

The history of home making and expectations of 'normal' home life today

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1: Introduction

This paper proposes that in order to understand domestic energy demand, researchers need to consider key themes in the making of home. The idea that domestic energy scholarship would benefit from greater understanding of the diverse meanings of home is not new (Aune, 2007; Dowling and Power, 2012; Galvin and Sunikka-Blank, 2014; Wilk and Wilhite, 1985; Wilson et al., 2015). Homemaking is important for domestic energy researchers because it emphasizes that homes do not simply change as the result of householders making rational and functional renovations (Aune, 2007; Sunikka-Blank and Galvin, 2016). Certainly, decisions to change the home are not solely motivated by the potential to save money, reduce one’s environmental impact, or improve thermal comfort. Yet, homemaking is a complex practice to investigate, Dowling and Power (2012: 77) suggest that:

“homemaking is not a one-way process where people simply appropriate objects, furnishings, colours and textures to achieve feelings of homeliness. Rather it is a multi-directional relation where the materiality of the house also shapes and potentially surprises, disturbs and alters residents’ sense of home.”

The idea of this ‘multi-directional relation’ hints at the complexity of intervening in domestic energy demand and the need for a socio-technical investigation of everyday home life (Gram-Hanssen, 2014a,b; Sunikka-Blank and Galvin, 2014, 2016). In order to demonstrate the utility of exploring homemaking in domestic energy research this paper is organized around five key themes: home-as-ideal (section 2), hearth (section 3), family (section 4), privacy (section 5), and gender (section 6). These themes emerged from analysis of key texts on the evolution of our homes as social and physical units (Blunt and Dowling, 2006; Crowley, 2001; Flanders, 2015; Hardyment, 1992; Rybcznski, 1986; Valentine, 2001), and were also reflected in wider literature on the meanings and expectations of home (Brickell, 2012; Mallett, 2004; Perkins et al., 2002; Sixsmith, 1986; Sommerville, 1992). Considering the complexity of housing and the importance of home in people’s lives, there are likely other themes important to homemaking. However, these five appear in much of the scholarship on the meanings and makings of home and, as this paper demonstrates, have clear implications for domestic energy demand. The UK context is the primary focus of this paper, partly reflecting that the majority of home literature is biased towards Anglo-Saxon studies.

2: Home-as-ideal

The home is entangled with all sorts of ideal representations and models of ‘homeliness’ (Blunt and Dowling, 2006; Brickell, 2012; Chapman and Hockey, 1999; Flanders, 2015; Gorman-Murray, 2007; Hardyment, 1992; Lancaster, 1939; Mallett, 2004; Perkins *et al*, 2002; Rybcznski, 1986; Sixsmith, 1986; Sommerville, 1992; Valentine, 2001). The home-as-ideal theme is not to suggest that the home is actually, or always, positive in reality; this assumption is actually a common critique in literature on the home (Blunt and Dowling, 2006; Brickell, 2012; Gorman-Murray, 2007; Imrie, 2004; Mallett, 2004). Instead the home-as-ideal theme indicates that homemaking is often driven by nostalgic and aspirational aims or that householders try to (re)create past and future ideals of the home.

Past norms of homemaking structure current and future practices. Architect Rybczynski (1986: 9) observed that in homemaking there is an “acute awareness of tradition [...] that reflects a desire for custom and routine in a world characterized by constant change and innovation”. Idealising the past has been suggested to be an important part of homemaking since the Industrial Revolution because householders attempt to return to past simplicity and the ‘good life’ by preserving symbols of homeliness thereby creating a sense of continuity and connection with (this romanticised view of) the past (e.g. Tudor façade, fireplaces and mantles)(Chapman and Hockey, 1999; Flanders, 2015; Mallett, 2004). This theme is important to domestic energy research because preserving symbols of past homeliness may not align with modern ‘needs’ (Flanders, 2015). For example, the aesthetic appeal of stone cottages or wooden framed Victorian windows can clash with modern expectations of indoor environments being warm, dry and draught-free. Indeed, there is empirical evidence of UK householders choosing to maintain heritage features over saving money or making their homes warmer (Sunikka-Blank and Galvin, 2016). Yet retrofitting existing homes is often cited as a key way to reduce energy demand and carbon emissions (Sunikka-Blank and Galvin, 2016; Wilson *et al.*, 2015). For instance, in the UK, 40% of homes were built before 1939 (Sunikka-Blank and Galvin, 2016) and only 13% of the housing stock was built after 1991 (DECC, 2013). Thus, the vast majority of homes are already built and will need some efficiency retrofitting to meet the UK’s ambitious commitment to reduce emissions by 80% by 2050. A large proportion of these homes have traditional or aesthetically pleasing features which householders may be reluctant to compromise for the sake of thermal comfort or energy saving. Subsequently, Sunikka-Blank and Galvin (2016) recommend the development of a new/special ‘warm heritage’ label for energy advisors, where householders are offered an assessment that prioritises architectural characteristics, even if the suggested measures to improve thermal comfort or reduce energy use are sub-optimal. This sort of energy advice thus acknowledges the complexity of homemaking and the way in which aesthetic aspirations influence thermally retrofitting the housing stock.

Turning from looking at how nostalgic idealisation of past homes shapes current practices, the section continues by exploring the other side of the home-as-ideal theme: the impact of aspirations for a future ‘ideal’ home. The home-as-ideal is not meant to ignore the varied experiences, forms, and meanings of home but to suggest that broader cultural norms exist about what characteristics an ideal home should have (Chapman and Hockey, 1999). There are cultural perceptions about the ‘right’ number, and look, of bedrooms and bathrooms and the ‘ideal’ size, type and tenure of home that is appropriate for someone of a particular age (Ryan, 1997; Chapman and Hockey, 1999). Nonetheless average household size and housing characteristics are on the move (Williams, 2009) implying that the ‘ideal home’ is a moving target. The perception of the ideal home has two potential implications for understanding domestic energy demand. One is that the home-as-ideal is part and parcel of an entrenched high-consumption, consumer culture which is difficult to challenge because expectations of home comfort are increasingly energy demanding. On the other hand, amenity home improvements (e.g. changing the style of the kitchen or bathroom) can result in energy saving because of regulation for higher fabric standards and purchase of newer, more efficient appliances (Aune, 2007).

Building and designing a house is always an intervention in the lives of future inhabitants and these assumptions about what is ‘normal’ deserve investigation. For instance, developers repeatedly downplayed the zero-carbon aspects in their marketing, “doing all they could to make it immaterial to the space of home living and hidden from view” (Walker *et al.*, 2015: 9). The zero-carbon

developer's justification that people "buy a house not a cause – a life for my family versus an ecological statement" is unsurprising. What Walker *et al.*'s (2015) study highlights, which is also reflected in wider literature on marketing energy retrofits and zero-carbon homes (Palm, 2010; Sunikka-Blank and Galvin, 2016; Wilson *et al.*, 2015), is that policy-makers, developers, and energy advisors worry that activities to reduce energy demand will be dismissed by householders because they clash with 'normal' expectations. For example, challenging the assumption that the home should be sufficiently warm so that householders do not need to wear extra layers of clothing. Yet there is limited domestic energy research that even considers homeliness and what these expectations of 'normal' home life actually are. The rest of this paper identifies some avenues for understanding some of these key expectations, as hearth, family, privacy, and gender are arguably all shaped by some idealised visions of homeliness and home comforts.

The next key theme is related to the centrality of the hearth in meanings and making of home, which again reflects the import of these ideal images of home.

3: The hearth

The hearth is central to the home, connected to ideas of warmth, relaxation, comfort and a welcoming atmosphere for visitors (Crowley, 2001; Flanders, 2015; Sommerville, 1992; Valentine, 2001), again highlighting this notion of the home-as-ideal. The hearth is the second theme because it was literally, as well as figuratively, the centre of the home until at least the 16th century as the common design of European domestic spaces was a hall with a central fire (Crowley, 2001; Flanders, 2015).

Despite modern heating systems there is still evidence of an attachment to the hearth today. For instance, Sunikka-Blank and Galvin (2016) found that householders balanced aesthetics and functionality in their decisions to thermally retrofit: "a traditional open fire was seen as impractical and wasteful of energy, but old fireplace surrounds and mantelpieces were valued" (Sunikka-Blank and Galvin, 2016: 103). Thus, the hearth may not be preserved for its original heating purposes yet remains in some form because it is a symbol of homeliness. The obduracy of the hearth is also reflected in the popularity of stoves and several studies have documented that households have stoves for the ambience, cosiness, and glow with thermal comfort or cost being secondary considerations (Devine-Wright *et al.*, 2014; Peterson, 2008; Pineau, 1982). The hearth's importance in the home therefore goes beyond warmth and relates to the home being comfortable, welcoming and a place of relaxation.

The development and marketing of new heating systems may therefore benefit from greater consideration of the centrality of the hearth, homing in on aspects that contribute to cosiness beyond thermal comfort. The UK's (relatively recent) shift away from solid fuels and open fires is a prime example that householders do not upgrade their heating systems because of thermal comfort or energy saving considerations. Though most of the United States, Europe and Scandinavia had shifted to heating more efficiently with stoves in the 18th and 19th centuries (Crowley, 2001; Flanders, 2015), the main form of heating in UK homes was from solid fuels and open fires until 1965 (Rudge, 2012). The shift to central heating in the UK was not driven by householder's hope for financial savings or warmer homes but instead by the 1965 Clean Air Act and post war fuel shortages

(Ibid, 2012). These external conditions forced heating away from burning wood/coal to the much cleaner fuel of gas and subsequently central heating (Ibid, 2012). The hearth theme usefully highlights that there is more to heating systems than thermal comfort (e.g. symbol of homeliness, ambiance, cosiness). Indeed, rather than being triggered by a desire for warmer homes, changes to 'normal' heating systems altered expectations of 'normal' indoor temperatures. Since shifting to central heating, indoor temperatures in the UK rose approximately 5.5C, from 12C to 17.5C (DECC, 2013). Although gas central heating is now the most common way of heating in UK homes, some householders still prefer the feel of radiant heat (Devine-Wright *et al.*, 2014). Consequently, even if central heating has led to, and allows for, higher indoor temperatures there is nonetheless some resistance to these new(er) more efficient and cheaper forms of heating because there is more to comfort than indoor air temperature (Devine-Wright *et al.*, 2014; Fanger, 1970). For example, (older) householders switching from radiant heat sources to heat pumps have complained about being cold even though their homes were a higher constant base temperature (Devine-Wright *et al.*, 2014). Nonetheless, the obduracy of the hearth may also help attempts to reduce the environmental impact of domestic energy, for instance, when wood, pellets, or other solid fuels are sustainably sourced. Furthermore, considering that more energy is required to heat the volume of a room (i.e. space heating and heating air) than the surfaces of the same room, it is arguably useful to draw attention to attachment to the hearth and the desirability of the 'feel' of radiant heat sources. Infrared heaters (i.e. an electric heater which works like the sun to heat objects rather than air) can be operated at lower air temperatures than convection heaters (e.g. radiators) whilst still providing the same levels of thermal satisfaction and require roughly a third less energy (Roth *et al.*, 2007; Sarbu and Sebarchievici, 2015).

Heating is a major area of research in domestic energy scholarship because of its significant contribution to overall household energy demand (approximately two-thirds in the UK (DECC, 2013)) and the obduracy of the hearth can affect efforts to reduce energy demand for heating. The centrality of the hearth in meanings of home is thus important to domestic energy research because past practices and infrastructures influence current designs; there is an attachment to having fires because there is more to expectations of homeliness than thermal comfort. The next section considers these opportunities for domestic energy scholarship in discussion of the family and home life.

4: Family

The family comes as the third theme because, like the hearth, it is rooted in the meanings and making of the home. Indeed, the family is such an important aspect of home (Blunt and Dowling, 2004; Flanders, 2015; Moore, 2000; Perkins *et al.*, 2002; Smith, 1994; Soaita, 2014; Sommerville, 1992; Valentine, 2001) that the two are often conflated in housing literature (Gorman-Murray, 2007; Mallett, 2004).

The definition of the family, and its relationship to the 'household', has evolved. The 1850 census in Britain defined the family as "the wife, children, servants, relatives, visitors, and persons constantly or accidentally in the house" (Flanders, 2015: 30). The notion that the family includes people who are 'accidentally' in the house hints at the prevalence of lodgers, servants and extended family households in past homemaking practices. Changing boundaries between family and household thus

reflect wider shifts in the design of the house and everyday life. For example, the trend towards smaller household sizes creates different home 'needs' and new houses are smaller in the UK (Williams, 2009). Nonetheless, smaller houses and household sizes still result in more space per person, increasing demand for space heating, and creates duplication of appliances (e.g. fridge-freezer, washing machine, boiler), increasing base loads per person (Ibid, 2009). Today's narrower framing of the household and family potentially hides that past home life was much more communal and required energy-demanding practices to be shared to a greater extent. Certainly, drawing attention to the 'family' in domestic energy research highlights the importance of dynamics of negotiation and compromise to household management and understanding everyday practices.

The family should be a priority in domestic energy research considering that the increasing number and decreasing size of households is understood, in part, to be due to changing family structures (DECC, 2013). This trend towards more space per person (Williams, 2009) is important because house and household size are some of the biggest determinants of energy demand because a large house built to very high energy-efficiency standards uses substantially more energy than a small house built to only moderate standards uses (Wilson and Boehland, 2008). Furthermore, household size significantly affects energy use per person, 'two can live as cheaply as one' (DECC, 2013). For example, in the UK electricity-demanding practices in a single-occupancy household can result in nearly twice as much energy use per person than multiple-occupancy homes (Ibid, 2013). The family theme is not meant to ignore the growing number of single-occupancy homes. Households exist as part of wider networks and the family is one that can create certain practices of homemaking. For instance, a person's memories and experiences in their childhood home may shape activities in their current home or someone now living in their own home may tell siblings or parents about their new home improvements, gadgets, or routines which in turn could lead these family members to alter their own practices. Furthermore, the family impacts on certain expectations of features of the home, such as the 'need' for a guest bedroom to ensure that family members that are not permanent residents can still visit. Arguably, there is considerable scope to explore how household energy practices are influenced, and compare to, the wider family unit.

Domestic energy research generally has given insufficient attention to dynamics within the household (Ellsworth-Krebs *et al.*, 2015), a criticism also made of housing studies (Easthope *et al.*, 2015). Expectations of privacy within the home, and between householders, impacts the physical form of homes, which has implications for domestic energy demand. For instance, Dowling and Power (2012: 616) suggest that attempts to reduce house size may need to engage with concerns related to family life, good parenting, privacy, and maintaining tidiness because "bigger houses are a spatial accommodation of the complexity of contemporary middle-class family life". In their study more space was justified by parents as a way to create privacy, alone time and contain children's mess from overwhelming the tidiness and aesthetics of the entire home (Dowling and Power, 2012). An example of being able to deliver privacy without 'needing' more space would be to improve insulation between rooms as a way to limit sounds and enable family members to have space apart within smaller homes. More generally, understanding family dynamics and expectations of family life may shed light on ways to develop sustainable housing that is more nuanced and dynamic than simply making houses more energy efficient or assuming that householder's home choices will be motivated by money or energy saving.

Exploring the importance of family in the making of home may present useful avenues for future domestic energy research; such as engaging with expectations of house size and space per person in family homes, explaining attachment to (large) family homes that may no longer suit householder's needs, or aligning (idealized) notions of family life with energy reduction campaigns by stressing the utility of sharing energy-demanding practices. The next section investigates this link between (increasing) expectations of privacy and domestic energy demand further.

5: Privacy

The fourth theme is privacy because the home is generally expected to be a place of control and stability (Aune, 2007; Blunt and Dowling, 2006; Brickell, 2012; Mallett, 2004; Perkins *et al.*, 2002; Rybczynski, 1986; Saunders and Williams, 1998; Sixsmith, 1986; Soaita, 2014; Sommerville, 1992; Valentine, 2001). This sense of constancy and control, or ontological security, is a base around which identities are constructed and in housing research this is understood to be a significant psychological necessity in life (Giddens, 1991; Dupuis and Thorns, 1998; Saunders, 1989). There are two facets of the importance of privacy and the home: independence from the outside world and creating personal space within the home.

The public/private dimension of the home is already discussed in domestic energy research, with several studies suggesting that there is a tension or concern about governments and home energy advisors infringing on householders' autonomy by telling people how they ought to live (Palm, 2010; Walker *et al.*, 2015). For instance, a common comment from the energy consultants in Palm's (2010: 2861) study was that "as long as householders can afford to pay for high energy consumption, they will. [The consultants] cannot interfere with any investment decision [as] household finances are a private issue". Thus, the significance of privacy in the home is understood rather simply as a constraint which reinforces the mainstream emphasis on energy efficiency, financial incentives and information campaigns because householders then have the choice and control to alter the physical features of their home or their lifestyles. However, it is naïve to suggest that governments have not or do not intervene in home life and the design of homes (Shove, 2010; Walker *et al.*, 2015). Again the Clean Air Act of 1965 in the UK is a prime example of governments intervening in the 'normal' features and rhythm of home life (e.g. shift from solid fuels and open fires to gas central heating) (Rudge, 2012). Governments are essential to maintaining the many networks that connect the home to the world and therefore significantly influence the evolution of our homes and the (re)defining of basic needs and expectations of the home. Indeed, there is extensive scholarship articulating how standardisation of comfort (enforced in part through government regulation) has led to increasingly resource intensive expectations of home life (Shove, 2003; Hitchings and Lee, 2008).

Privacy has also been a driving force in (re)shaping homes' layouts, everyday activities and relationships within the household. For example, several authors remark on open plan living (e.g. bringing kitchen, living room and dining room into one multifunctional space) being a failure because it goes against centuries of the home being designed to offer increasing personal privacy (Cieraad, 2002; Flanders, 2015; Rybczynski, 1986). However, expectations of increasing personal privacy hint at an Anglo-Saxon framing of homemaking. Ozaki (2002) suggests that these multi-functional spaces are desirable in Japanese homes which are more family-centred and seek familial-privacy rather than individual-privacy. Individualism, independence, and self-reliance are emphasised in studies of

British homes, yet other cultures are more group-oriented emphasising family, collectivism and interdependence. Thus, the degree of personal privacy sought within the home is not universal (Ozaki, 2002). An emphasis on personal privacy, as opposed to familial privacy, likely requires more space per person (e.g. more space heating, more lighting), tends to result in duplication of electronic devices (e.g. multiple TVs, computers, phones) and similar energy demanding activities that might once have been shared are dispersed around the home (e.g. watching TV as a group verse householders all watching individual programmes at the same time) (Klocker *et al.*, 2012).

Expectations of privacy, as a basic home comfort and critical aspect of homemaking, may be useful to understanding changes in household and house size; and engaging with the trend towards more space per person has arguably received insufficient attention in domestic energy research. The final section considers how another topic that is fundamental in housing and home literature may influence domestic energy demand and research: gender.

6: Gender

In housing and home scholarship the expectation and experience of the home is widely accepted to be highly gendered, in the sense that where the home is a place of rest for a man, it is a place of work for women (Flanders, 2015; Mallett, 2004; Perkins *et al.*, 2002; Valentine, 2001). If women are (traditionally) charged with the responsibility of making and maintaining the home as well as the wellbeing of the family (Brickell, 2012; Flanders, 2015; Valentine, 2001) then their choices and activities are particularly important for understanding everyday practices (which affect energy demand) in the home. Gender is the final theme therefore because it impacts householder's experience and expectations of the home.

Although the home is a key site of feminist scholarship, gender is an underexplored area in domestic energy research (Organo *et al.*, 2013). Ryan (2014) recently called for energy researchers to rethink gender on the grounds that it affects access to resources, exposure to pollutants, and opportunities to engage with resource management and policy. However, Ryan's (2014) focus, like the majority of energy scholarship that touches on gender (Batiwala and Reddy, 2003; Permana *et al.*, 2015; Ryan, 2014), is based in 'developing countries' where issues of gender, (in)equality and energy consumption are different (e.g. burning solid fuels and indoor air pollution). In fact, at the time of writing there is only one study, by Organo *et al.* (2013), that explicitly sets out to draw together gender and household sustainability in 'developed countries' and clearly identifies both opportunities and constraints for reducing domestic consumption that gendered analysis may shed light on.

Organo *et al.* (2013) empirically investigated who did the 'work' to make a home sustainable in Australian, nuclear family households. Their study concluded that gender differences matter because "women, as homemakers, implemented sustainable practice through making most of the decisions regarding household purchases and organising the household rhythms" (Organo *et al.*, 2013: 568). One adult was generally seen as the driver of sustainable household practices, though this was not gender specific, and then both adults supported this intention. However, their study found that men and women contributed to sustainability practices in different ways (Ibid, 2013). For men, household sustainability practices were understood primarily as leisure activities (e.g. bread making, home brewing, building chicken coops, cycling), not as housework. Whereas, women spent more time on sustainable practices (e.g. shopping for sustainable products, turning off lights,

recycling, gardening) shouldering expectations of sustainability as part of their habitual roles as mothers and household managers (Ibid, 2013). Certainly, Organo *et al.*'s (2013) findings related to domestic consumption are complimented by previous feminist and home literature which has suggested that women are the instigators of changes in household practices because of their role as homemakers and household managers (Pink, 2004).

Moreover, several studies would suggest that active engagement with the cooking, cleaning, and childrearing aspects of domestic labour are still less common for men than women (Isaksson and Ellegard, 2015), although the work of maintaining and fixing the home most often falls on men (Blunt and Dowling, 2006). In emphasising gendered differences my intention is not to reproduce stereotypes, but to highlight that this is an area of study deserving greater attention in domestic energy scholarship. If the home is the 'women's sphere' and a disproportionate amount of domestic chores are undertaken by women (Isaksson and Ellegard, 2015; Klocker *et al.*, 2012) then understanding energy demand may be enhanced by making a point of speaking to women about their everyday practices or relating energy-saving advice to home-making (e.g. generalised as feminine) rather than cost, maintenance, or gadgets (e.g. generalised as masculine). In fact, greater consideration of gender in domestic energy scholarship might help to challenge stereotypes (e.g. construct alternative masculinities) (Organo *et al.*, 2013).

7: Conclusion

The paper concludes with a plea to energy scholars to turn from researching the uptake of energy efficiency improvements, as if they occur in isolation, to thinking more broadly about the process of homemaking in which these activities are situated. Key themes that emerge from analysis of homemaking highlight some areas deserving further investigation in domestic energy research. While more specific recommendations have been offered within each theme above, two key suggestions for future research are presented to summarise and bring the themes of home-as-ideal, the hearth, family, privacy and gender together.

Firstly is the need for a more nuanced framing of the household. How do interactions between householders, sharing the home, and negotiating individual preferences affect house layout (related to family and privacy)? Who makes decisions about, and carries out, everyday household management, which partly determine the energy-intensity of practices (e.g. women/man (gender), children's 'power' to affect everyday routines (family))?

Secondly, these themes highlight the socio-technical complexity of intervening in the materiality of the home. Thermal retrofitting or energy efficiency improvements may be halted if these improvements take away from 'idealised' historical features of the home (related to home-as-ideal and hearth). Authors who interviewed householders on their experience of making energy efficiency improvements found that for the most part these activities also increased floor size and the number of rooms (Judson and Maller, 2014; Maller and Horne, 2011; Maller *et al.*, 2012). These material changes are (often) contrary to improving the energy performance of the home. Thus, it is important to remember that householders invest in home improvements in response to daily routines and those expected in the future (related to home-as-ideal, family and privacy), not simply to save energy or improve thermal comfort. Indeed, UK householders invest billions of pounds annually in home improvements (EST, 2010), which are predominantly intended to improve 'amenity' features

(e.g. kitchens, bathrooms, living areas). These 'amenity' home improvements may be understood as part of the process of making a home, which goes far beyond financial rationalisation.

What constitutes 'normal' home life is undoubtedly a moving target and investigating homemaking offers insight into how/why homes, daily life, and expectations of home comfort evolve.

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