A Culture of Curiosity: Science in the Eighteenth-Century Home

The study of the early modern home has drawn mounting interest from academic historians over the past decade. From Sara Pennell’s *The Birth of the English Kitchen* (2016), to Tara Hamling and Catherine Richardson’s beautifully illustrated *A Day at Home in Early Modern England* (2017), to Elaine Leong’s *Recipes and Everyday Knowledge* (2018), a focus on the ‘everyday’ has been established as an important area for new research. Leonie Hannan’s *A Culture of Curiosity: Science in the Eighteenth-Century Home* makes a valuable contribution to this growing field. Hannan draws on a broad range of source material to argue that the quotidian home and its associated actors were integral to the development of natural knowledge and scientific practice. She presents a well-researched book that is engaging and relevant to anyone interested in knowledge-making in the eighteenth-century domestic environment.

A Culture of Curiosity comprises an introduction followed by seven chapters divided into three parts. The first part contains two chapters dedicated to exploring ‘Household materials and networked space’ and ‘Tacit knowledge and keeping a record’ respectively. The second part concentrates on three different activities: ‘collecting’, ‘observing’ and ‘experimenting’. These chapters are enhanced by well-chosen case studies, employed to highlight each chapter’s theme. The third part comprises two concluding chapters that draw the previous chapters together, focusing on ‘Personal experience and authority’ and the ‘Culture of enquiry’ in the eighteenth century.

In terms of the sources employed for the purposes of this project, Hannan seeks to access the ‘talkative dimension of domestic knowledge-making’ by examining everyday manuscript materials found in the archives: recipe books, account books, inventories, lists and receipts (p. 12). Hannan analyses material related to a range of eighteenth-century dwellings — from modest homes above shops to large country houses set in substantial estates. She concentrates primarily on the British Isles, including Ireland, but also discusses the lives and work of emigrants who built homes and settled in America, in this way acknowledging ‘global circuits of trade, networks of exchange and colonial relations of domination and extraction’ (p. 12).

Expanding on the sources used for the purposes of her project, Hannan discusses the influence of print culture and the accessibility of this to the middling classes — not only books, but periodicals and magazines.
She also explores the importance of epistolary exchange and contextualises how the knowledge developed at home was happening alongside a thriving coffeehouse culture and the development of new learned societies and institutions, such as the Royal Society, the Society of Antiquaries, and the Society for the Encouragement of Arts, Manufacturers and Commerce. She emphasises that the home, in contrast to these ‘semi-public spaces’, has been hitherto under-explored (p. 11). Hannan acknowledges that the surviving textual evidence hinting at the knowledge generated and practised in the home is only the tip of the iceberg: ‘conversation, demonstration and verbal instruction were clearly the most usual methods by which knowledge and skill were transferred person to person’ (p. 206). In this way, Hannan highlights the importance of social networks in the development and exchange of knowledge generated in the domestic environment.

Hannan’s introduction neatly sets out her argument and identifies the eighteenth-century home as an under-explored area of study. Her remit is to demonstrate the ways in which ‘skill, tacit knowledge, technology and the rhythm of daily work in the home created the conditions and aptitudes for scientific enquiry’ (p. 16). The introduction is well-researched and engages with much of the key literature on an array of topics related to Hannan’s central line of investigation. She discusses (amongst other themes) women as key proponents in early modern science, the concept of domestic work, and ‘tacit knowledge’ as an important component of the knowledge developed in the home environment. She even delves into philosophical discussions surrounding the concept of ‘practice’.

Hannan provides a stimulating discussion focused on the concept of ‘domestic space’, arguing that stillrooms, breweries, and gardens should be included under this umbrella. She explores the layout of the eighteenth-century home, and how particular areas, such as the kitchen, were spaces of ‘production’. Hannan highlights the networks connecting householders to the wider world, especially within the realms of trade. ‘Household record-keeping’ is a prominent theme, linked to the concept of domestic oeconomy, and Hannan emphasises the ‘process of tracking consumption’ of food and supplies that was common in the case of large houses and country estates (p. 35).

Specific domestic practices are examined in the second part of Hannan’s book, beginning with collecting. Hannan discusses collections of objects (such as globes, telescopes, art, and antiquarian artefacts) that might reside in museums, but also in urban coffeehouses or private houses, made accessible to the public for a small fee. She draws attention to the strong connections between collecting and record-keeping, discussed in Chapter Two. Her remit is to challenge the view of science as ‘a series of rarefied practices undertaken by scholars who then shared their findings with the ‘public’ via print’ suggesting instead that ‘the actions of scientists were merely extensions of existing everyday practices’ (p. 98). A significant proportion of the chapter is dedicated to discussing the collections of British naturalists and how items were organised, classified, and documented. Hannan refers to the ‘socially encompassing character of natural history’ in the eighteenth century and incorporates case studies from across the social spectrum, ranging from the second Duchess of Portland, Margaret Cavendish Bentinck (1715-85) to botanist and illustrator James Bolton, the son of a weaver (p. 103).
Hannan moves on to concentrate on the theme of ‘observation’ in her fourth chapter, exploring the changing relationship between observation and experiment from the eighteenth to the twentieth century. She discusses two Dublin apprentices — Robert Jackson and Thomas Chandlee — who pursued their interest of astronomy at home in the second half of the eighteenth century. Hannan points out that astronomy in Britain was an activity that ‘thrived outside of the formal institutions of learning and science with participation from many ‘amateurs’’ (p. 123). The case studies of Jackson and Chandlee aptly demonstrate that it was not just the wealthy that adapted domestic spaces for intellectual work. Expensive telescopes were not essential for the practice of astronomy; more basic (and affordable) instruments could be used to carry out observations of the night sky. Hannan does, however, emphasise the need for embodied knowledge when using even basic apparatus. There is further reference to the importance of cheap print in this period (including almanacs and journals) that provided easy access to astronomical observations, calculations, and predictions to people from all levels of society.

Experimenting within the context of the domestic environment is examined in Chapter Five. Hannan uses the experimental work of breeding silkworms by men and women — including a post-mistress in Kent and an apothecary in Pennsylvania — to frame the home as a primary space for experiment. As an activity that ‘sat at the juncture of naturalism and commercial interest’, silkworm breeding provides an insight into eighteenth-century natural history, manufacture, and commerce, and how these might be considered within the context of the home (p. 147). Hannan acknowledges the absence in her monograph of a comparison between the eighteenth-century home and an alternative site of knowledge production. It certainly would be interesting to explore, for example, similarities and differences between the domestic environment and the early institutional laboratories: spaces purposefully built for the pursuit of science.

The final chapter of Hannan’s book (Chapter Seven) encourages the reader to reconsider how each of the case studies discussed fit into the eighteenth-century ‘culture of curiosity’ to which this book owes its title. Hannan’s principal argument is that householders were integral to the development of eighteenth-century natural knowledge and that, most importantly, ‘scientific methods and ideas were initiated, rather than imitated, by a wide variety of people in domestic surroundings’ (p. 205). Domestic experimenters were ignored and misunderstood by their contemporaries, and this has had enduring effects on how knowledge-making has been characterised more broadly in the historiography. Hannan states that householders ‘did their work with their environment, not in spite of it’: their curiosity about the natural world was entangled in the rhythms of everyday life and stimulated by their desire to undertake quotidian tasks more efficiently and productively (p.212).

Hannan discusses what she means by the phrase ‘culture of curiosity’ in her introduction, explaining that ‘curiosity was rife in the eighteenth century, and many acted up on it to investigate the natural world’, with resulting ‘ramifications for the characterisation of intellectual life in this period’ (p. 6). Further explanation as to why people in the eighteenth century were more ‘curious’ than those in the seventeenth or nineteenth centuries for example, would have been welcome. Regardless, Hannan is compelling in her argument that enquiry and domestic work went hand in hand, and that eighteenth-century men and women frequently functioned as part of ‘communities of learning’ (p. 220).

Hannan uses the term ‘science’ throughout the book, and an explicit definition of what was meant by this would have been beneficial, especially with reference to other phrases used, such as ‘natural philosophy’ and ‘natural knowledge’. In her seminal work The Jewel House: Elizabethan London and the Scientific Revolution, Deborah Harkness, for example, convincingly explains and defends her use of ‘vernacular science’ to refer to knowledge that was ‘based in urban ways of knowing and evaluating nature that came from the densely overlapping worlds of the City’. (2) In a similar vein, Hannan’s later use of the word ‘scientist’ to refer to early modern figures came across as slightly anachronistic given that this term was coined in the 1830s. (3) However, these remarks on terminology are minor points when considered alongside Hannan’s rich portrayal of the activities and practices that occurred in the domestic sphere, and the evidence she presents to challenge our understanding of the construction of knowledge in the eighteenth-century
The penultimate chapter of Hannan’s book (Chapter Six) focuses on personal experience and authority, examining the surviving epistolary evidence written by those who undertook observations and experiments at home. She provides examples of innovation being motivated by a domestic problem; something that links well with Sara Pennell’s research on the early modern kitchen as a space for ‘technological change’, innovation, and experiment. A key remit of this chapter is to examine the gender dynamics at play with regards to experimentation in the home environment. Hannan points out that though women were excluded from universities and learned societies in Britain and Ireland at this time, they could pursue experimental science in other ways. Hannan argues that in the eighteenth century, a ‘diverse range of women were engaging with science in public fora, whether that was through periodicals or poetry’ and returns to the examples of silkworm breeding to demonstrate this (p. 186). Hannan considers the experimental testimony of Ann Williams and Henrietta Rhodes — two women of the middling sort and gentry who bred silkworms in their homes — and examines how the content and style of their writing made their accounts convincing. This discussion could have been further expanded to include the seminal work of Steven Shapin and Simon Shaffer, who have explored in detail the challenges presented in evaluating early modern ‘testimony’ and the attempts made by individuals to overcome these. They discuss the concept of ‘virtual witnessing’ and argue that by providing extremely detailed and public accounts of experimental phenomena, readers could experience the experiment in their minds, negating the need for them to replicate it themselves or witness it in real life. Williams and Rhodes relied on their letters to the Society for the Encouragement of Arts, Manufactures and Commerce to communicate their domestic experiments with silkworms and so their ability to provide meticulous and convincing accounts was critical.

A significant proportion of Hannan’s book discusses the concept of tacit knowledge and this is particularly developed in her second chapter, enhanced by examples found within the ‘productive work’ of the eighteenth-century home. She defines the characteristics shared between knowledge learned at home and scientific enquiry, identifying ‘personal experience and repetition, typically in the form of observation and experiment’ as key (p. 63). One of the case studies presented involves bread-making in an elite Irish household. Hannan describes the tacit knowledge required to identify ‘good barm’ used in the leavening of bread, and how this was communicated from servant to master. This discussion could have been expanded to incorporate existing research by the likes of Michelle DiMeo and Katherine Allen who have both demonstrated the transfer of domestic medical and culinary knowledge from servants and tradespeople to elite individuals. Other case studies discussed by Hannan include two manuscript recipe books (one English and one Irish) belonging to two women, and two weather diaries belonging to an Englishman and an Irishman. The weather diaries provide clear evidence for the importance of careful observation by eighteenth-century householders, though the links to tacit knowledge are more subtle.

Hannan recognises the difficulties faced by historians in detecting the ‘unwritten tacit knowledge’ of the home and hence being able to ‘fully value it in histories of knowledge’ (p. 64). Historical reconstruction is one approach that might prove fruitful in this context. Historian Pamela Smith is a strong advocate of historical reconstruction, and her Making and Knowing Project, based at Columbia University, has done much to investigate early modern artisanal practices through the reconstruction of manuscript craft recipes. In Smith’s words, it is only through ‘understanding the contingency of the production of natural knowledge and the ways in which making knowledge and objects is dynamic and emergent we begin to incorporate a history of experimental knowledge into the narrative of what has been called the Scientific Revolution’. In undertaking a historical process, whether a culinary recipe or a scientific experiment, the historian might be able to more clearly identify the tacit knowledge required for that activity. What actions, steps or techniques needed practice, experience or further explanation absent from the textual record?

Hannan has written an immensely enjoyable and engaging book, and she has made a significant contribution to the field. She is a captivating and engaging writer and her work complements that of Smith, amongst others, who have argued for the value of artisanal knowledge in the development of modern science. Stepping away from the workshop, Hannan instead makes a convincing argument for asserting the
household as an important space for the generation and production of natural knowledge and the making of modern science.

Notes


Image beside cover image on landing page: Wellcome Trust, A sick lady addressing her husband, and being nursed by three women. Mezzotint by V. Green after E. Penny, 1774. Penny, Edward, 1714-1791. Date: March the 22nd 1775, Reference: 466055i

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