year programme of work that would raise construction from sixty thousand houses per year to over one hundred and fifty thousand. It produced over half a million houses in ten years, all but fifteen thousand of which were provided by local authorities. A further two million homes were constructed by the private sector, primarily for the middle classes.



**Figure 7.** Post-WWI building: the new suburban working class home

Working class housing was still badly in need however. The influential nutritionist John Boyd Orr summed matters up well in saying that one third of the working population lived well in new accommodation and another third less so in older houses which while sanitary lacked modern amenities, whereas the remaining third lived still lived in grossly sub-standard dwellings which were rapidly degenerating into slums.<sup>37</sup> Orr was one of many who were instrumental in an emerging “anti-slum campaign”, which while unorganized evoked widespread public sympathy and support, even from the Prince of Wales. Although house building increased in response to the outcry – a further one and half million dwellings were constructed by 1939 – the renewal of total war forced housing issues to the background of social affairs. Housing the poorer classes would have to await the outcome of the Second World War.

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<sup>37</sup> Orr, J.B. (1936) *Food, Health and Income*, London: Macmillan.

## MIDDLE CLASS HOUSING IN THE INTER-WAR YEARS

The inter-war years saw dramatic transformations in the labour market which radically affected the shape of the home. On the one hand, the development of industrialisation brought with it a rapid expansion in “tertiary” occupations. Industry and commerce demanded more managers, administrators, clerks, technicians, and other specialists. With the rise of the skilled artisan and white collar worker the ranks of the middle classes expanded rapidly. Unlike their Victorian and Edwardian predecessors however, these new members were not quite so affluent and speculative building was compelled to enter a new period of development to meet the needs of the aspiring masses. On the other hand, and propelling this development, was the sharp decline in domestic service. In 1861 over twelve per cent of the population were employed as resident domestic staff, a figure that remained relatively constant until 1914. The human cost of war, changing attitudes, and the post-war boom that followed peace saw that figure drop by over a quarter. The number of persons engaged in domestic service, resident or otherwise, continued to decline dramatically throughout the inter-war years (and by 1950 only one per cent of the population was so employed). Domestic staff turned to shop work, factory work, clerical work, and the minor professions, becoming members of the expanding middle classes themselves.

Following economic depression in the late 1920s and early thirties, a large section of the populace found itself with disposable incomes and housing patterns shifted quite dramatically – home ownership became vogue providing ample opportunity for the speculative builder to open up the market. Seventy per cent of all houses constructed in the inter-war years were constructed by private enterprise, the vast majority being for sale rather than rent. Speculative building targeted an income bracket of two to six hundred pounds per year by the mid-thirties. At that time, two hundred pounds a year was enough to secure a mortgage and was well within the reach of engineers, fitters, printers, engine drivers and a host of other skilled workers. One thousand pounds would buy a new detached house designed by an architect located in a half-acre plot. Four hundred pounds would buy a three bedroomed semi-detached. An older through terrace could be picked up for considerably less. Low interest rates and material costs combined with the rapid expansion of building societies fostered a revolution in domestic life. A privately constructed suburban landscape began to spring up around major cities all over the country. Lacking any

overall plan, speculative building proceeded in an *ad hoc* fashion broadly informed by garden city principles. Thus a new, contemporary suburban topography marked out by a variety of novel house styles with generous gardens situated alongside arterial roads or along winding tree-lined, grass-verged avenues, crescents, and closes emerged (not uncritically) as the middle class standard in the inter-war years.



**Figure 8.** The inter-war expansion of suburbia

Unlike the garden cities inspired by Howard or Unwin, the new suburbia benefited from little architectural input. Individual constructions were largely variations of a standard plan dictated by plot size and cost, a pattern of inclusion that did not change until the late thirties when architects were commissioned to design variegated sites rather than individual houses.<sup>38</sup> Even then architectural influence was tenuous, as fierce competition compelled building firms to cut costs to the bone. Architecture was thus largely employed as a means of façade, providing a front or a gimmick to sell the product. Mock Tudor beams, pebble-dashed brickwork, imitation carved stairways, tiled bathrooms and a host of other architectural gimmicks were offered to mask a multitude of sins that came with poor quality materials, shortcuts, and shoddy workmanship. While there were a large number of well-built houses and significant advancements, speculative house building in the inter-war years marks the emergence of the gimmick as a serious marketing device, and it was not restricted to the deployment of architecture.

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<sup>38</sup> Richards, J.M. (1973) *The Castles on the Ground: The Anatomy of Suburbia*, London: Murray.

Technology was the greatest gimmick of all and speculative builders were quick to appropriate new developments in order to sell their homes. Thus, and for example, in addition to a fitted kitchen, indoor toilet, tiled bathroom and shower, gas boilers, radiators, fires and cookers, electrical power points, and two-way lighting became standard features of the middle class suburban home. Far from being encountered as mere “gimmicks”, technological developments came to constitute significant improvements in the home. Both gas and electrical “services” provided significant increases in comfort and convenience and were rapidly transformed into national standards. At the turn of the century only two per cent of the population had electricity. By 1939 that figure had risen sharply to some seventy five per cent. Vacuums, irons, washing machines, and a host of other new labour saving devices were beginning to enter the middle class home in particular, driven by the changing nature of the economy and its effect on work in the home. In the absence of domestic staff, the housewife’s position in the home was redefined. Mundane activities of cooking, cleaning, and washing replaced receiving guests, organizing dinner parties, and the other more refined activities that characterised the Victorian and Edwardian lady’s life. With this redefinition, the scullery was transformed from a peripheral space into the modern day kitchen occupying a central position in the daily life of the home. Well laid-out and equipped with the latest labour saving devices, the emergence of the kitchen as the centre of activity in the middle class household saw the reversal of the tradition of segregating function: a new convergence was underway. Radical transformations of the home were afoot then in the inter-war years, though their development would also have to await the outcome of the World War II.

#### THE DOMESTIC REVOLUTION

The outcome of the Second World War was, predictably, total slaughter: fifty seven million casualties including civilians in all, a particularly twisted extension of “modern” warfare. Russia and China bore the brunt of the fighting, incurring twenty-one million and eleven million casualties respectively (over half were civilians). Britain fared rather better: less than four hundred thousand casualties, sixty thousand of which were civilians. Less predictable was the positive post-war mood, which saw Britain enter a period of distinct prosperity. Employment was readily available and well paid and the housing market, like the rest of the economy, boomed. The working classes - clerks and unskilled labourers - saw a radical increase in their income and

with it their standards of living.<sup>39</sup> Home-ownership burgeoned from twenty five per cent of the population in at the end of the war to fifty per cent by the mid-sixties. The Parker Morris Report described these and other changes in domestic life as “revolutionary”.<sup>40</sup>

At the heart of the revolution was a widespread growth in “white” and “brown goods”, which characterised the new “affluent society”.<sup>41</sup> A modern cooker was now to be found in over eighty per cent of all homes, a vacuum cleaner in over seventy per cent, a washing machine in fifty per cent, and a fridge in over thirty per cent. From large appliances to kettles, toasters, food mixers and the rest, white goods proliferated. At the same time a narrower market for brown goods opened up. Nonetheless a television set complemented a radio in over eighty per cent of all homes by the 1960s, and record players and telephones became everyday items in many homes.



**Figure 9.** Revolutions in the home: white and brown goods

Along with technological advances, standards of furnishing, fittings, and decorations rose significantly. With the rise in living standards and decrease in working hours to forty-two hours a week, the character of the home began to change, people started to spend more time in it and take a greater interest in their environment. Home-centred leisure time and family-based activities increased and this created a need for a reorganization of usable space in the home. The centre of working class life began to expand to incorporate the front room in the round of daily activities. At the same time new domestic “rituals” emerged to compliment older ones. People began to take an interest in gardening, cleanliness, and hygiene, for example. Observably such things –

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<sup>39</sup> Burnett, J. (1968) *A History of the Cost of Living*, Harmondsworth: Penguin.

<sup>40</sup> Ministry of Housing and Local Government (1961) *Homes for Today and Tomorrow*, HMSO.

<sup>41</sup> Zweig, F. (1961) *The Worker in an Affluent Society: Family Life and Industry*, New York: Heinemann.

a tidy garden, clean windows and scrubbed doorstep, mopped floors and tidy kitchens, etc. – became a way of *displaying* that the home belonged to a family of good moral character; the absence of such observable efforts providing for inference and action towards sloth and moral turpitude.

A prosperous economy, a sharp rise in marriages which brought about shifts in living patterns as newly weds could now afford their own homes, and the consequences of war which saw half a million homes destroyed, placed excessive pressure on the housing market. Once again, housing policy was at the forefront of reconstruction and expansion and by the mid-fifties over two and half million new homes were built, three-quarters by local authorities. “Mixed development” schemes were encouraged to provide housing not only for families but all sectors of society, and the flat flourished. The centrepiece of such developments was the high-rise flat inspired by the Modern Movement and architectural pioneers such as Charles-Edouard Jeanneret (Le Corbusier) and Walter Gropius. The promise that high-rise flats held out as exemplary dwellings did not materialise and the Ronan Point disaster of 1968, in which a gas explosion collapsed twenty-three storeys on top of one another, sounded the death knell for this particular form of dwelling. Many were already plagued by serious social problems, attributed by the architectural profession to local authority “abuses” of architectural form.<sup>42</sup> Whatever the case, the high-rise flat was rapidly abandoned as a major housing type in the UK.

In 1961 the Parker Morris Report was released, having a profound impact on the domestic landscape. Motivated by the findings of the 1946 Dudley Report - which suggested that houses in general were too small and not adaptable to modern needs – the Parker Morris Report was expressly concerned with the internal organization of domestic space. Consequently, the Report laid out new standards both for public and private housing. Increases in space were recommended throughout the home, which saw the creation of the “adaptable house”. Radically, only two open plan day rooms were to be provided in family homes: one to cater for daytime activities that required some degree of privacy (receiving guests, reading, watching TV, listening to music, playing, etc.), and the other attached to the kitchen, either directly or by extending the kitchen space. This open plan arrangement – which actually meant that rooms were

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<sup>42</sup> Sutcliffe, A (ed.) (1974) *Multi-storey Living: The British Working Class Experience*, London: Croom Helm.

subtly divided rather rigidly demarcated by solid walls – reversed the tradition of segregating space into discrete functional rooms and marked the death of the parlour. This not to say that the segregation of functions was abandoned, naturally sanitation functions and sleeping functions were still separated, but that all ground floor space was available for daytime use, and not just on special occasions. Particular attention was paid to kitchen space in the effort to bring housing up to date with modern requirements that placed the kitchen at the centre of household activities. Enlargement and planning of the kitchen space was recommended so that it might easily accommodate the increasing quantity of equipment that was coming into it. Studies of work in the kitchen saw its layout informed by a “work sequence standard” which would allow a person to move from work surfaces to appliances unhindered by doors or other traffic. It was also recommended that storage space be increased significantly throughout the house, from the standard forty cubic feet to eighty cubic feet. Electric power points were to be increased, flexible heating was to be provide throughout and would be capable of delivering a minimum temperature of fifty-five degrees fahrenheit in the kitchen and sixty-five degrees in the day rooms with an outside temperature of thirty degrees; a real revolution of the times.

The Parker Morris Report placed an emphasis not on housing style but on the quality of the internal environment. Just how the standards of the Report were to be implemented was left to professional architects, designers and town planners to interpret. Left to voluntary compliance, adoption of the standards was slow in coming and by 1965 only twenty per cent of new council houses incorporated the recommendations. In 1967 they were made mandatory for public sector housing in “new towns”, which had been under construction since the end of the war, and for all local authority housing in 1969. Combined with the rising affluence of the working classes, the implementation of standards recommended by the Parker Morris Report has propelled a “levelling out” of domestic patterns of living between the working and middle classes. Both in size and use of space, working and middle class housing has converged, particularly around the kitchen area and adjacent day room. This is not to say that all persons live in equal circumstances. Although the gap between rich and poor is considerably smaller than Victorian times, we nonetheless live with our historical legacy. Thus, people today live in a disparate collection of dwellings from run down two-up two-downs, to through terraces and suburban housing estates of varying quality, to new towns and regenerated urban centres, not to mention rural

abodes. Equally we still live with divides between the poor and the affluent, as is reflected in the places we reside. Nonetheless, a convergence of living patterns for the working classes and middle classes alike have seen a reversal in the strict segregation of functions that characterised housing design up until the First World War and with that reversal, the adaptation of the home for modern requirements. Today's domestic space, whether it be an old barn, a through terrace, or suburban home, is *multifunctional*. The rigid divisions between the kitchen, the living room, and the front room are gone, indeed some of those very rooms have gone, and many activities now occur within the living space of the home. Just what activities take place in the modern domestic space is of great interest and relevance to design. Before addressing the matter, however, we consider what the historical shaping of the home has illuminated of its social organization in connection to technology design.



**Figure 10.** New Town interpretation of Parker Morris

### **Towards design: domestic legacy**

The historical shaping of the home has seen the domestic space transformed over the last two hundred years from a one-roomed hovel to a very familiar and easily recognisable shape on the ground. Driven by industrialisation, the demands of social interaction, an unremitting urge to reform, the consequences of total war and a host of other factors, the domestic space has evolved over that time to provide most people in the Western world with an ensemble of discrete internal spaces or territories: a kitchen, a bathroom, a toilet, a number of bedrooms, a living room, a lounge, etc. It is just this internal ensemble of territories that makes the domestic form familiar and

recognisable to us and not unsurprisingly so because this is our historical legacy: rich or poor the vast majority of people live in homes “like that”.

The importance of this domestic legacy to the design of computer-based technologies cannot be under-estimated or under-emphasised. As noted above, people live in a huge variety of housing – flats, back-to-backs, through terraces, suburban estates good and bad, country cottages, converted factories, warehouses, agricultural buildings, and the rest. Relatively few people live in new buildings, indeed in many European countries at least there is something of a cultural kudos attached to living in old building. The significance of this domestic arrangement of space is that if computer-based technologies designed for the home are to achieve “critical mass” (thus being employed by large sectors of society),<sup>43</sup> then they will have to be compatible with the legacy that currently constitutes the domestic space. Technological developments that require major architectural and infrastructural changes should probably be avoided, then, and design should instead seek to build on top of existing architectures and infrastructures in the home wherever possible. Rather than ignoring our domestic legacy and approaching design with a “year zero” mentality, building on top of existing architectures and infrastructures provides the opportunity to develop future technologies that may be readily incorporated into the home without having to radically alter the fabric of the domestic space; the latter being a costly exercise that is bound to inhibit the uptake of new technologies in the domestic space.

While many involved in design may wish to ignore, if not eschew, a concern with our domestic legacy, placing an emphasis on attending to existing architectures and infrastructures (physical and electronic) is not an unreasonable thing to suggest, as design in the business environment has discovered. The design of computers for the workplace is far more developed than for the home and it follows that a great deal may be learnt from designers’ experiences in such settings. The experience of legacy is a relatively novel and non-trivial one that has had a profound impact on design (Randall *et al.* 2000).<sup>44</sup> Notable examples of the phenomena include the “millennium

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<sup>43</sup> Grudin, J. (1988) “Why CSCW applications fail: problems in the design and evaluation of organizational interfaces”, *Proceedings of the 1988 ACM Conference on Computer-Supported Cooperative Work*, p. 85-93, Portland, Oregon: ACM Press.

<sup>44</sup> Randall, D., Rodden, T., Rouncefield, M., and Sommerville, I. (2000) “Remembrance of Designs Past: Legacy Data, Organisational Memory and Distributed Design”, *Systems Engineering for Business Process Change* (ed. Henderson, P.), London. Springer-Verlag.

bug” and the introduction of the “euro”, each of which occasioned tremendous technical challenges as designers were compelled to get to grips with needs of the future in the face of the constraints of the present and the past. A notable, indeed significant, feature of legacy issues in design is that the “challenges” the phenomena presents are not simply technical in character. Whatever technical characteristics a computer may possess, it is irremediably embedded in organizational context, which is essentially social in character (the organization being populated by people who use computers in their work together). Naturally, the home is no exception, being an organizational context regardless of its non-commercial character. Social organizational matters impact directly on design challenges in dealing with legacy issues as systems development is not simply about the design of computer systems but inevitably about redesigning or restructuring the socially organized activities within which systems are used. Failure to attend to the social organizational context of use can be disastrous for use (Grudin 1988), resulting in the design of perfect solutions for the wrong problems of work. In dealing with legacy issues (even within the context of the home) there is an established need, then, not only to attend to physical and electronic issues but also to the socially organized activities that take place within the home as a matter of course. As Rodden *et al.* (2000) put it,

any attempt to resolve legacy issues will depend for its success on understanding that organizational change will necessarily have to confront legacies *as the practical issues of daily work*. (emphasis added)<sup>45</sup>

In approaching the task of design, the historical shaping of the home serves to identify several discrete social organizational phenomena that are of relevance to the consideration of domestic legacy and the development of future applications. Firstly, there is the effect of social interaction on the shape of the domestic space. As the rise of suburbia instructs us, the domestic space is not merely some kind of “container” for action but constituted in and through action and designed to meet its requirements. In the case of the wealthy Victorian classes the domestic space was expressly “designed” by architects to meet the demands of “social intercourse”. Prior to the urge to reform, the construction of working class homes was a vernacular concern, and

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45 Rodden, T., Rouncefield, M., Sommerville, I., and Viller, S. (2000) “Social Viewpoints on Legacy Systems”, *Systems Engineering for Business Process Change* (ed. Henderson, P.), pp. 151-163, London. Springer-Verlag.

although crude the home was nevertheless a designed environment. Given the multifunctional requirements placed on the contemporary domestic environment we might expect the vernacular interactional organization of the domestic space to be matter of some importance to design. Related to the shaping role of interaction in the home, and as is now clear, is the role of architecture in the shaping of the domestic space. Victorian demands saw the architectural segregation of function that typifies, insofar as it is our legacy, a great deal of the housing that people live in today. Although the “modern” turn in architecture instantiated by Le Corbusier and others was not a great social success in its time, ideas with regard to form and function espoused by the movement were influential in more pragmatic ways as articulated by the Parker Morris Report for example, and saw something of a reversal in the habit of segregating the domestic space. With the 1960s expressly designed multifunctional spaces emerged, a trend extended through the internal conversion of older legacy buildings.

The role of architecture in the design of the domestic space today is less clear, though it is clearly an important social organizational phenomena in respect of the interactional demands people put on the home, particularly in light of technological revolutions. The post war “services revolution” prompted by widespread demand for gas and electricity made the technological advances that characterised the “affluent society” possible. Although deployed as a sales gimmick at first, interactional demands for technology, such as heating, lighting, and living equipment (cookers, washing machines, etc.), influenced the role of architecture in the design of the home, providing the physical infrastructure whereby white goods could be incorporated for example. Architecture and technology clearly have an important role to play in the design process then, though like the demands of social interaction it is not clear what the nature of that relationship will be with regards to the design of computer-based technologies. Nevertheless, the historical shaping of the home has instructed us that important they are and respecting that fact we see each as an important area of work to be taken into account in approaching design. Accordingly, the following chapter sets out explore the potential relationship between architecture, technology, and social interaction as important constituents of domestic legacy in the design of computer-based technologies for the home. Although there is as yet a great deal of work to do with respect to actual technology development, we conclude our historical sojourn with two broad “recommendations” for design. Two general points, that is, that

provide a historically situated orientation towards and basis for approaching the design task.

- Firstly, and as noted above, in order to entertain the prospect of achieving critical mass, the design of future household technologies should attend to domestic legacy. Thus, design should attempt wherever possible to *build upon* existing architectural arrangements and service infrastructures in the home and predicate developments on an appreciation of the social organization of the home.
- Secondly, the historical shaping of the home also instructs that the domestic environment is not an isolated environment but intimately connected with other environments that constitute the “living space” (work, shops, the streets, hospitals, libraries, etc.). Thus, design should attempt from the outset to develop *integrative* architectures and infrastructures that allow for multiple forms of connectivity between various environments.

In the next deliverable D1.2 *Shaping the Home: Architecture, Technology, and Social Interaction* we set out to unpack the domestic legacy, elaborating a distinct methodological approach to the study of the home as a historically situated, architectural, technological, and socially organized common-place fact of everyday life.