

List Making in the Home

Alex S. Taylor
Microsoft Research
7 J J Thomson Ave
Cambridge, CB3 0FB
UK
+44 (0)1223 479700
ast@mac.com

Laurel Swan
Independent Researcher
9 Union Square
London, N1 7DH
UK

lmswan@blueyonder.co.uk

ABSTRACT

This paper presents research on the use of household lists. Drawing on an ethnographic study of mothers' work, it focuses on the centrality of paper lists in home- and child-care arrangements, and reveals that they provide a useful means for organizing the complex interrelations between a household's people, activities and tasks. However, paper lists are also shown to be poor at handling the separation, or classification, of these things. In conclusion, both these positive and negative aspects of list making are used to raise broad pointers for CSCW and system design.

Categories and Subject Descriptors

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms

Design, Human Factors.

Keywords

Housework, women and technology, home life.

1. LISTS AS COOPERATIVE TOOLS

In the CSCW literature there is a growing body of research on technology in the home. With a few exceptions, this research has been concerned, primarily, with the role of technology in leisure, such as TV viewing, gaming, etc. In countering the leisure trend, Blythe and Monk [1], for example, consider domestic chores, such as vacuuming and dishwashing. Also, Crabtree, et al. examine the use of calendars in home settings and do well to demonstrate how household order is occasioned through the collaborative work that goes into arranging a family's activities [3].

In this paper, we have sought to develop the research undertaken by Crabtree and others by examining the role of material artifacts in home life. Focusing on how domestic work centers around and takes shape in relation to tangible, real-world things, we look specifically at the use of the common household list and the ways in which it orders the people, activities and tasks associated with the home. In binding those in a household together and managing

their interrelations, our view is that the list is used to coordinate what has been characterized as the particularly unpredictable and complex arrangements of home life [4]. Thus, we believe it stands as a useful device from which to explore future technical solutions designed to support the multifaceted and cooperative aspects of housework and childcare.

In the following, we outline the overall method to the presented work, present several excerpts from the data corpus that has been collected so far on the use of lists, and conclude with a brief comment on how and why the work's findings have implications for CSCW and system design. At this early stage, the design implications remain broad; in parallel with the continuing fieldwork, we intend to develop more concrete implications and, after an initial period of development, undertake phases of *in situ* prototyping.

2. STUDYING LISTS

The research presented in this paper is drawn from an ongoing project on mothers, who, despite the changing patterns of work, remain the primary home- and care-givers in modern households [2]. Our attention to mothers arises from a recognition of their centrality in matters surrounding the organization of home life and the key role they play in the marshalling of information that flows into, around and out of the home [5]. Throughout the project, we have sought to examine mothers' everyday routines as they are observably and witnessably accomplished. Our hope is that as the project progresses we will assemble a data corpus detailing mothers' work and, in doing so, attend to an aspect of home life that has, hitherto, received little empirical scrutiny. In this vein, the focus on lists in this paper has surfaced because they have been found, in their various incarnations, to be central to the complex and dynamic arrangements involved in organizing the home.

Adopting a qualitative and, specifically, ethnographic orientation, the project has thus far involved several in-depth interviews with eight mothers (over 20 hours) and periods of observation in and around these mothers' homes. All the interviews were recorded using audio equipment and field notes were made during observations. Alongside this, pictures were taken of the materials discussed, e.g., lists, calendars, diaries, etc. For the purposes of brevity, the data presented in this paper are drawn from sessions with three of the mothers, sessions that we feel capture some common features of list use throughout the participating homes.

2.1 Lists as Timelines

In the first of our interview excerpts, Claire—mother of three—describes how complicated days that require the planning and coordination of multiple people, activities and tasks, necessitate the making of lists (see Fig. 1).

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When days get very complicated I will do a day list, just how I'm going to get everybody in the right place... So this is Tuesday. What I'm doing [points to left column], what Ella's doing [points to right column] and who has to be picked up when. This was one day [points to the left-hand side and talks us through the items]. This was Jessica's school trip so I had to take the train to school rather than the car because I had nowhere to leave the car for 4 hours. I had to meet Mrs Anderson, Jessica's teacher, at 10 past 8. Then I went on the school trip. Then, I had a whole lot of stuff that I wanted to do that I was taking with me with the phone and I was going to hang out and phone people and do all the bits and pieces in a café outside the school. Then I was going to pick up Jessica and we were all meeting on this recipe book we're making at school for her class to raise money. And then I needed to get Jessy to her extra English lesson in Cannonbury and I was working at the timing and I had to wait outside so I needed stuff to do for me.

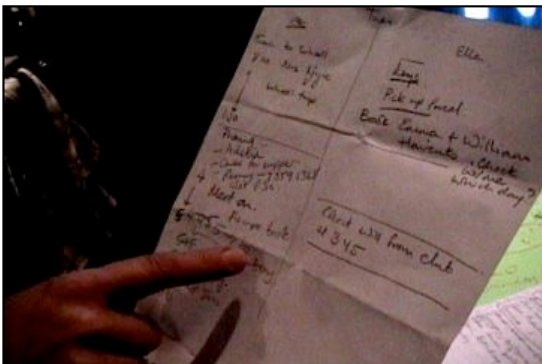


Figure 1. Timeline.

From this excerpt, we see that Claire's list takes shape in a fairly typical form, where the temporal ordering of tasks and activities to be done are marked out in a linear sequence. For our purposes, there are two important points worth mentioning. The first is that in talking through the list, Claire demonstrates that a considerable amount of effort can be required to arrange the ordinary routines of home-related activities. She reveals how a great deal of forethought is needed to plan the seemingly simple operations of bringing her daughters and son to school and to their respective activities. The list captures how her children's movements must be coordinated with her own household and personal "bits and pieces" and arranged in such a way that they can be systematically accomplished.

The second point is how the list's items are broken up to refer to different times in the day and the different family members' activities. Her own timeline is juxtaposed with those of her daughters and son but conspicuously ordered so that the children's movements and activities take precedence. What is apparent is that a particular property of the paper list allows the items to have been arranged and divided in this way. Specifically, the free-form structure (or lack of any structure) afforded by the paper list, rather than the imposition of fixed system of entry, allows Claire to sketch out her tasks and activities in a fashion that suits her needs; the inherent properties of the paper list allow it to be used opportunistically [for a thorough discussion of the affordances of paper see 6].

2.2 Lists as Spatial Maps

Moving on, we see that this opportunism is not only confined to juggling multiple people and their temporal relations. Below, Jane, mother of two, describes a list that she has scrawled onto the back of an envelope that reflects the spatial character of her tasks and activities (Fig. 2):

ok, well I had a morning where I had lots of little things that I needed to do. Cause I was working, I thought I'll have one morning where I'm going to get all these little things done, silly little things. And it was things like, I had photocopy documents cause I had to get the residents parking permit and things like that and I also had cheques that I needed to take to the bank. So there were kind of little itty bitty jobs like that and I wanted to get as many done as possible and I had a limited amount of time so I did a list and I did the list in a kind of geographical order. I worked out where I needed to go to first so I could do everything and then come back and be back at the right place to get to pick up Henry from school. I had to go to a bank, to the NatWest, because I had to bank the money from the cake stall because once a week I have to bank the money from the cake stall from school and then I had to go to the post office... [and the list continues]

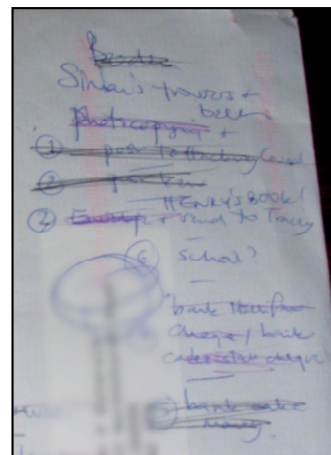


Figure 2. Spatial map.

In this excerpt, our attention should be drawn to the role the list serves in Jane's miscellany of tasks. Jane reveals how the list is 'done' to reflect her work and, specifically, to perform in coordination with the spatial-temporal constraints she finds herself operating within. She explains that her list is ordered to embody her sequential movement through the tasks, and to allow her to pick up her son, Henry, on time. Jane's numbering scheme from 1 to 6, applied to each item, transforms them into a marker guiding her progress in terms of geography, time and the tasks she must do. Each of the hand-written items inscribed onto the front of the envelope thus serves as a referent to the geographical movements necessary and the list, as a whole, delimits what is to be done before picking Henry up from school; the list is a tangible or embodied instantiation not only of the work that must be done, but also artfully expresses how it should be accomplished under certain terms.

Jane's list thus builds on the apparent in-built property of paper lists that allows for the opportunistic systems of organizing the tasks and activities relating to home- and child-care. The list illustrates how there is also an artfulness in creating these systems as they are continually being invented and developed to handle mul-

tuple and disparate tasks and activities. What's more, we find that the list lends itself to systems like Jane's because it is something that can be kept at-hand: carried, referred to, and further marked-up in tracing one's way through the listed items.

2.3 Wish Lists

The sense of both opportunism and artfulness, as well as the importance of the material features of paper lists is further illustrated in a list making system adopted in Luci's household—made up of her husband, Simon, and her three boys, 8 and 5 years, and 6 months. Notable in this system is the more explicit sense of cooperative involvement and, specifically, how the system not only embodies an order to certain tasks and activities, but also an overall family order.

Luci's family keeps a communal notebook, purposefully placed at one end of the kitchen table, that contains an ongoing log of to-dos, shopping lists, etc. spread over a number of pages. In discussing this notebook with Luci, a number of interesting collaborative facets related to its use come to light. The most obvious of these is that all of the lists contained in the book are designed to be shared—shared either between the entire household or between specific members. What may not be so apparent, however, is that all but the first of the lists were jointly authored.

To examine this point further, we shall look specifically at one of the lists from the communal notebook because it presents a particularly interesting example of how lists can be authored collaboratively, and how this can come to reflect the arrangements of the home. Below, Luci explains the workings of what she calls the household's 'shopping list' (Fig. 3) and her reasons for putting the system in place.

So I try to make it so that there's a shared responsibility. The other thing is we have people staying here a lot and we're lucky to have a spare bedroom, and so we often have other people in the house, and so things get finished and the sort of rule is that you can eat anything or finish anything but you have to put whatever it is on the shopping list so that I know to replace it. Cause I don't mind anyone eating anything but I find it really really annoying when there's no — I just find it really irritating when something gets finished and nobody's — as if I'm meant to monitor what everyone else is eating and using and somehow know that we need more.

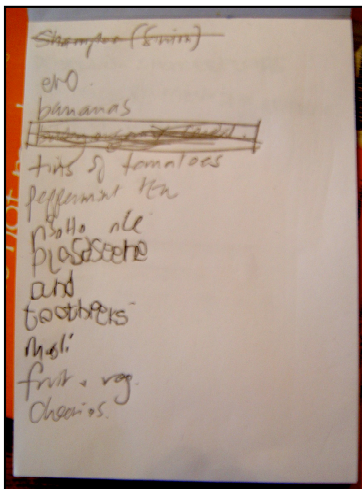


Figure 3. Communal shopping list.

What is notable in Luci's explanation is the way in which work is delegated to the shopping list, so to speak. Because of the system Luci has adopted, responsibility is distributed amongst all those in the household and not just placed on her. The list is assigned the role of intermediary because it is through it that responsibility is devolved. As Luci talks us through the list's items, however, we find that this devolved system of rule is not altogether simple.

And the boys add to — that's 'ero', that's an Aero bar [laughs] and this one is Plasticene and toothpicks because Oscar wants to make some more models. So it can end up being slightly random and also it can end up with things that I refuse to buy and the boys really want and so sometimes there are things on here to do with, umm, meat — we have a completely vegetarian household — meat sometimes creeps onto the list, and there was an extended period where chewing gum was on the list.

We see that by exerting her authority in refusing to buy things such as meat and chewing gum, Luci is enacting the time-honored parental prerogative of laying-down-the-law. Relevant to us is that it is the list that is enrolled in this system and that it is the system that gives rise to a mechanism for the children to systematically test out their rights and privileges (e.g., through their concerted and extended acts of attrition for the right to chew gum). By inscribing their choices onto the list in their own hands, her sons are thus offered a degree of responsibility and, at one and the same time, infused with Luci's, and presumably Simon's, system of values—vegetarianism and non-gum-chewing.

2.4 Multiple Worlds, Multiple Lists

Thus far, we have spoken of how the list is mobilized to manage and arrange housework and childcare and how the features of paper lists, in particular, enable the artful and opportunistic design of systems for managing the various tasks and activities. Of course, the complexity and the effort involved in creating systems for organizing the different activities are not only confined to the 'domestic world'. The increasing prevalence of home-based work and specifically, the significant increase in working mothers, contributes to a further level of complexity that must to be dealt with.

In the excerpt below, we return to our talk with Luci to hear how she has designed a system to organize both her personal and work related activities. Luci describes the use of the primarily work-based notebook that she carries with her and explains how she has been trying out a system where she adds personal to-dos and notes to one half of the book and flips the book over and upside down for items related to her work as part of an art collective. Her description evokes the tension in having to enforce a system of separation onto the different elements of her everyday life.

I've started actually working on the other side of the book but I've done this before and it's really really irritating [laughs], because you're then invariably turning the book around and trying to divide your life up so that one's upside down and one's the right way round — it's a really lousy system I have to say and it will fail and what I will do is I'll add, without any doubt I will add — so it's a lousy system because I have to remember which way my book is when I've got which hat on and what I've done in the past is [laughs], fail to do that. So then I have to like rip pages out from this side of the book and then turn them round and then stick them in later. It just makes a real mess of my book. It would be fine if I thought a little bit and

opened the book the right way up at the right moment, but invariably I seem to create a system and then not quite stick to it.

Despite her best efforts, it's clear from Luci's description that it's not all that easy for her to separate the tasks and activities from her personal and work worlds. Luci vividly expresses how the material properties of her notebook—having no clear indication which side is 'up' or which side is 'down'—do not afford the neat separation of her two-hatted life. The underlying subtext to what she says, however, reveals there is somewhat more to this problem. For Luci it is the system, and not only the material features of the book that fail her. The system requires 'a little bit' of thought to ensure that the right hat corresponds to the right side and to avoid having her life, itself, turn upside down.

A plausible interpretation of Luci's confusion is that her separation system is not all that good and, in fact, it may not always be clear to her which side of the book her tasks and activities should be listed. The separation between Luci's personal life and work life is not a natural consequence of their innate characteristics but rather something constituted (although sometimes poorly) and reified in her notebook. What this points to is that the system—one attempting to rigidly delineate work and personal—and the material features of her notebook do not map well onto one another.

2.5 Sentimentality

This point of the misfit between the system and the nature of the materials used comes across more forcefully in another excerpt taken from Luci's interview. What emerges is that the sense of emotion embodied in material artifacts such as lists and notes can also be at odds with specific systems of separation. In the excerpt, Luci is sifting through several loose scraps of paper that she has in her notebook and chooses to talk about one on which she has sketched out a program for weaning her 6 month old son.

I quite like this one, this is trying to get from breast-feeding to bottle-feeding and working out — this is basically how I was going to wean Jonah. I have to visualize things so anything like that I'll write down... I was trying to get down from seven feeds to five feeds. I think I realized there was no point in doing that, but I did get down to six feeds. It's snuck into my work book because I don't want to throw it away. I don't know — it's sort of, it is — it's this — this is completely sentimental. That's a page that represents his weaning. Which is, on bright pink paper!... The thing is in here there's umm, there are some little things. There's a [scrap] book that Felix made for me which I haven't used yet but this is another book that I'm going to be able to use and I have pictures of my children [in a white envelope] in here as well. So the thing is there are a few — it's a bit like my office I think in that it's basically a work space but then it's not quite as clearly defined as that.

Luci reveals that even in her 'work book' things to do with family "creep" in. What is more, the logical division she has sought to establish by dividing personal matters from matters related to her art collective is, yet again, under threat. This time, it is the sentimentality of items that degrades the categorization scheme, transforming her notebook into a device for storing papers she has an emotional attachment to, far removed from its original purpose of supporting her work.

3. CONCLUSIONS

In this paper, we've presented a number of ways in which lists are used in managing and arranging work in and around the home. Of

course, in no way have we captured the full range of possibilities. Rather than tackle breadth, our attempt has been to illustrate how the systems employed in household list making are multiple, varied and continually evolving. It has also been to show that the material features of lists are tightly bound up with these systems of practice. This orientation has revealed two broad findings that are of importance to CSCW and, specifically, to the design of organizational tools for the home.

First, in the data we present, it has emerged that paper lists allow for the multiple and disparate tasks and activities related to the home to be ordered in meaningful ways. In particular, we have argued that lists—because of their specific material features—sit well with the artful and opportunistic creation of what we shall call the *organizational systems* designed to manage the competing duties of home carers. The capacity for freeform entry (whatever); capacity to create systems to suit the moment at hand (however); portability (wherever); and accessibility (whoever)—all made available through the list—mean that it is a tool *par excellence* for the embodied organization of complexly interrelated and disparate people, tasks and activities.

Second, it emerges that some of these same material qualities of paper lists weaken their benefit in what we've referred to as the *separation systems* people employ to divide their different categories of people, activities and tasks, be they related to personal matters, childcare, housework, etc. The trouble is, once enforced, the separation systems are not always applicable or appropriate and they fail to be sufficiently flexible to accommodate modification. The very materialness of paper means that a list or the items on it only easily fall within one category at a time and must be physically moved if they are to be categorized differently or if the system is altered.

Both the strengths and weaknesses of the systems associated with paper lists thus reveal that organizational tools designed for the home should not only support the ad-hoc organization of people, tasks and activities, but also that these systems should allow for the *opportunistic* making of separation systems. That is, new tools designed to support organization in the home should enable information to be *both* organized and separated in opportunistic and artful ways. We also learn from this focus on the material features that the organizing and separating systems should be immediately evident in the physical properties of any solution and, ideally (if it is to make immediate sense), something that emerges from a user's own making.

4. REFERENCES

- [1] Blythe, M. & Monk, A. Notes towards an ethnography of domestic technology, Proc. DIS '02, ACM Press, (2002), 277-281.
- [2] Cowan, R. S. More Work for Mother. Free Association Books, London, 1989.
- [3] Crabtree, A., Hemmings, T., Rodden, T., & Mariani, J. Informing the development of calendar systems for domestic use, Proc. ECSCW '03, Kluwer Academic Publishers, (2003), 119-138.
- [4] Frissen, V. A. J. ICTs in the rush hour of life, The Information Society, 16, 1 (2000), 65-75.
- [5] Sellen, A., Hyams, J., & Eardley, R. *The Everyday Problems of Working Parents: Implications for New Technologies*, HP Laboratories, Bristol HPL-2004-37, (2004).
- [6] Sellen, A. J. & Harper, R. *The Myth of the Paperless Office*. MIT Press, Cambridge, Mass., 2002.