Home, Work, and Play:
Situating Canadian Social History, 1840-1980

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Female Regulation of the Healthy Home

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'Woman's sphere', observed Harriette M. Plunkett, 'has had a great many definitions.' To illustrate her idea of women's place in sanitary reform, the author of *Women, Plumbers, and Doctors; or Household Sanitation* included in her book a sectional drawing of a standard middle-class house, labelled 'A properly plumbed house—Woman's Sphere'.¹ Drawn in the manner of Teale and the other house-doctors, it showed the exterior connections of a building to the municipal sewer system, as well as its ventilation and water supply. ... Woman's sphere 'begins where the service-pipe for water and the house-drain enter the street-mains,' explained the American author, 'and, as far as sanitary plumbing goes, it ends at the top of the highest ventilating-pipe above the roof.'²

Plunkett was not alone in designating domestic sanitary responsibilities to women. Ada Ballin, the editor of *Baby* magazine and the author of numerous books for women, also considered the examples set by women in the home to be significant contributions to public health:

'It is a glorious thing for us to think that health-science is mainly to be taught and practised by women; that women are now going about among the people as apostles of health, teaching them how to be well and happy, and that this movement is gaining impetus every day. Oh, yes, my readers may say that is doubtless all very good and noble, but we cannot all frequent the shrines as missionaries of the goddess Hygeia. Certainly not; not every woman is suited, or can have the opportunity to do so; but yet, by attention to herself, her children and her home, she can work in the good cause. Let her make her own home a temple of the goddess, and she will have done her duty.'³

Sanitarians noted women's supposedly innate interest in health and also their familiarity with the construction and arrangement of the house. 'The men of the house come and go; know little of the ins and outs of anything domestic; are guided by what they are told, and are practically of no assistance whatever', asserted the physician Benjamin Ward Richardson. The women are conversant with every nook of the dwelling, from basement to roof, and on their knowledge, wisdom, and skill the physician rests his hopes.⁴

Plunkett and Richardson were also typical in their focus on the spatial limitations that defined women's place in late nineteenth-century health reform; both sanitarians described women's sphere as being within the physical boundaries

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of the middle-class house. Throughout the literature of the period, the so-called separate sphere—or woman’s sphere, as Plunkett called it—was synonymous with the female-led middle-class home. While men toiled in the city, a public world, middle-class women were thought to live in an essentially private, domestic realm bounded by the exterior walls of the house.

Few historians have challenged this notion of a spatial separation of men and women in English or North American urban life. According to most accounts, the period since the Industrial Revolution has been marked by sharper distinctions between the experiences of men and women, reinforced by the breakdown of the extended family as a unit of production. Since the mid-eighteenth century, the story goes, home and work have increasingly been differentiated by geographical location, architectural style, and gender associations. ‘As the workplace became separated from the home,’ observed Jane Lewis in a major social history of nineteenth-century English women, ‘so a private, domestic sphere was created for women, divorced from the public world of work, office and citizenship.’

As a result, the history of the nineteenth-century home, like the building that is its focus, has been gendered female. Concentrating on the differences between the middle-class house and the city, rather than on their similarities, historians have painted a picture of home that assumed a universality of experience and meaning. A ‘cult of domesticity’ in the late nineteenth century supposedly made the house antithetical in every way to the city. The city was aggressive while the house was passive; the city was unpredictable while the house was stable; the city was corrupt while the house was virtuous. In terms of architectural style, public architecture relied on universally accepted principles for its meaning. The house was personalized, emotional, exclusive, and sheltered from the public gaze, like the Victorian woman.

‘Control’ of the separate sphere (the house), in terms of its health, was largely the responsi-

bility of middle-class women. The medical discourse that emerged from the Domestic Sanitation Movement in the 1870s radically changed women’s relationship to the home and to the city. The conceptual blurring of the body, the house, and the city exposed women’s control of domestic space and their participation in the urban realm. This chapter explores the female regulation of domestic architecture during the period 1870–1900. It also examines the significance of a new field of endeavour for women, domestic science, which focused on the house as a subject of study, debate, and reform. As a feminized component of the medical profession, domestic science provided a significant public arena for feminist critiques of the middle-class house, while at the same time expressing time liberated from the constraints of reproduction and child care. The emergence of this new field at this particular time also illustrates how public debates over the virtues of art and science were simultaneously played out in both the woman and the house. Neither the woman nor the house, then, was as separate as most histories of the period would have us believe.

This idea of the middle-class house as a separate domestic sphere was not invented in the twentieth century. Like Plunkett, many Victorian women described the separateness of their lives from the public world of their fathers and husbands, adopting the metaphor of the sphere to emphasize their isolation. Jane Ellen Panton, the author of more than 30 popular advice books for women in the late nineteenth century, was typical in her description of Victorian women’s lot in spatial terms: ‘A woman’s sphere is domestic, more or less, she cannot alter it by stepping out of it.’ Advisers earlier in the century had even noted the exclusion of men from the world of home. It was the right of every wife, said author Sarah Ellis, to have ‘a little sphere of domestic arrangements, with which the husband shall not feel that he has any business to interfere, except at her request, and into which a reasonable man would not wish to obtrude his authority, simply
because the operations necessary to be carried on in that department of his household are alike foreign to his understanding and his tastes.  

There is no doubt that Victorian women's choices in life were extremely limited, as many excellent studies have shown. Women had no access to property or wages, for example, during most of the nineteenth century. Nor did Victorian women exercise any real political power; they could not even vote in England until 1928.14 Victorian women were not lawyers, and few were doctors. None were architects.15 Some were teachers and nurses. Most were mothers and homemakers. In the realm of opportunities, the spheres of women and men were unquestionably distinct.

In most other respects, however, the social worlds of nineteenth-century middle-class women and men overlapped considerably. For example, although women undoubtedly spent more time than men in the home, they exercised enormous power in the so-called public sphere of economics. If a family rented out a room to a lodger, for instance, it was the woman who handled this arrangement, generating a sizable percentage of the family income within supposedly 'separate' space. Middle-class women in the nineteenth century typically controlled the employment of servants; they hired, trained, paid, and fired the men and women who looked on their houses as workplaces as well as residences.16 They also managed the elaborate round of social events that helped secure their husbands' place in the public world of finance and manufacturing.17 In addition, most women managed the purchase of food and clothing for their families; they balanced the family books, exercising, in many cases, considerable economic expertise. The rise of the department store in the business districts of cities is testament to women's economic power in the consumption of ready-made goods.18 The sphere of women encompassed, in a very real way, the public spaces, rural landscapes, commercial enterprises, and private rooms of nineteenth-century England. Gender distinctions depended on women's behaviour in public places.19 If anything, the range of spaces accessible to Victorian women was far wider than that open to Victorian men.

Nor was the world of home shielded from the influence of men. The daily lives of middle-class husbands and fathers had an enormous impact on domestic life.20 Although architectural historians have focused in their consideration of gender on rooms associated with women's experiences—the parlour, the kitchen, the nursery—as many rooms in the house were relegated to men's special use. The dining room, for example, was often occupied exclusively by men when women left the table after eating.21 Victorian dining-room furniture was often dark and massive in appearance, supposedly satisfying masculine tastes. . . . Decorators Rhoda and Agnes Garrett maintained that the gloomy atmosphere of most dining rooms in London was to 'remind one of the British boast that every Englishman's house is his castle, and that he wishes neither to observe nor to be observed when he retires into the dignified seclusion of this, the especially masculine department of the household.'22 In larger houses, the library, study, smoking room, and billiards room were designed especially for the man of the house. The separation of these spaces from the family rooms was necessary for the proper transaction of business (and smoking), but their difference was also marked in material terms by the presence of books, maps, scientific equipment, and weapons.23

Indeed, the spatial separation of men and women was one of the most prominent features of the typical Victorian house, and the degree of separation was a significant indication of class.24 While the dining room, study, and smoking room were associated with the husband, the drawing room, boudoir, and morning room were the wife's realm. It was in these rooms that the elaborate ritual of women's morning calls took place, as well as other important occupations for middle-class women, such as reading novels, writing letters, and doing handiwork.
Men's association with the dining room depended on the withdrawal of women to the drawing room after dinner. In plan, the dining and drawing rooms were often set off in direct opposition to express these gendered associations. The 'masculine departments' were commonly located at the front of the house, the more 'public' part of the plan, while women's rooms were in the back or were removed from the street level altogether, apparently protected by this distance from public space. The plan of a typical London house cited by Poore and published in the Lancet... shows this configuration of rooms. The dining room is adjacent to the main entrance of the house while the morning room is in the rear. The lady's drawing room and boudoir are on the first floor, above the unpredictable and presumably noisy activity of the street.

The prospect of rooms and their means of access in a typical Victorian house were also clearly gendered. Men's rooms, particularly the study or library, often included a separate entrance 'to admit the tenants, tradesmen, and other persons on business, as directly as possible to the room in question, and no other part of the house', while women's rooms often looked out on flower gardens or even on a 'lady's walk'. Men's rooms were thus open and accessible to the outside world, while women's spaces were most often intended to be closed and inaccessible. Most experts recommended the complete separation of men and women's rooms. Robert Kerr, for instance, considered connection between the dining and drawing rooms 'a clumsy contrivance'. The author of another popular advice book observed that the drawing room and dining room were the reverse of each other in every way. The location of the rooms on different levels, of course, secured separation and guaranteed relatively predictable meetings between men and women in the house.

In terms of decoration, too, men's and women's rooms were directly opposed. The relations of the Dining-room and Drawing-room, explained Kerr, 'are in almost every way those of contrast.' He saw the ideal drawing room as being 'entirely ladylike' in 'cheerfulness, refinement of elegance, and what is called lightness as opposed to massiveness'. Hermann Muthesius, whose classic English House of 1904–5 is a perceptive analysis of the contemporary British house plan, said that the drawing room had a 'light, pleasing impression and a general air of joie-de-vivre'. The Garretts described the decoration of the drawing room as 'light and airy' compared with the 'heavy and sombre' dining room, for in the former 'the ladies of the family are told that it is now their turn to have their tastes consulted.' According to the Garretts, the drawing room was devoted 'to the lighter occupations of life'.

The entire Victorian house—its location, arrangement, style, and size—also served to situate men (and women) in a culture ordered according to class. Like clothing, language, behaviour, and even smell, the house expressed to the public world the aspirations and economic mobility of all its inhabitants. The healthy house, 'from basement to roof', as Mrs Plunkett described it, was an equally important expression of women's participation in the public urban realm.

The association of middle-class women with health in general was not new in the Victorian period. As many historians have noted, before the rise of the modern profession of medicine, women of all classes had played significant roles as domestic healers in their homes. In the seventeenth century, Lady Anne Clifford described her mother as 'a lover of the study of medicine and the practise of Alchemy'. It was said that 'she prepared excellent medicines that did good to many'. Cooking, brewing, and distilling—traditionally women's work—were closely associated with healing. Sickness and dying were much more private conditions than today, and both were overseen by women within the home.

The expectations of the nineteenth-century sanitarians stemmed from this long-standing belief that domestic health was an innately
female concern; women were considered 'natural' healers and nurturers because they bore children. Victorian scientific theories of sexual difference also saw women as passive, intuitive, and tender—qualities that were considered appropriate to caring for the sick. 'Sick-nursing' was seen as a natural extension of domestic labour. As Lewis has noted, it was not until 1891 that the census in England differentiated hospital nurses from household servants. The emergence of modern nursing in the nineteenth century as a profession particularly suited to women is testament to all these beliefs.

By then, too, it had often been stated that women were particularly adept at preventive rather than therapeutic or curative medicine. Their experience in raising a family supposedly endowed them with special abilities in maintaining good health in the household and preventing the spread of disease once it entered a home. Pioneering female physicians later in the century used the seemingly urgent need for preventive medicine to strengthen their campaign for more women doctors. 'We should give to man cheerfully the curative department, and women the preventative', proclaimed Dr Harriot Hunt in 1852. This perception that women's place in the profession of medicine was complementary to men's eased the way for women to enter the predominantly male field.

As in the profession of medicine, so it was in domestic sanitation. Women's role in the reform of domestic architecture focused on preventing the spread of infection within the house—by inspecting and maintaining the sanitary aspects of the house, by caring for the sick according to modern 'scientific' principles, and by keeping the house clean, especially free of dust. 'The responsibility for repairing or healing the already 'sick' building—like the restoration of sick bodies—was the charge of male physicians.

Women's isolation in the home was used to advance their role in domestic sanitation, as Dr Richardson so clearly stated: 'I press this office for the prevention of disease on womankind, not simply because they can carry it out... but because it is an office which man never can carry out; and because the whole work of prevention waits and waits until the woman takes it up and makes it hers. The man is abroad, the disease threatens the home, and the woman is at the threatened spot. Who is to stop it at the door, the man or the woman? This parallels women's 'progress' in other fields, where their supposed experience as mothers was used to strengthen their position outside the home as practitioners of 'social' or 'civic paternalism'.

But the reformers' enthusiasm and support for female collaboration worked in other ways as well. Teaching women the 'laws' of sanitary science and expecting them to realize these laws in the home meant that any subsequent sickness or death was considered to be the result of women's failure to follow the rules. 'The gospel of sanitation must find its chief preachers and exponents in the women who make the house into the home, or by neglect turn it into a trap for the four deleterious D's, Darkness, Damp, Dirt, and Disease. Slovenly women... are factors of disease, and cleanly housewives acting forces against the possibility, or for the suppression, of sickness', reported a reviewer of Dr Richardson's Household Health.

The domestic sanitaritans expected middle-class women to be amateur inspectors of their houses, maintaining minimal standards of healthy architecture by detecting architectural defects. Typical house inspection covered a wide range of tasks, including checking the connection of the house to the municipal sewer system, the orientation of the building, and the materials used in the walls, as well as inspecting for water purity and measuring dampness and air movement in the interior of the house. A proliferation of books and articles appeared in the 1880s and 1890s instructing women on how to inspect the work of the 'ignorant or indolent plumber', builder, or architect. The authors included tips on drainage, ventilation, lighting, furnishing, and the arrangement of rooms, covering the
architecture of the house thoroughly for their female readership. Attention to these sanitary matters, claimed one sanitarian, could decrease the death rate by half.\textsuperscript{45}

The inspection of the house was usually conducted in a series of tests, which were spelled out in detail and illustrated in the women's advice literature. The 'peppermint test', to check the drainage system, consisted of running peppermint oil into a drain from the exterior of the building. If a minty smell was detected inside, the house was considered insanitary. The oil could also be mixed with a can of boiling water, as recommended by William Maguire in his popular plumbing manual, then poured down the soil pipe from the roof. Maguire pointed out that this test was 'troublesome' and required 'delicate handling'. The person pouring the peppermint oil into the pipes had to remain on the roof for a considerable time, otherwise one might bring the peppermint smell into the house and ruin the test.\textsuperscript{46} Special machines, resembling modern vacuum cleaners, were commercially available to assist householders in the diagnosis of their houses.

The titles of articles in popular ladies' magazines in the final decades of the nineteenth century suggest that women may have participated in decisions regarding the health of houses long before problems were evident. The authors of 'Where Shall My House Be?', 'The Site of the House', 'Walls', and 'Drainage' provided middle-class women with comprehensive information on building design, including issues of health in the home.\textsuperscript{47} The design of domestic architecture was thus a form of preventive medicine regulated entirely by women. 'She may have something to do with the building of the house at some time', observed an expert in 1899.\textsuperscript{48}

Again, this gendering of responsibility worked in two ways. If a wife and mother was solely responsible for major design decisions that were thought to affect the health of the family, it followed that any defects or illness that subsequently emerged was essentially her fault. In addition, it meant that a woman's poor health was regarded as a result of her own actions. By insisting that middle-class women's health had declined rather than improved as the reform of domestic architecture presumably progressed, doctors implied that women's faulty choice or regulation of sanitary systems was more to blame than their own inability to cure.\textsuperscript{49}

'House-choosing', as Panton called it, was a standard chapter in late nineteenth-century domestic manuals for women. Selecting a family residence was one of the many tasks that a young couple performed together before (or just after) marriage. According to most authors, women were expected to make most of the decisions regarding the family's place of residence, sometimes but not always with the advice of their husbands.\textsuperscript{50} They were always solely responsible for any aspect of the house affecting the family's health. For example, although both husband and wife probably participated in the general inspection of a house before its lease or purchase, the more detailed investigation of plumbing and drainage was the responsibility of the wife. The previous generation of women, reported Plunkett in 1885, had left inspection of the 'semi-telluric' region of the house to their husbands, whereas modern women 'rise above the beaten paths of cookery and needlework to some purpose.' 'A new sphere of usefulness and efficiency opens with the knowledge that in sanitary matters an ounce of prevention is worth a ton of cure', she asserted. 'There is nothing in hygiene that [a woman] can not comprehend.'\textsuperscript{51}

As well as becoming amateur inspectors of their houses, Victorian women learned about science and medicine by nursing sick family members, just as their mothers and grandmothers had done. Indeed, the primary location for middle-class medical care at this time was the home. It was even the site for major surgery. Hospitals, especially those in large urban centres, were seen as the causes of death rather than as places to heal, since their mortality rates were extremely high. It
was not until the turn of the century that the hospital was considered preferable to the home as a site for middle-class medical treatment, for by then it was understood to be cleaner and more appropriate than the home. As a result of Joseph Lister's explanation in 1867 of the role of living organisms in the putrefaction of wounds, cleanliness and antisepsis were practised so that hospitals gradually became curative places.52 Around the turn of the century, many operating theatres were redone with new easy-to-clean materials and were rearranged to include specialized sterilizing and recovery rooms, which obviously were not available in typical middle-class houses.53

Women's role in the home involved much more than the simple isolation of the patient in a bedroom. As sick-nurse, a woman's responsibility included monitoring the room temperature and humidity, overseeing the patient's meals, and ensuring the patient's isolation from other family members. The difference between the Victorian woman's care for the sick and her great-grandmother's was that the late nineteenth-century sickroom was ordered with 'hints' from a medical expert according to modern 'scientific' principles.54

'However skilfully designed the arrangements of a house may appear to be,' commented Mary Ann Barker, author of *The Bedroom and Boudoir*, 'it is impossible to know whether a great law of common sense and practical usefulness has guided such arrangements, until there has been an illness in the house.' Family sickness entailed considerable rearrangement of the spatial relationships between family members, as well as the ways spaces were perceived. 'Many smart and pretty-looking bedrooms are discovered by their sick owner to be very different abodes to what they seemed to him in health', noted Lady Barker.55

Women's major responsibility in caring for the sick at home was ensuring the isolation of the family member in the sickroom. The sickroom was an ordinary bedroom that was often set aside and especially furnished in anticipation of illness in the house. Catherine Gladstone described the benefits of such planning in the book she authored for the International Health Exhibition:

As we must prepare, in every dwelling-house, for the contingency of illness, how desirable it would be for all houses, even of moderate size, to have some one corner suitable for a sick-room! If space admits of such a room being entirely isolated from the rest of the house, so much the better; but much may be done by at all events securing two rooms opening into each other, with windows, doors, and fireplaces where they should be, with hot and cold water supply within easy reach, and a closet properly placed.56

Many authors not only recommended the careful planning of special rooms for the sick but also advised that they be constructed differently from ordinary bedrooms, with 'double sashes and double wall', for example, 'to exclude the sound of the elements without'.57

Mrs Gladstone did not explain why she recommended having two sickrooms, though she probably subscribed to the widespread belief that a 'change of rooms' improved a patient's health. Children were often moved to a spare bedroom when they were ill, not only to prevent the infection spreading to other children but because it was feared the illness might infect the room itself. Maud Sambourne, daughter of the cartoonist Linley Sambourne, was temporarily accommodated in the spare room of the family home in Kensington. Her mother Marion Sambourne's diaries record the concern she experienced when 12-year-old Maud fell ill in 1887 and the frequency with which doctors visited the family's sickroom. On 10 February 1887, Marion wrote, 'Maudie no better, v. feverish & in pain, Dr O came four times.'58

The 'construction' of a special room or suite of rooms for a family member within the home often involved considerable rearrangement of room uses, as previously mentioned. Mrs Panton suggested choosing a room at the top of the
house. In the case of a house that was being built to a family's specifications, she advised that the sickroom be separate from the main building— an annex that could be reached by an interior passage and an exterior door. The door between the passage and the sickroom should be of plate glass so that a mother could observe her sick child without risk of infection. As additional protection, Panton suggested that a sheet soaked in carbolic acid should be hung on the door. The doctor would enter the sickroom from the exterior door. The decorations and furnishing should be extremely cheap, Panton advised, because they would be destroyed after every illness.  

Most sickrooms were less elaborate than Panton's version. Certainly, most families did not construct special annexes to their houses. They simply 'emptied' ordinary rooms of furnishings, clothing, and any other contents as a way of securing separation of the sick from the healthy members of the family. The back of the house was better than the front, and upper levels were preferable to lower floors, experts said, because of the need for perfect quiet. Too much furniture was believed to 'confuse' sick people. 'As a rule, in a severe illness,' warned Lady Barker, 'sick people detest anything like a confusion or profusion of ornaments or furniture.' Like others, she associated successful nursing with the removal of 'things' from the room:

I have known the greatest relief expressed by a patient, who seemed too ill to notice any such change, at the substitution of one single, simple classical vase for a whole shelf-full of tawdry French china ornaments, and I date the recovery of another from the moment of the removal out of his sight of an exceedingly smart modern dressing-table, with many bows of ribbon and flounces of lace and muslin. I do not mean to say that the furniture of a sick-room need be ugly—only that it should be simple and not too much of it.  

The American author and social reformer Charlotte Perkins Gilman described the sense of confinement, even imprisonment, she had felt in a 'big, airy room' because of its 'smouldering unclean yellow' wallpaper. Her well-known story, 'The Yellow Wallpaper' (1892), recounted her quick mental disintegration while spending time in a former nursery at the top of a rented summer house. The tale has become a classic in women's history and is also significant for the clear links drawn by the author between architecture and women's power, a subject that intrigued Gilman throughout her prolific career. Seldom mentioned, however, is that in 'The Yellow Wallpaper' she blamed her husband John, a physician, for her inability to get better.

An emptier room was also easier to clean, protecting the next occupant from infection. Catherine J. Wood suggested that women should remove all carpets and curtains, retaining only a table and washtub in the sickroom. While every family could not afford to destroy and replace the room's contents, care was certainly taken to clean the sickroom and its contents thoroughly after an illness. Like the regular cleaning of the house, this was entirely the woman's responsibility.

The above advice of Wood and others is evidence of the widespread debate at the time over the role played by household objects in the spread of infection. It also shows that medical experts as late as the turn of the century continued to create an 'atmosphere of constant crisis' in the middle-class home. Articles with titles such as 'Books Spread Contagion', 'Contagion by Telephone', and 'Infection and Postage Stamps', as well as many experts' insistence that diseases were continuing to spread because of women's negligence, must have boosted both the standards of cleanliness (and sales of sickroom furniture) and maternal guilt.

The sanitarians also promoted cleanliness in the home by specifying the use of new materials inside the house. This advice, of course, assumed that there would be considerable renovation to house interiors. The sanitarians' 'prohibition against dust', for example, discouraged the use of
upholstered furniture and the elaborate decoration that was popular at mid-century. W.H. Corfield recommended the use of tiles throughout the house; Douglas Galton, an authority on hospital design, suggested that interior walls be made of metal or cement to avoid the accumulation of dust. Most experts’ advice was less drastic, suggesting simply that one avoid heavy curtains and difficult-to-clean furniture.65

Commercial manufacturers took advantage of woman’s role as sick-nurse in the home by promoting health-inducing products that were supposedly less disruptive to the household. The ‘Arena’ vaporizer, for example, would prevent the spread of all infectious diseases while a woman slept, read, or worked. . . . Not surprisingly, the International Health Exhibition of 1884 brought together hundreds of manufacturers selling devices specially for invalids and sickrooms. Many of these were marketed to women. Messrs Doulton and Company, the major manufacturer of domestic tiles at the time, set up a special pavilion at the IHE.66

In terms of material culture, however, health reform had its greatest impact on the design of beds. The most drastic change was the popularity of metal beds, which had formerly been used only in institutions. It was believed that metal, like tiles, harboured less dust and absorbed no humidity; it was thus intrinsically cleaner than wood. The leading manufacturer and distributor of beds in London, Heal and Son, exhibited an ideal small bedroom at the IHE. . . . Although the other three pieces of furniture in the room were wooden, the bed was metal.

Physicians also advised different ‘environmental’ conditions for the treatment of various illnesses in the home. After about 1870, the authors of articles advising women how to nurse sick family members nearly always focused on the arrangement of the sickroom rather than on the therapeutic treatment of illnesses.67 Through the arrangement of the ‘architecture’, women were expected to prevent the spread of infection in the house. A fever, for example, required that the sickroom have either a small fire or none at all, thorough ventilation, and minimal furniture. A completely different ‘architecture’ was recommended for the treatment of measles: closed windows and an open door.68 Victorian women thus practised domesticity, as historian Regina Markell Marantz has noted, ‘not as a cult, but as a science’.69

Beginning in the 1870s, women’s sanitary responsibilities in the home were professionalized under the name of domestic science or domestic economy. Like medicine and architecture, the new ‘field’ was configured to follow precise and predictable rules, was subject to examination (not registration), and became the subject of formal programs of education. ‘Wifeliness, which for centuries has been attributed to natural charm, is demonstrably a science’, proclaimed the pioneers of the new field.70 As Barbara Ehrenreich and Deirdre English have noted, ‘scientific housekeeping’ depended heavily on real connections to the male world of science.71

‘[The home maker] must know a good deal about physics’, stated an expert in 1899, ‘because that is basal to all the plumbing in her home, basal to the whole subject of ventilation, to the whole material side of the home.’72 Like Catharine Beecher in the United States, proponents of the new field argued that proper housework was based on scientific principles. ‘It is a Profession,’ claimed Phyllis Browne, the author of several housekeeping manuals, ‘and to qualify for it a girl needs systematic training and methodical practice.’73 Beecher’s ideas were promulgated in England in the 1890s by her sister-in-law, Eunice Beecher. ‘There is nothing that can lighten labour’, she said, ‘like method and regularity in performing it.’74

The first annual congress on domestic economy was held in Birmingham in 1877 to discuss the teaching of domestic science as a part of the general education of girls.75 Several sanitarians, including Edwin Chadwick, read papers to the newly assembled organization. A journalist
reporting on the conference noted what he considered a peculiar omission:

We are not aware if domestic architecture has yet been taken up as a profession by women—but we feel convinced that when this is the case it will prove not only lucrative to themselves, but most valuable to the community. The dreary monotony of our street architecture would be done away with, and our poor and middle-class houses would be built with all the appliances for domestic health and comfort which now are either done without or are subsequently added at great expense and trouble by the inmates themselves. We wish that someone had taken up this subject at the Congress.  

This remark was typical of the period. As women gained more and more recognition and confidence in design through their management of the home by ‘scientific’ principles, they, like the physicians, were seen by an anxious public as alternative ‘designers’ of domestic environments. 

The invention of the new field of domestic science was part of a broader program to employ women in the late nineteenth century. A surplus of females—resulting from an imbalance in the number of men moving to the colonies, among other reasons—had reached seemingly insoluble proportions by 1891, when the census reported nearly 900,000 more women than men in England and Wales. Ten years earlier there had been recorded 121 spinsters to every bachelor in London. Many of these unmarried women, called ‘redundant’ at the time, were forced to earn their own living. The new educational opportunities, including programs in domestic science, provided ‘professional’ opportunities for the redundant spinsters. Domestic science was not threatening; women studying it did not put men out of work. Moreover, its subject matter seemed restricted to women’s traditional work within the home: cooking, cleaning, and caring for the sick. Even the new field of hygiene, as we have seen, was considered a woman’s version of science. 

A major aspect of the discipline was the systematization of household cleanliness. This meant that women should follow a ‘routine’ in keeping their houses clean. ‘Method and system’, observed the housecleaning expert Phyllis Browne, ‘are to household work what oil is to machinery—they make things go smoothly and easily.’ ‘System’, she explained, ‘consists in having a clear understanding of what has to be done, when and how it is to be done, and arranging who is to do it.’ Methods of housecleaning were equally important. Following the general scientific model, this meant the establishment of principles that were to be observed in the cleaning of a house. ‘There is a right way and a wrong way even of dusting a room or furniture’, Browne asserted, and then explained at length to her female readership how to dust ‘correctly’. Again, the threat of sickness and death was upheld as the consequence of ‘incorrect’ dusting: ‘Where dirt reigns, disease, misery and crime stand erect around his throne; liberty, progress, and enlightenment hide their heads in shame. All the great plagues which have destroyed human happiness, broken women’s hearts and made children orphans, have held their carnival in the midst of dirt.’ 

Pointing to dirty houses (and, by implication, careless women) as the cause of illness was obviously not in itself a liberating factor for Victorian women. Through this kind of liability, however, women became ‘experts’ on the design of houses. Women trained in the ‘principles’ of hygiene spoke out publicly on the merits of various materials and designs, constructing a critical forum with which to consider the work of architects. In addition, women’s accomplishments at home led directly to work in the supposedly public world of men. Having proven their gender-based competence in detecting faulty drains and poor ventilation in their own homes, women were among the first to be appointed sanitary inspectors of buildings as ‘health visitors’ to the poor.
The overall tone of Victorian domestic advice literature implied that women could detect unsanitary work but could not undo or improve the mistakes supposedly made by builders or architects. Changes to the plans of the houses, at least in England, were beyond their immediate power, which many advisers suggested would be much improved if women were given the chance to design buildings. 'Doubtless the great thing that strikes us when we are house-hunting is that if women architects could get employment houses would be far better planned than they are now', remarked Mrs Panton.\textsuperscript{83}

The situation was very different in the United States. There women were encouraged to make extensive renovations to their homes, including substantial changes to the plans of their houses. In the name of domestic cleanliness, the American author Helen Dodd advised the wives of farmers to improve the arrangements of their houses to suit their own needs better. She told women to look critically at their houses and ask themselves whether the buildings really satisfied them rather than being designed to suit the rest of the family. Dodd set out some 'principles of sanitation' for farmhouses which could be realized without employing skilled workmen: 'any strong woman' could do the renovations, she said.\textsuperscript{84} Dodd's instructions focused on changes to the interior arrangements of the houses without altering the exterior walls. . . . For example, her renovated kitchen plan increased the direct light of both the kitchen and the dining room, as well as providing a more efficient work space in the kitchen.\textsuperscript{85}

E. C. Gardner's manual, The House That Jill Built, after Jack's Had Proved a Failure, also encouraged American women to modify their houses.\textsuperscript{85} Using the narrative of a young married couple considering various arrangements of houses, Gardner conveyed to women standard architectural information on room composition, sanitary drainage, and decoration. Intended for three groups of people—those contemplating the purchase of a home, those wishing to improve their homes, and those who had suffered from living in homes based on errors in design—the books title revealed the author's confidence in the design abilities of women.

No such books were written for English women, though women in Britain may have read the American literature. As noted above, their responsibilities appear to have been limited to the detection of faulty design and did not include the building's physical improvement. This was doubtless because the system of middle-class housing was far more standardized in England than in the United States; it was not necessarily a reflection of stronger feminist impulses among American women. . . .

English novelists described women's familiarity with plumbing as a mark of new-found confidence. In Pilgrimage, for example, Dorothy Richardson described a woman's view of a Bloomsbury house in 1890:

The large dusty house, the many downstairs rooms, the mysterious dark-roomed vault of the basement, all upright in her upright form; hurried smeary cleansing, swift straightening of grey-sheeted beds, the strange unfailing water-system, gurgling cisterns, gushing taps and lavatory flushes, the wonder of gaslight and bedroom candles, the daily meals magically appearing and disappearing; her knowledge of the various mysteriously arriving and vanishing people, all beginning and ending in her triumphant, reassuring smile that went forward outside beyond these things, with everybody.\textsuperscript{86}

As we saw at the beginning of this chapter, Mrs Plunkett's assignment of a 'properly plumbed house' to 'woman's sphere' in 1885 was undoubtedly accurate. Women actively participated in building construction and science through their regulation of healthy houses. Their own homes—particularly the drainage—were arenas through which they exhibited their mastery of these concepts, hence the name of the new field: 'domestic science'.
Equally important, however, was Plunkett's qualification of her statement that woman's sphere had many definitions. Although the new scientific and architectural expertise gained by women through sanitary science appeared to be liberating, it set relatively rigid limits on their participation in health reform. Women were blamed for the persistence of disease among the middle class as well as for the unacceptable work of plumbers and architects. In addition to their role as regulators of healthy houses ... the close association of women and houses between 1870 and 1900 cast Victorian women into passive roles as the objects of scientific research. Like the service pipe, house drain, and ventilating pipe that defined woman's sphere, her body acted as both the protection against disease and the source of infection.

Notes

1. Mrs H.M. Plunkett, Women, Plumbers, and Doctors; or, Household Sanitation (New York: D. Appleton, 1885), title page.

2. Ibid., 94 ...


10. Blackmar, Manhattan for Rent, 110.


14. The first women’s suffrage committee was formed in 1866; women taxpayers voted in local elections in 1869, following the Municipal Franchise Act. It was not until 1928 that the Equal Franchise Act allowed all women over 21 to cast votes. See Angela Holdsworth, Out of the Doll’s House: The Story of Women in the Twentieth Century (London: BBC, 1988), 12–13.


18. On the department store as an institution designed to appeal to women, see Susan Porter Benson, Counter Cultures: Saleswomen, Managers, and Customers in American Department Stores, 1890–1940 (Urbana: University of Illinois Press, 1986).


20. This question has not been explored fully by historians because of a dearth of sources. Studies that begin to address men’s influence at home include J.A. Mangan and James Walvin, eds, Manliness and Morality: Middle-Class Masculinity in Britain and America, 1800–1948 (Manchester: Manchester University Press, 1987).


23. Most Victorian books on house planning described men’s rooms this way. For a typical example, see Robert Kerr, The Gentleman’s House; or, How to Plan English Residences (London: Murray, 1864), 101–10, 129–38.


29. Ibid.


32. Ibid., 56.

33. Blackmar, Manhattan for Rent, 128.


41. Barbara Ehrenreich and Deirdre English have noted how the germ theory became a doctrine of individual guilt. See Ehrenreich and English, *For Her Own Good*: *150 Years of Experts’ Advice to Women* (London: Pluto, 1979), 74–5.
42. ‘Reviews’, *Sanitary Record*, 15 Jan. 1887, 335.
43. For a typical article, see ‘Going Over the New House’, *Baby: The Mothers’ Magazine* 3 (Dec. 1889): 129.
49. On physicians blaming women for having poor health, see Branca, *Silent Sisterhood*, 66.
50. This process was expounded by William Dean Howells in his novel *A Hazard of New Fortunes* (1890), in which Mrs March, exposing her ‘female instinct for domiciliation’, led her husband on a lengthy search for lodgings in New York.
52. Lindsay Granshaw has explained how general cleanliness and antisepsis were seen as two distinct methods. See Granshaw, “Upon This Principle I Have Based a Practice”: *The Development and Reception of Antisepsis in Britain, 1867–90*, in John V. Pickstone, ed., *Medical Innovations in Historical Perspective* (New York: St Martin’s Press, 1992).
58. Marion Sambourne’s diaries were analyzed in Shirley Nicholson, *A Victorian Household* (London: Barrie and Jenkins, 1988). For this photo and the description of Maud’s illness, see ibid., 46. Today the Sambourne house appears much as it did in the late nineteenth century. It is operated as a house museum by the Victorian Society.
64. ... These titles are reproduced from Ehrenreich and English, *For Her Own Good*, 157.
68. This typical advice for the management of a sickroom is extracted from Pye Henry Chavasse, *Advice to a Mother*, 14th edn (London: Churchhill, 1886), 215–20.
71. Ehrenreich and English, *For Her Own Good*, 141–81.
76. Ibid., 354–5.
80. Ibid., 875.
81. Ibid., 869.