Diversifying the Domestic
A Design Inquiry into Collective and Mobile Living

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Abstract

We report on a design research inquiry aimed at understanding and exploring the values, practices, and perspectives of people that actively embrace and choose to live within collective houses and mobile vehicles as their homes. A goal of our work is to inquire into how such lived alternatives of 'home' can take a step toward broadening possibilities for conceptualizing 'domestic' technology and provoking questions around how it might be critiqued, imagined, and designed. We offer a brief overview of our ongoing research with a sample of collective and mobile dwellers, and propose three themes that extend prior generative work in this area: critique through living, taking time to adapt, and the transitional home. We use these themes in a design-led approach to propose six fictional future technology concepts that aim to (i) critically reflect on and provoke questions about commitments in current mainstream visions of domestic technology and (ii) explore new possibilities for engaging with material, social, and technological conditions shaping the lives of our collective and mobile dweller participants. We conclude with

a reflection on our work, its limitations, and opportunities it suggests for future research and practice.

Authors Keywords

Home; Domestic Computing; Speculative Design; Design Research.

Introduction

The home and domestic life are longstanding sites of research in the design and HCI communities [13,20]. This corpus of work has produced important contributions that have helped better inform the design of technology to support the tasks, routines, and experiences of home dwellers. However, conceptualizations of what the home is, where it resides, how it is made and by whom have arguably remained somewhat narrow in the HCI community. Whether implicitly or explicitly, 'the home' is often characterized as a detached house and 'domestic life' frequently imagined as biologically related family members (e.g., a heterosexual married couple with children). A small but growing amount of HCI research has begun to better recognize and design for less mainstream or homogenous forms of domestic life. These works have explored contexts that include subsistence farming, co-housing, and off-the-grid eco-housing communities [e.g., 18,23,39,40] as well as people's experiences of living in impermanent situations without a geographically fixed dwelling [e.g.,15,22,25,28,34,38]. This body of research offers important early steps toward diversifying the HCI community's vision of 'the home'. Yet, works like this still remain sparse. In our view, more research is needed to further expand approaches and provoke questions around designing for alternative visions of domesticity.

Our ongoing project is situated in the metropolitan Vancouver area of western Canada. Like many cities worldwide, Vancouver is facing numerous challenges in the areas of affordable housing and the availability of space to accommodate a fast-growing population [3,11,31]. These issues and a range of social motivations have catalyzed a growing number of citizens in Vancouver to adopt less 'mainstream' living situations (e.g., ones that are smaller, mobile, self-made, and/or collective). Our research directly builds on prior work by Oogjes et al. [27,9] who conducted a broad cultural probe study with a set of dwellers in a tiny home, micro loft, van, collective house, and urban condo in the Vancouver area. These authors then created a series of design responses that speculated on how different kinds of domestic technologies could fit these various types of dwellings. Their research helped to take a step toward broadening the conceptualization of 'the home' through proposing qualities such as "*adaptable, dynamic boundaries, orientated, exchange, and dispersed*" [27:324]. These qualities can catalyze future design research efforts to question and understand opportunities and limits bound to designing domestic technology that is better situated to support a diversity of dwellers and dwellings.

Our work aims to scaffold and extend this line of design research in two ways: (i) through proposing a complementary set of themes surfaced with our sample of collective and mobile dwellers and (ii) mobilizing these themes through six fictional design proposals that question current mainstream visions of domestic technology and explore new possibilities. Next, we describe each of these stages and detail how they are organized in our pictorial.

Engaging with Collective and Mobile Dwellers

To dig deeper on understanding the values and practices of people living in different kinds of homes, we decided to engage with a sample of collective and mobile dwellers for our project. On a general level, mobile dwellers live in vehicles where the interior of their home environment is relatively fixed, while the exterior environment surrounding their home is often dynamically changing. For collective dwellers, the physical location of the house is fixed, while the inhabitants (and objects) residing in the home may fluidly change over time. However, it is important to acknowledge that our sample of mobile and collective dwellers, as well as Oogjes et al.'s earlier sample of participants [27,9], primarily choose to live in their respective dwellings. Thus, they could arguably be considered to be representing a somewhat priviledged position. People in other positionalities may live in the same types of dwellings but not through their own choice or desire (e.g., due to homelessness, poverty, refugee status, physical/mental health challenges, and so on). Dwellers living in these conditions would likely have very different needs and desires. Thus, this suggests key limitations in terms of the scope of insights that our fieldwork and design proposals our pictorial are capable of delivering.

Yet, as a starting point, we anticipated that engaging with our sample of mobile and collective dwellers would be productive as these two groups offer promise to reveal insights about their everyday domestic lives that might productively overlap and differ. It is also important to note that we went into this project with the goal of exploring how insights from engagements with collective and mobile dwellers could translate into design concepts that might give a unique way to explore how different ways technology might be envisioned to fit in such unique contexts and to question underlying assumptions and values in mainstream consumer technology marketplace. Our longer-term aim, beyond this pictorial, is to co-design such new ideas directly with collective and mobile dwellers. In this pictorial, it is not our aim to analytically report on ethnographic work.

However, we have spent considerable time with our collective and mobile dwellers. Over the past 8 months, we have conducted interviews and 'deep hanging out' sessions [32,40] with one van dweller, two boat dwellers, and three collective houses. Our van dweller has lived in her van for two years, lives alone, and makes her home in and around the Vancouver area (changing location frequently). Our boat dwellers are both anchored at a co-housing marina located downtown. One lives in a family of four on a large motor powered boat; they have been anchored at the marina for four years, but typically take off for long stretches of island cruising each summer. The other boat dweller lives alone on a smaller sailboat, has used the marina as a home base for two years, and anticipates never going back to living in a land-based dwelling. Our three collective households represent also exhibit key differences (see [33] for more details). The first has been established for one year with five inhabitants from a wide range of ages. The second was established nearly a decade ago and has four members in their 20s-30s. The third was established just over forty-five years ago and has six members from various ages living in it. It is worth noting that all participants had a self-stated desire to live in their respective conditions, although key motivations also related to affordability and the general lack of available housing in Vancouver. Our aim in the first part of this pictorial is to offer a glimpse into insights emerging from our ongoing engagements across our collective and mobile dwellers: *critique through living, taking time to adjust & adapt, and the transitional home*. For each theme (on pages 3-5) we offer a brief overview, a visual collage of associated photos, imagery, written responses, interview quotes, objects, and a set of questions and provocations.
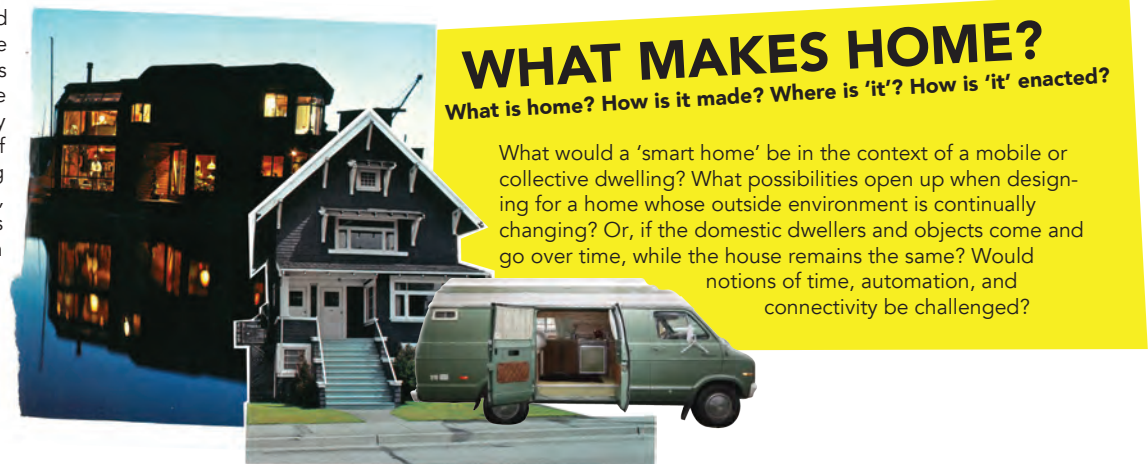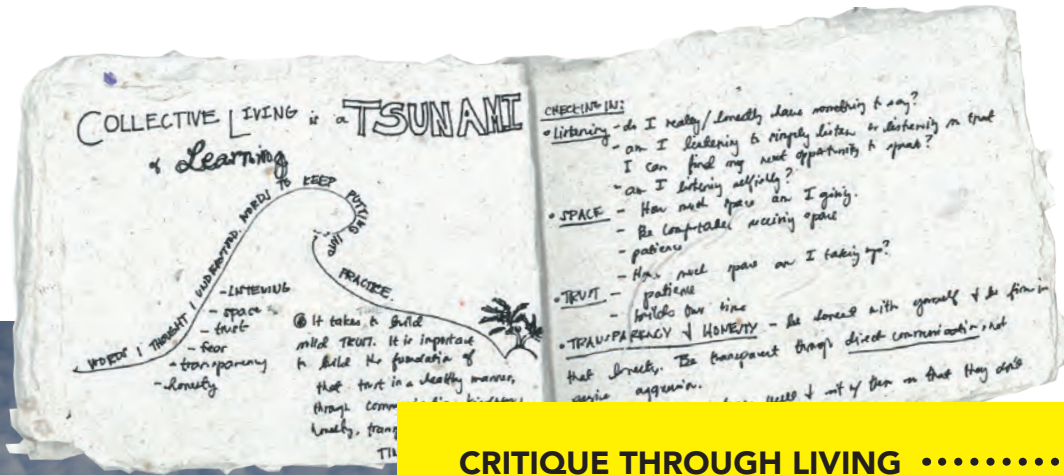
Presenting Design Proposals

In the second part of the pictorial, we generatively engage with these themes through a series of speculative design proposals in the form of six fictional products and services. Our design research process spanned four months and required numerous rounds of critique, reflection, and iteration among our team. Our approach is informed by prior research in the DIS and HCI communities (e.g., [1,6,7,8,21,35,36]) that has shown the value of using design fiction and speculative approaches to critically explore and question issues, insights, and phenomena encountered through field research. We were also inspired by prior work that has explored the creation of fictional product catalogs (e.g., [4,5,10]). We were drawn to their capacity to catalyze a sense of familiarity at first glance through the visual semantics and styling of an advertisement, while then sparking critical reflection as the viewer recognizes, upon deeper inspection, a distinctly different technological future through the products and their attendant details. We decided to embody the design proposals as various products and services communicated through forms that resemble a Craigslist advertisement, popular tech news article, amazon.com pages, and app store product pages to think through how domestic technologies might be used, designed, and marketed. Here, we aim to subvert and extend common tropes around domestic technologies. Our higher level goal in adopting these design proposal formats is to show that the proposed products do not exist in isolation, but rather in relation to other service, products, and social systems within a sociotechnical world.

Taken together, our six design proposals aim to (a) critically reflect on underlying commitments in current mainstream visions of domestic technology and (b) exlore and question new possibilities in the HCI community to engage with the diverse material, social, and technological conditions shaping our sample of collective and mobile dweller lives. In this, the design proposals aim to surface and suggest new orientations that designers and design researchers might take with regard to how space, time, and connectivity are organized and designed for in a range of homes and what practices these fictional products might help engender – for better or worse. The majority of this pictorial is devoted to presenting these design proposals sequentially (on pages 6-11). Each is introduced with a brief commentary to contextualize and motivate the concept, and guide the reader's gaze. We invite the reader to take time to interpret each one, and consider potential questions they might raise or new insights they might generate.

This pictorial makes two contributions. First, it offers a set of three themes that extend prior work to help broaden conceptualizations of 'the home' in a form that can be inspirational to design researchers and practitioners. Second, it proposes a series of design responses in the form of highly detailed fictional product concepts to reflexively open up different possibilities, provocations, and questions for future HCI research and practice.

WHAT MAKES HOME?
What is home? How is it made? Where is 'it'? How is 'it' enacted?

What would a 'smart home' be in the context of a mobile or collective dwelling? What possibilities open up when designing for a home whose outside environment is continually changing? Or, if the domestic dwellers and objects come and go over time, while the house remains the same? Would notions of time, automation, and connectivity be challenged?

"We were so resistant to buying a glass condo up in the sky.

It's not like a real thing.

It's some space in the sky."

CRITIQUE THROUGH LIVING ●●
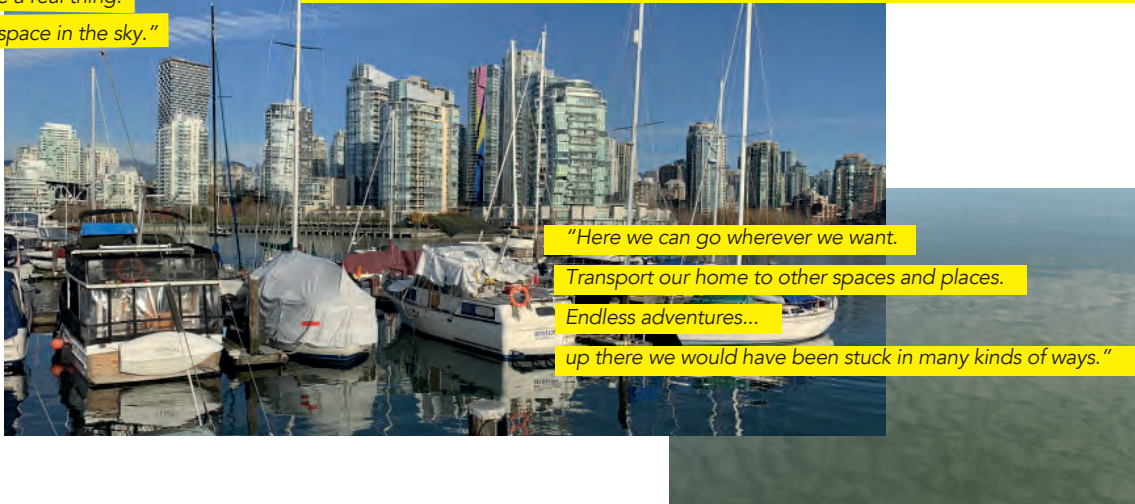
Our sample of participants that intentionally chose to live in mobile and collective dwellers had shared commitments to a set of practices that enacted a self-recognized critique through living. For collective dwellers, this often manifested through establishing and nurturing deeply rooted systems of cooperation to maintain a close-knit household of members that were not biologically related. This meant expanding one's idea of ownership from the personal to the collective. With this new orientation came more shared objects as well as things that belonged simply to 'the home'. It also required collective dwellers to become adept in flexibly configuring boundaries of shared and private domestic space. For mobile dwellers this meant maintaining domestic life as well as the vehicle in which it unfolds – living in tight spaces and, at times, in situations that were quasi-legal (e.g., a city street) or environmentally unpredictable (e.g., a choppy ocean). It also meant living with less mainstream 'conveniences' to be free of social and economic constraints (e.g., being tied to a specific location, living with huge debt and/or domestic precarity). For Collective and Mobile dwellers alike, Critique through Living was about not only living, but thriving with less.

"Here we can go wherever we want.

Transport our home to other spaces and places.

Endless adventures...

up there we would have been stuck in many kinds of ways."

These insights inspired us to consider how the values bound to Critique through Living might be explored through new technological concepts that question normative assumptions in how 'the home', 'ownership', and 'domestic space' are enacted through contemporary smart home products. How could the flexible demarcation of space be expressed through the form and logic of smart products? In what ways could technology be designed to support thriving with less while remaining connected to traces of things, people, and places that make home?

"A lot of letting go of things. And findings other homes for the most important things that didn't make the cut for our boat." "
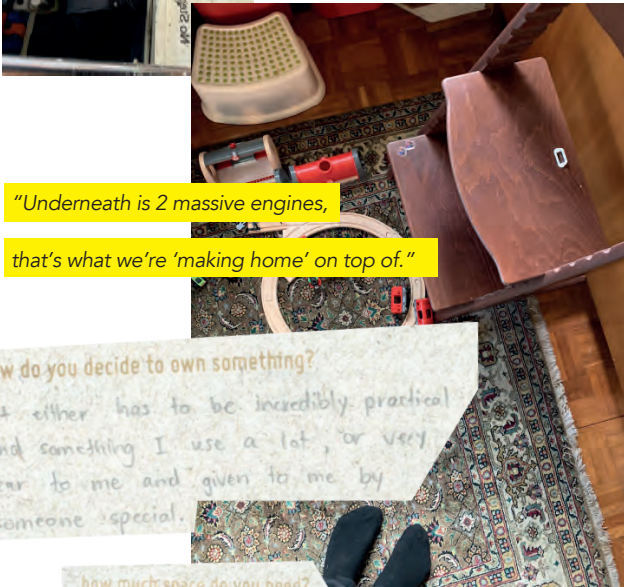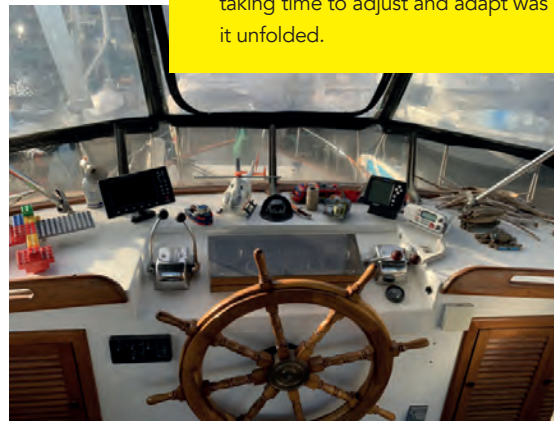

"Underneath is 2 massive engines, that's what we're 'making home' on top of."

how do you decide to own something?

It either has to be incredibly practical and something I use a lot, or very dear to me and given to me by someone special.

how much space do you need?

I have about 70 square feet in my van. That is plenty. I have everything I need in here and even a few things I could do without.

TAKING TIME TO ADJUST AND ADAPT ••••••••••••••••••••••••••••••••

It was common for participants to remark on how their orientations to things, space, and time shifted as they adopted their collective or mobile lifestyle. While they seemed content now, the process of initially adjusting to newfound domestic conditions was not usually described as perfect or easy. For collective dwellers, new orientations to objects, space, and social support systems were welcomed, but needed time to adjust to. This could require learning new ways of managing commitments to acts of sharing as well as establishing boundaries between personal and collective time that, over time, became more porous. For mobile dwellers, many things had to be dispossessed or new 'homes' found for them – whether permanent or temporary. It also meant transforming the things they did keep into integrated facets of the home infrastructure so they could withstand high-speed and multi-directionality movement. In both contexts, taking time to adjust and adapt was a sensitive, yet vital process that needed to be carefully attended to as it unfolded.

These accounts made clear that that moving into a collective or mobile living situation is a social and temporal process that could be better more acknowledged and explored through design. How could fleeting relations to dispossessed objects be supported, while not obscuring the values and integrity bound to one's commitment to a new lifestyle and dwelling? In what ways could more diverse kinds of products and services be designed to support adjusting to such new domestic circumstances?

"...when I first moved into Vancouver I lived in a place like this for like, a couple of months where it was like everybody had all their own soy sauce and ketchup like -- stuff that seemed really petty to, be labelling and having as um, your own? It just seems weird to me. Like, it's... I don't know I like having other people around but also not being super possessive of stuff all the time. That seems bizarre."

"I'm definitely certain that I got $10 worth of joy out of that barbecue."

"We keep heading farther and farther North because the boundary of mobile connectivity keeps on going higher as more luxury yachts appear. Even on our boat far up North it can start to feel like there are fewer and fewer places that do not have [mobile] connectivity."

how do you define home?

A place where I can escape either from the world or into nature. Safety, a place to sleep and eat.

TRANSITIONAL HOME ···

Our collective and mobile dwellers both actively lived in transitional situations, albeit in very different ways. For collective dwellers, the socio-material environment of the house was their anchor point. While the collective social culture inside of the home aimed to be relatively fixed, the people inside of it may come and go over years. For mobile dwellers, the home was shaped by dynamic, ongoing transitions through space to different urban, suburban, rural, and remote surroundings. Such transitional qualities also manifested through relations to objects and technologies. For collective dwellers, objects in the home often belonged to previous dwellers no longer living in the house; at times, such things had lived in the home longer than any of the current human occupants. For mobile dwellers, the home continually shaped one's relation to digital connectivity, whether striving to be closer to, or more remote from, a smartphone signal or the electricity grid.

What opportunities emerge when engaging with the spectrum of connectivity between being fully connected or disconnected, and in recognizing these boundaries as rich, dynamic, and permeable? How might we consider the benefits of actively configuring one's domestic life around modulating levels of digital connectivity against the backdrop of changing material, social, and environmental conditions?

"So this is weird, but I used to live in this house, and I was just biking by, and I just, is there still a piano… there?".

"Yeah, yeah there's a piano"

"Well… because it's my piano and I moved, and I didn't have a place to put it, so I just left it there. But now I live in a place where I could use it again, so do you mind if I take it?"

And she hadn't lived here for probably five years or so.

So that just shows you how long this house has been a thing.

"…if you pick up an object, I could probably tell you if that was some thing that belonged to me, belonged to that person, or belonged to the house."
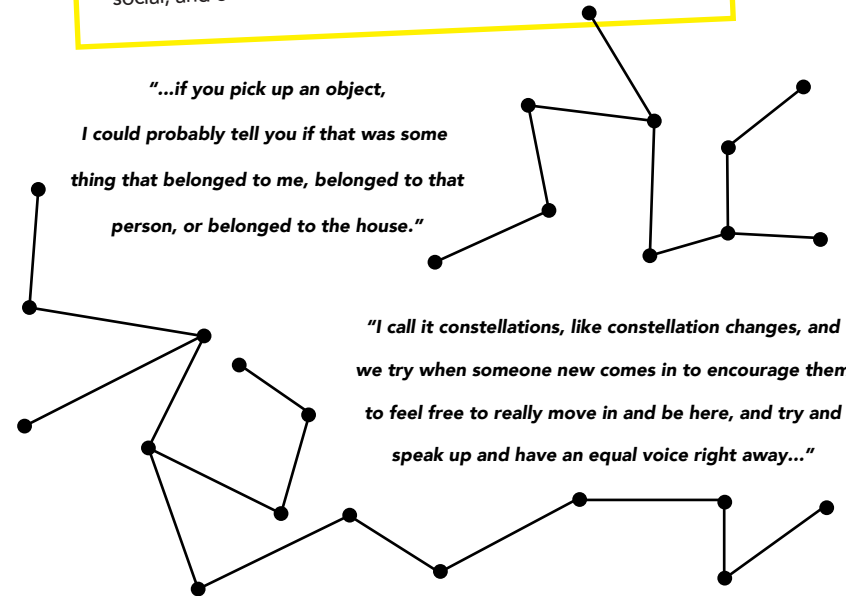
"I call it constellations, like constellation changes, and we try when someone new comes in to encourage them to feel free to really move in and be here, and try and speak up and have an equal voice right away…"

This fictional craigslist ad draws from the experiences of mobile and collective dwellers in which they had to part with, share or otherwise (re)consider their attachment to their belongings. While not often easy, these processes could result in renewed understandings of participants' relations to things which enabled them to adapt to new domestic lifestyles. We draw on this unique type of knowledge and consider how it could be leveraged for normative and non-normative homes alike. In an age in which minimalism is adopted for resourceful or aesthetic reasons, this concept provokes questions about whether alternative dwellings have a danger of being framed in ways that are too idealized, fetishizing "alternatives". Further, "Thumbnail 2" prompts us to wonder how we could be weaned off of things we really 'couldn't live without' if reconfigured into a non-functional form to ease one's adaptation to a new dwelling.

OL   vancouver, BC > burnaby/surrey/richmond > services > household services   post | account

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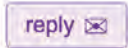
reply ✉   prohibited [?]   Posted 22 minutes ago   ◀ prev ▲ next ▶

Terry's Transitioning service - specialty moving service - we take care of your belongings! (Metro Vancouver)

I'm Terry at Terry's transitioning service. We offer specialty moving services that assist you not just on moving day, but before AND after. Moving can be stressful and your belongings become burdens. Our team has years of personal and professional experience living in and moving between a wide variety of "homes". Whether you require a simple move or are transitioning into a different lifestyle, the combined knowledge of minimalists, zero-waste practitioners, communal dwellers, and modern nomads will help you transition into the living situation that you desire!

::::::: TRANSITIONING :::::::
We offer a wide variety of services to help your transition (konmari, digital detox, etc). We go through your belongings with you (with an expert of your choice). Custom plan based on your needs. Call/Text Terry @ 778-731-8225 for FREE consultation.

We operate within a big network of communal houses, tiny homes, mobile dwellers, etc. We will find a place for your belongings that you no longer need, so you know they're well taken care of — whether as a temporary loan or through longer term ownership. We donate/recycle all other accepted items and materials. Private storage is also available for those belongings that you can't let go of or share (yet)! Have a few near-and-dear possessions you can't live without? For these extraordinary circumstances, we offer a translation service that will boil your treasured object down to a size that works for your new living situation (See Thumbnail 2)

::::::: MOVING :::::::
1 Mover + Moving Van = $80/hr (See Thumbnail 1)
2 Movers + 14 foot box cube Moving Truck = $95/hr (See Thumbnail 3)
* Large ex Budget Truck

* No hidden or extra charges...
* No travel time charged within city limits...
* Customers are welcome to help. We work with you...
* We don't waste time, yours or ours!..
* Our trucks are well equipped with blankets, dollies ,ties, straps, shrink wrap, tools, etc...
* Highly efficient and well-coordinated crew with years of experience and advanced skill level...
* Serving the Lower Mainland and short trips to Vancouver Island...
* Trash, Rubbish, Recycling, Scrap, Junk Removal, Hauling services available…

++ 24/7 FREE CONSULTATION - Questions & Answers, Request call with references (Over 100 to speak to), Small Moves, Emergency movers and/or Special Situation - Call/Text Terry @ 778-731-8225

Keywords: Junk, removal, disposal, couch removal, appliance removal, desk removal, furniture removal, drywall removal, garbage removal, waste removal, eco friendly, same day, same-day, minimalist, zero-waste, tiny home, vanlife, boatlife, communal, co-op, microloft.

::::::: LIKE us on FACEBOOK!!! :::::::
https://www.facebook.com/Terrys-Transitioning-Service

post id: 6794746134   posted: 44 minutes ago   updated: 44 minutes ago   email to friend   best of [?]

VR/AR Transformations for Every Kind of Home

These concepts are presented through a tech review article of two popular products that marry 'cutting edge' technology with 'age old' domestic tendencies (e.g., having enough space to amass hidden clutter, or a have a room that is largely unused). JunkDrAR is an augmented reality application that, when placed over a drawer (or small cavernous space), the messy virtual contents of customizable junk drawers are displayed. Untouched Room offers an immersive virtual reality experience into sparsely decorated spacious rooms that can be customized, explored, and meditated on. These designs are inspired by participants' accounts of re-experiencing memories and associations with 'traditional' domestic conveniences from their past. Such experiences could be positive or trigger feelings of ambivalence; it was clear that adopting a new lifestyle doesn't happen overnight or mean completely letting go of the past. Then, what do JunkDrAR and Untouched Room propose? They could be used to reflect on small luxuries longed for by our dwellers. Or, offer satisfying reaffirmation of one's choice to leave behind the wasteful opulence of clutter and unused space. Or perhaps these concepts could simply help alternative dwellers (or any dwellers) increase the spatial and material complexity of their homes, despite the physical constraints they might live within.

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VR/AR Home Transformations for Every Kind of Home

If renovations are too costly or space is at a premium, then the latest in home VR/AR apps might be for you

BY SANDY WATERS | JANUARY 7, 2018 8:45 AM PST

f y r ⊙ ✉ 💬

Let's face it. Whether you're living off the grid in your camper van or finally taking the plunge on your first family home purchase in the 'burbs, things could likely be bigger or better (or messier). In this article, we review two of the latest VR/AR home apps that help you experience your ideal home by allowing you to keep all the junk you've ever wanted, or gain that little extra untouched space no matter your actual living conditions.

JunkDrAR - Mobile App + More
By: HomeRemedy co.
Price: $8.99

If home is where the heart is, what does that make all the junk you tossed out during the KonMari cleansing craze? HomeRemedy co.'s latest JunkDrAR augmented reality app aims to help you get that cosy hygge feeling back. This app allows you to see all the junk you ever wish you saved when hovering your iOS or Android mobile device directly over your beautiful (but empty) cabinet drawers. You can select different types of "junk" drawers depending on your mood — find a drawer full of gardening, kitchen or miscellaneous living room objects, or randomize the setting to really shake things up. Sift and search through the objects to relive that familiar experience of losing things to the junk drawer. While overall we loved this concept, we found it hard to integrate shiny 3D objects (e.g., Grandpa's stainless steel shoehorn) which shows there's still room for improvement in the personalization settings.

A nice in-app purchase of laminate JunkDrAR drawer liners completed the experience for us. Now you can permanently see junk in your

experience that never goes away. Available in three sizes, starting from $1.99.

Untouched Room - VR with Add-Ons
By: MiHome
Price: $29.99

Living in a tiny home — whether a van or boat — is full of advantages. You can set your own hours, skip paying rent, travel untethered 24/7 , but sometimes you might miss the luxury of having little extra space that's never in use. That's where VR homes come in. Our friends at MiHome have developed The Untouched Room, an impressive new virtual reality experience for the Google Daydream and HTC Vive (Playstation VR and Oculus Rift coming in Summer 2019). The Untouched Room is an immersive home experience that virtually expands your current home with a sense of spaciousness and decadence.

If you're feeling a little claustrophobic, you can momentarily leave your tiny abode worries behind enter into a range of untouched rooms with varying aesthetics to choose from including Modern, Minimalist, Shabby Chic, French Country, Industrial and Beach House. Interchangeable tactile accessories in the form of "touch pads" will allow you to feel each different room. The cnet office pick is the velvet mahogany chaise lounge touch pad in the Victorian Parlour room. Just click-on the corresponding pads to your controllers for that extra real feeling. We found The Untouched Room to be pleasingly versatile in use. It offers a seamless and detailed experience of inhabiting spacious rooms and could be ideal for users occupying a tiny home, a shared room, or even nomadic situations.

Share Your Voice

💬 **7 Comments**

Tags

(VR) (AR) (Virtual Reality) (CES)

ⓘ ✕

🛜 **Connectivity Clock**

Works with Apple HomeKit   works with the Google Assistant

The proposal of this navigation app was inspired by our mobile dwellers' descriptions of moving in and out of digital connectivity – which projected 'connectivity' as a more porous, stratified, and permeable concept. For example, a boat dweller mentioned how she had to sail further North each summer to get away from smartphone connectivity. There were fewer and fewer zones that allowed her to truly get away from the connected world. Yet, she also enjoyed getting back to connectivity, the city and its infrastructures. The Connectivity Clock provides information on how to direct oneself into different levels of (dis)connectivity, while not privileging one over the other. This provocation challenges the always-on ideal. Yet, it does so in a nuanced way by foregrounding freedom of choice to actively modulate one's (dis)connectivity desires. Yet, the Ratings and Reviews section suggests it may not be for everyone. New features such as slow time mode explore and question the desirability of enabling different levels of (dis)connectivity to open up new interactions with other locally connected devices and services (e.g., different kinds of smart light hues and music turn on once entering/leaving deep disconnectivity zones).

Connectivity Clock

To Connect or Disconnect? You decide.
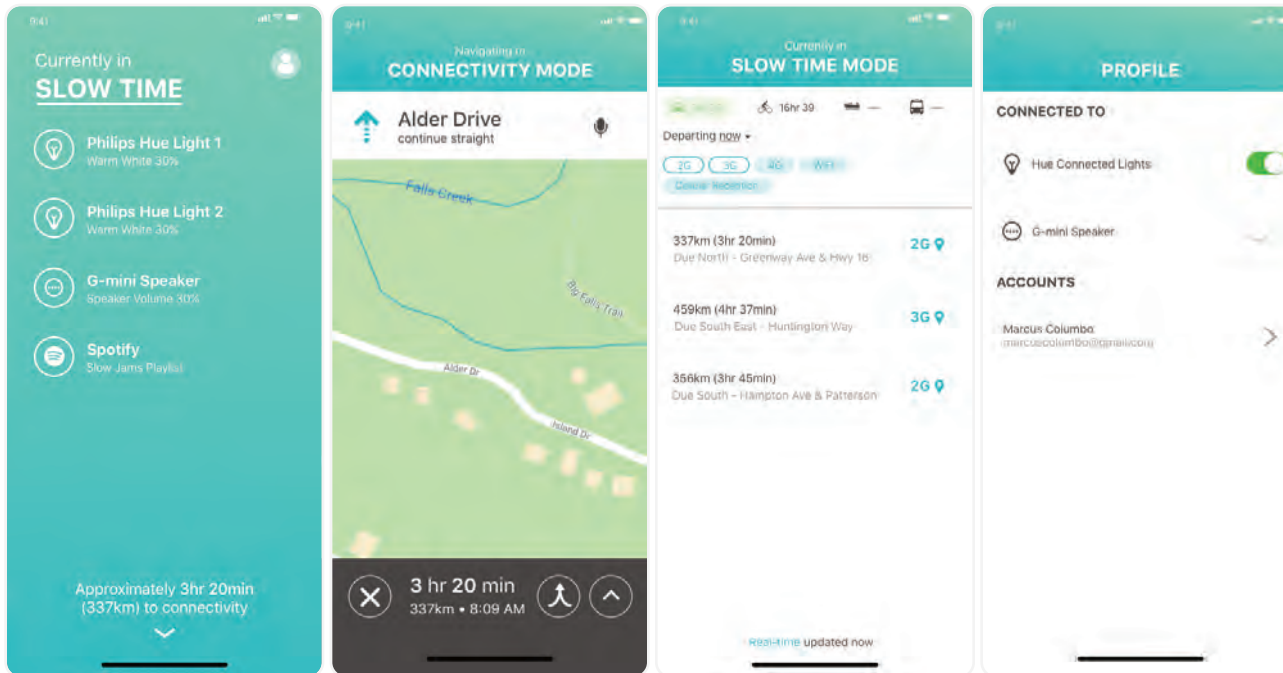
Clarity LLC

Smart Navigation. Utilities.

★★★★½ **4.8, 1.3K Ratings**

$9.99 + in app purchases

Works with:

- works with the Google Assistant
- Works with Apple HomeKit
- hue Works with Philips Hue

Connectivity Clock   iPhone   iPad

Disconnecting on a digital detox adventure or making it back to civilization to plug-in has never been easier with the ConnectivityClock. Part smart navigation tool and part digital connectivity gauge, our app offers you two simple choices: select if you want to get away from or closer to digital connectivity. Using GPS technology, your smartphone's gyroscope, and our proprietary global cellular and broadband activity monitoring software, the ConnectivityClock then calculates the approximate amount of travel time it will take to get away/to digital connectivity based on the direction you're pointing in. Been too long in the woods or out at sea? Our app will get you on course for your internet fix! Too much screen time this week and need to disconnect? Hit the road and keep driving until you're at least 4 hours out of range! All geographic and connectivity-based maps are auto-downloaded so the ConnectivityClock will keep working no matter where you are.

What's New

• New mode: **Slow Time** display brightness dims, ambient music chimes in, and the clock is hidden from your phone once you are 3 hours into disconnectivity territory. Google Home, & Phillips HUE compatible.

• Advanced options now allow for configuring **different types of connectivity**. Mobile (2G, 3G, 4G, LTE), WIFI, & Broadband Ethernet are all now selectable.

• Retina compatible.

Ratings and Reviews

4.8 out of 5, 1.3K Ratings

★★★★☆ **Top-rated Review**

MollyR, 2017-05-18

Navigating Connectivity on the High Seas

We were on our sailboat way far up North in a very peaceful area. There definitely no mobile signal there. I had to take a last minute client before we took off. I was able to complete my work on the boat and used the ConnectivityClock to navigate to an inlet where I could get enough signal to email my client the project and then sail back into unconnected bliss. This app was a real saviour!

★☆☆☆☆ **Top-critical Review**

EJ_Sanders, 2018-07-14

Beware of Road Trip Roulette

We needed to get away for the weekend and had seen youtube videos of people playing "road trip roulette" with ConnectivityClock. My girlfriend and I got in the car, turned the ConnectivityClock on and just started driving. It took us a several hours to get to a low-to-no connectivity zone, but we hadn't paid attention to being low on gas and got stranded in the middle of no where and couldn't call to get help. Beware of this app!

We envisioned the Compass Objects product line also for our mobile dwellers. This design concept is inspired by their accounts of being adept navigators of geographic terrain as well as our experiences of their domestic layouts where homey objects (e.g., children's toys, chach-keys) are intermingled with highly technical infrastructure (e.g., the motor, steering wheel, speedometers) of a boat or car. Compass Objects explores a future in which it is commonplace to integrate navigational functionalities needed for mobile living with everyday objects. While fulfilling their normal duties – providing seating, lighting, pleasant odours, decoration – Compass Objects are actuated and continuously point the way, not to your ultimate destination, but to a true direction (e.g., North or South depending on your hemisphere). This concept provokes questions about what possibilities might be opened through designing connected devices that can be functionally 'used' in the domestic interior while offering an exterior directional awareness without the perpetually glowing presence of a digital screen.

CompassObjects: GPS enabled NorthStar Chair (with Blue Cushion) rotates 360 degrees

by **LookUp Smart Furniture & Products**

★★★★☆ ⌄   **245 Customer Reviews**

3 answered questions

With Deal: **$152.25**

Style Name: **Side Chair**

Assembly options: **Expert assembly of two chairs with delivery**   More options

• COMFORTABLE AWARENESS - Intended for the motorboats and sailboats alike, the Northstar Chair is the latest in our Compass Objects product line. Utilizing the Global GPS technology, it automatically rotates to keep you always facing the Northstar. Get away from your phone and back to celestial navigation — Look Up and See The Stars!
• EASY USE - Combining energy harvesting circuits with a durable automatic winding mechanism, the NorthStar Chair requires no external power supply for actuated movement and works entirely oine. It never requires an update, oering a superior alternative to the easily outdated software of the Garmin SAT NAV or Google Maps to put YOU back in the driver's seat.
• VERSATILE PIECE - Combining modern intrigue with waterproof construction. The NorthStar's sturdy steel base can be bolted to the main deck or cabin. The armless design allows for easy entry and exit as the chair swivels to keep you focused and on course.
• SUPERB COMPATIBILITY - Sailing into the southern hemisphere? Simply flip over the cushion to toggle from Polaris (NorthStar) to Southern Cross (South Celestial Pole) mode.

$152.25
FREE Delivery by **Monday**

In Stock

Ships from and sold by Amazon.con
Gift-wrap available.

Shipping and expert assembly available at most marinas and docks More Info

Without expert assembly

Expert assembly   +89.68 per unit

Add to Cart

Buy Now

Other products from Seller

Note from LookUp Smart Furniture & Products: Using our patented Global GPS technology and self-powered actuators, we offer a range of other CompassObject Products for cars, boats, and other vehicles alike that will keep you on point with the True North (or South) and put YOU back in the driver's seat.

GPS enabled Hula Girl with Removable Adhesive

A dashboard classic that will keep you heading the right way. **$35.99**

GPS enabled LED Table Lamp in White (with Bulb)

Read a map with the true direction illuminated. **$55.99**

GPS enabled Fuzzy Dice (Colours: Black/White/Red)

You'll never have to roll the dice on getting lost again. **$15.60**

GPS enabled Air Freshener in Pine Scent (includes 5 refills)

Spruce up your interior while keeping your bearing in mind. **$15.60**

RoomiRoomba

This concept took inspiration from collective dwellers and how boundaries of personal and shared space were fluidly negotiated in the home. These social practices are tied to the identity of our collective homes and reinforce their commitments to living cooperatively. They require collective dwellers not only communicate with each other, but for them to figure out what their personal boundaries are. Our dwellers' desires to live cooperatively were strong, but the nuances of socially signaling personal, shared, and collective time and space could be challenging. This humorous proposal explores how a smart product service might play a stronger mediating role in this process. As highlighted in the Product Reviews and Questions section, we aimed to explore what positive and negative consequences might emerge from delegating this type of labor an autonomous smart object. Further, this concept raises on how smart home technologies could be designed to support social configurations of domestic space that are in constant flux, while the physical house itself remains a long-term fixed entity.

RoomiRoomba Robot Vacuum with Wi-Fi Connectivity, Works with Alexa, Ideal for Collective Homes: keep your personal space, the peace, & your home clean All-in-one

| by **HomeTech**

★★★★☆ ˅   **453 Customer Reviews** | **9 answered questions**

List Price: $~~374.99~~
With Deal: **$249.00**

Size: **R690**

You Save: $125.99 (34%)

• RoomiRoomba lets home dwellers schedule, customize, demarcate spaces in the home that are reserved as temporarily private, shared among a group, or open to the entire household — all from your smartphone.
• Spreads glitter in a dedicated linear trail to show you have reserved a room, comes with a sleek SpaceShare smartphone app to help reserve space in your home, and begins cleaning glitter trail when your time is nearly up.
• Increases domestic cleanliness while mitigating social awkwardness in creating private, shared, and public spaces among roommates in the home.
• 10 glitter colours to select from. Glitter trail width customizable from 1 to 5 centimetres.
• Patented sparkle detect sensor, multi-surface brushes, and dual filtration system enables glitter to be separated during the cleaning process and reused in the future.

$249.00
FREE Delivery by **Monday**

In Stock

Ships from and sold by Amazon.com. Gift-wrap available.

—— Add Additional Items ——

Roomi Glitter Cartridges
~~CDN$ 20.99~~ CDN$ 20.99

Add to Cart

Buy Now

Top Positive Review

See all 423 Positive Reviews **>**

Mélanie C.

★★★★★ **RommiRoomba saved my love life**

March 4, 2016

It's been a consistent bummer to bring a date home, put on some music, get cozied up on the couch, AND THEN have other roommies come into the living room and start watching TV. The Roommate Roomba helped make clear to others when the living room is reserved for date night. It'd clean the room up also while it was at work laying the glitter trail. Two birds with one stone! My love life has definitely improved ;-)

Top Critical Review

See all 30 Critical Reviews **>**

Derek_Thompson

★★★☆☆ **Helpful but takes some work**

November 8, 2017

As a household, we've gotten good use out of it and it's eased some tensions around respecting personal space in our collective. It's also had downsides. One time I meant to mark the dining room as a group shared space for a game night, but accidentally pressed the 'private space' setting and no one showed up!

Questions

See more questions (8) **>**

Question:

2 Votes

If you're extra cozy on the couch, but the Rommi is starting to vacuum up your personal space glitter zone because your time's up, can you extend it?

Answer:

Nope. You're outta luck!

By Jillw2cats on June 10, 2016

Roomate Replicator This smart home concept is inspired by collective dwellers' reflections on the home's agency in collective living situations and how memories and frustrations emerged through traces of past dwellers. In some cases, the house may have more of a sense of past residents' habits and belongings than the current people inhabiting it. Roommate Replicator enables current dwellers of the collective, and even the home itself, to experience a range of continued connections to past dwellers in the collective via the digital traces they 'left behind' – favorite music playlists and streaming media as well as common smart light, thermostat, and electric toothbrush settings from prior dwellers are all accessible and mixable. The 'What's New' section highlights newly added features that enable dwellers to re-experience digital traces from prior dwellers in curious, if not strange, ways. The 'Reviews' section explores how mundane traces left behind by co-dwellers can become lodged in our memory and explores what might happen if they were actively re-encountered. This concept explores how the history and accumulated knowledge of the home could shape 'smart' collective home technology and raises questions about the consequences of this future.

Roommate Replicator

Savour smart traces of your favorite housemates

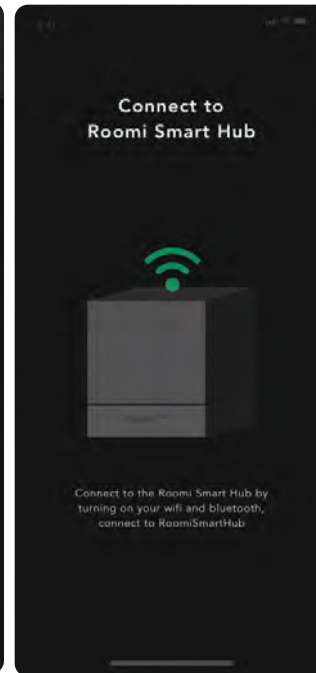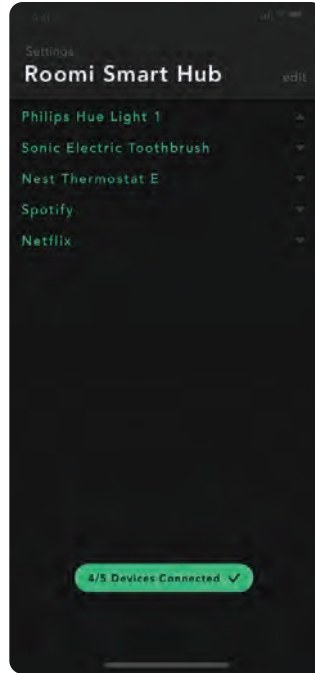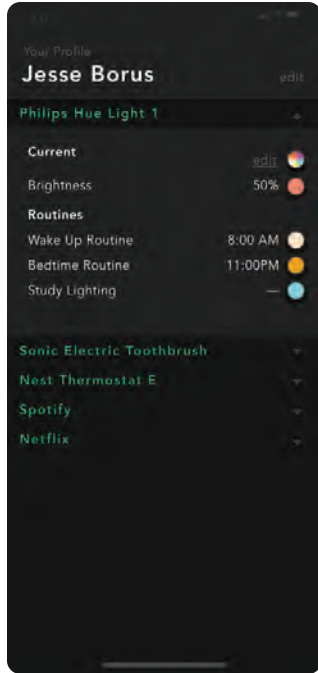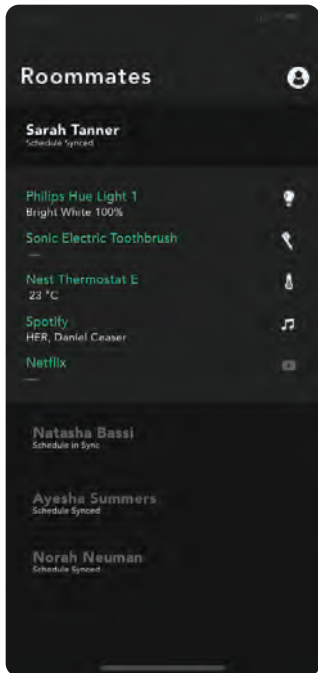**Roomi.co**

Smart Home, Social

★★★★⯪ 4.5k Ratings

Free* with purchase of RoomiSmartHub

Works with:

[works with the Google Assistant] [Works with Apple HomeKit] [hue Works with Philips Hue]

Connectivity Clock   iPhone   iPad

Roommate Replicator is the best app that connects with your Roommate Replicator smarthome bridge together with your smart devices to preserve the traces, habits, and memories of your beloved co-dwellers. Roommate Replicator tracks and logs histories of each home dweller's routines with their personal devices and shared appliances in and around the home. Re-experience your former roommates' favourite music playlists, Netlfix shows, lighting and temperature preferences, and smart toothbrush just as they did. Focus on one roomie or mix and match several. The possibilities are endless! Too many choices? Select the Automation mode to let Roommate Replicator select the most optimal combination of roomie activity traces. With Roommate Replicator the history of your domestic life with fellow co-dwellers will never be forgotten.

What's New

Version History
Version 2.2018.975107

• New mode: **KnockKnock?** a game where you must decide which roomie from the past is being replicated based on clues from their past routines.

• New mode: **TimeWarp** replicates roomie traces from exactly one, five, or ten years ago.

• New feature: **PassDown** allows you to share histories of past roomies to current roommates, even if they have never lived together at the same time.

Ratings and Reviews

4.5 out of 5, 2K Ratings

★★★★★
★★★★
★★★
★★
★

★★★★★

BrodyHoskins, 2017-02-20

Phenomenal!

I was skeptical at first, but Roommate Replicator gave me a totally unique perspective on the memories of my house and my roommates. Jerry moved out of our share house a couple years ago and I've missed his cool jazz tunes and chilled out HUE settings. Roommate Replicator turned that on its head by letting me set the ambience in our living room just like Jerry would've.

★★★★⯪

Z.W.Libow, 2018-09-09

Strangely intimate

I worked the night shift and Jenny was at Uni all day. We rarely saw each other but there was always something comforting about hearing the the wizzing of her toothbrush when I was getting tucked into bed and she was on her way out the door. It's strangely intimate to be able to trigger that sound from my bed even though she's moved abroad now.

conclusion
• •

Developing strategies to design interactive systems intended to support people's everyday lives and practices at home continues to raise opportunities and issues for the HCI and design communities. The goal of this pictorial has been to extend prior research by taking a modest step toward provoking questions around how domestic life could be conceptualized and approached in more diverse ways. Design has long been regarded as an approach for framing, setting, and solving human problems, and improving the conditions of people's everyday lives. Yet, design can also operate as an approach for critically provoking, imagining, questioning, and developing how we might treat such complex notions as 'the home' and the technologies designed in relation to it. We have proposed a series of fictional design concepts that respond to insights and themes in our ongoing engagements with a sample of collective and mobile dwellers in the service of generating openings, potentials, and questions for reflecting on what is bound up in the idea of domesticity. The design provocations explore how we might reconfigure assumptions in contemporary technology design around (dis)connectivity, mobility, shared use, and space to inquire into possibilities and limits for design.

Terry's Transitioning Service and VR/AR Transformations for Every Kind of Home offer different pathways into understanding that adapting to alternative forms of dwelling is a process that requires time and sacrifice, which can be difficult and greatly rewarding for collective and mobile dwellers alike. They provoke us to consider new questions: what kind of support systems might enable us to thrive with less over time? They also ask us to consider the desirability of design ideas around how we might leverage the lightweight, low-imprint nature of interactive technology to virtually amplify and extend the spatial and material complexity of our home while also maintaining social values bound to sharing and living with less.

Connectivity Clock and *Compass Objects* inquire into the transitional qualities of our mobile dweller through concepts that leverage digital connectivity to amplify orientational awareness to changing conditions outside of the home – whether it is geographic directionality or spectrums of (dis)connectivity. *Connectivity Clock* recasts digital connectivity as a porous spectrum with possible richness in the stratified segments between totally connected and disconnected. This (dis)connectivity spectrum presents an intriguing space for designers to investigate in the future: how might different strengths and types of connectivity change our relation to objects, devices, people, and the broader environment around us? For mobile dwellers and others alike? To what extent would this be wanted and why? *Compass Objects* digs deeper into environmental awareness through a range of actuated objects that perpetually orient to a single specific direction. They actively contrast the drive seen across mainstream smart home products to automate everyday tasks by making their owner subtly aware of their home's orientation, without anticipating or inferring the next course of action. Taken together, these concepts open opportunities to explore how new designs could generate different kinds of awareness by considering connectivity along a wider spectrum, while still balancing people's agency and keeping them in the driver's seat.

RoomiRoomba and *Roommate Replicator* re-imagine familiar looking smart home products through the unique social practices and histories of collective homes. *RoomiRoomba* offers an example of how the behavior and presence of a smart home vacuum could be extended to play a direct role in mediating the frequently changing configurations of personal, shared, and collective space – thus, serving as an extension of close-knit values of the collective. *Roommate Replicator* amplifies traces of the unique, and often deep, socio-material history of a collective house that may only be partially known to the dwelling's current occupants. Both concepts provoke questions around the benefits and also potential consequences of such technologies: Where do boundaries of acceptability lie when we extend practices tied to the sensitive and delicate social values of a household to a semi-autonomous smart home system? To what extent could or should we leverage the largely unseen individual data produced by household members' daily activities as a resource for remembering and exploring the history of a collective (or any household) over time?

Through adopting a research through design fiction approach [5,7,35] that was grounded in our ongoing engagements with a sample of participants that intentionally adopt mobile or collective dwellings, our work takes a modest step toward responding to growing calls in the HCI and design communities to: advance beyond homogenous visions of domestic technology and embrace a more diverse set of values, perspectives, and agendas in future design initiatives [1,12,16,18,19,22,24,30,36], express more diverse perspectives on how 'the home' is conceptualized and how it can be researched [4,7,11,15,17,19,23], and critically question underlying norms and values driving HCI research and practice [5,6,20,24]. We proposed *critique through living, taking time to adapt & adjust, and the transitional home* as a complementary set of qualities for conceptualizing domesticity, each of which offer their own unique constraints, questions, and provocations that can help diversify approaches to designing technology for the home. We then presented six fictional design proposals that aim to provoke reflection on how we might approach understanding the lives, experiences, and values of collective and mobile dwellers, and open new questions to inspire future design research and practice. Importantly, our approach also comes with key limitations. The sample of mobile and collective dwellers we are working with largely come from a position in which they were able to choose to adopt the lifestyles they desire. Members of populations and communities that are affected by poverty, homelessness, physical/mental illness, discrimination, and/or cultural annihilation (among other things) may have little choice other than to live in non-mainstream domestic conditions. Engaging with such populations represents crucially important opportunities for future research if we are to take seriously a broader, more inclusive call for diversifying the domestic and crafting new agendas for designing for a plurality of living situations.

Indeed, in the context of Vancouver, Canada the practice of collective and mobile dwelling is not a novelty or an escape from 'traditional' domestic life for everyone. Settler colonialism did not arrive at what is now known as Vancouver until 160 years ago. Before then, this area's residents were from First Nations communities that practiced many forms of domestic life that are outside of the norms of present-day Vancouver. In our view, incorporating these perspectives is also vital to genuinely and critically engaging the goal of inquiring into diverse lived and imagined conceptualizations of home. In this pictorial, we aimed to, as design philosopher Tony Fry would term, 'dig where you stand' – to engage with dwellers and communities that we had worked hard to establish rapport and relationships with that, while limited, are still notably diverse in their own way. As a next step, we plan to leverage these design proposals as catalysts for supporting co-design and speculation through continued engagements with our participants. In the future, we plan to engage with other individuals and communities beyond our current dwellers. Ultimately, we hope our work will inspire others to conduct research that contributes to diversifying conceptualizations of 'the domestic' and that expands how we approach designing technology for the home.

ACKNOWLEDGMENTS

references

[1] Ryan Aipperspach, Ben Hooker, B., and Allison Woodruff. 2008. The heterogeneous home. In Proceedings of the 10th international conference on Ubiquitous computing, pp. 222-231. ACM.

[2] Genevieve Bell, Mark Blythe, and Phoebe Sengers. 2005. Making by making strange: Defamiliarization and the design of domestic technologies. ACM Trans. Comput.-Hum. Interact. 12, 2 (June 2005), 149-173.

[3] Luís Bettencourt, José Lobo, Dirk Helbing, Christian Kühnert, and Geoffrey B. West. 2007. Growth, innovation, scaling, and the pace of life in cities. Proceedings of the national academy of sciences 104, no. 17: 7301-7306.

[4] Julian Bleeker, Nicolas Nova, Fabien Girardin, Nick Foster, Emmet Byrne, Lena Tesone. (2014). TBD Catalog Vol 9 Issue 24. Published by Near Future Laboratory.

[5] Julian Bleecker 2009. Design Fiction: A Short Essay on Design, Science, Fact and Fiction. http://drbfw5wfjlxon.cloudfront.net/writing/DesignFiction_WebEdition.pdf

[6] Mark Blythe, Kristina Andersen, Rachel Clarke, and Peter Wright. 2016. Anti-Solutionist Strategies: Seriously Silly Design Fiction. In Proceedings of the 2016 CHI onference on Human Factors in Computing Systems (CHI '16). ACM, New York, NY, USA, 4968-4978.

[7] Mark Blythe. 2014. Research through design fiction: narrative in real and imaginary abstracts. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14). ACM, New York, NY, USA, 703-712.

[8] Mark Blythe and Andrew Monk. 2002. Notes towards an ethnography of domestic technology. In Proceedings of the 4th conference on Designing interactive systems: processes, practices, methods, and techniques (DIS '02). ACM, New York, NY, USA, 277-281.

[9] Andy Boucher, Dean Brown, Liliana Ovalle, Andy Sheen, Mike Vanis, William Odom, Doenja Oogjes, and William Gaver. 2018. TaskCam: Designing and Testing an Open Tool for Cultural Probes Studies. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18). ACM, New York, NY, USA, Paper 71, 12 pages.

[10] Barry Brown, Julian Bleecker, Marco D'Adamo, Pedro Ferreira, Joakim Formo, Mareike Glöss, Maria Holm, Kristina Höök, Eva-Carin Banka Johnson, Emil Kaburuan, Anna Karlsson, Elsa Vaara, Jarmo Laaksolahti, Airi Lampinen, Lucian Leahu, Vincent Lewandowski, Donald McMillan, Anders Mellbratt, Johanna Mercurio, Cristian Norlin, Nicolas Nova, Stefania Pizza, Asreen Rostami, Mårten Sundquist, Konrad Tollmar, Vasiliki Tsaknaki, Jinyi Wang, Charles Windlin, and Mikael Ydholm. 2016. The IKEA Catalogue: Design Fiction in Academic and Industrial Collaborations. In Proceedings of the 19th International Conference on Supporting Group Work (GROUP '16). ACM, New York, NY, USA, 335-344.

[11] Grace Campagna. 2016. Linking crowding, housing inadequacy, and perceived housing stress. Journal of Environmental Psychology 45: 252-266.

[12] David Chatting, Gerard Wilkinson, Kevin Marshall, Audrey Desjardins, David Green, David Kirk, and Andy Boucher. 2017. Making Home: Asserting Agency in the Age of IoT. In Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems, ACM, 526-533.

[13] Audrey Desjardins, Ron Wakkary, and William Odom. 2015. Investigating Genres and Perspectives in HCI Research on the Home. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). ACM, New York, NY, USA, 3073-3082.

[14] Audrey Desjardins, Ron Wakkary, and William Odom. 2016. Behind the Lens: A Visual Exploration of Epistemological Commitments in HCI Research on the Home. In Proceedings of the 2016 ACM Conference on Designing Interactive Systems (DIS '16). ACM, New York, NY, USA, 360-376.

[15] Audrey Desjardins and Ron Wakkary. 2016. Living In A Prototype: A Reconfigured Space. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16). ACM, New York, NY, USA, 5274-5285.

[16] Bill Gaver and Heather Martin. 2000. Alternatives: exploring information appliances through conceptual design proposals. In Proceedings of the SIGCHI conference on Human Factors in Computing Systems (CHI '00). ACM, New York, NY, USA, 209-216.

[17] Andy Boucher, Dean Brown, Liliana Ovalle, Andy Sheeen, Mike Vanic, William Odom, Doenja Oogjes, and William Gaver. 2018. TaskCam: Designing and Testing an Open Tool for Cultural Probes Studies. In Proceedings of the SIGCHI conference on Human Factors in Computing Systems (CHI '18). ACM, New York, NY, USA, in press.

[18] Tom Jenkins. 2017. Living Apart, Together: Cohousing as a Site for ICT Design. In Proceedings of the 2017 Conference on Designing Interactive Systems, pp. 1039-1051. ACM.

[19] Tom Jenkins. 2015. Designing the Things of the IoT. In Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction, pp. 449-452. ACM.

[20] Tejinder K. Judge and Carman Neustaedter. 2014. Studying and Designing Technology for Domestic Life: Lessons from Home. Morgan Kaufmann Publishers Inc., San Francisco, CA, USA.

[21] Vera Khovanskaya, Phoebe Sengers, Melissa Mazmanian, and Charles Darrah. 2017. Reworking the Gaps between Design and Ethnography. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17). ACM, New York, NY, USA, 5373-5385.

[22] David S. Kirk, David Chatting, Paulina Yurman, and Jo-Anne Bichard. 2016. Ritual Machines I & II: Making Technology at Home. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16). ACM, New York, NY, USA, 2474-2486.

[23] Gilly Leshed, Maria Håkansson, and Joseph 'Jofish' Kaye. 2014. "Our life is the farm and farming is our life": home-work coordination in organic farm families. In Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing (CSCW '14). ACM, New York, NY, USA, 487-498.

[24] Justin McGuirk. 2015. Honeywell, I'm Home! The Internet of Things and the New Domestic Landscape. Retrieved 11 December, 2017 from http://www.eflux.com/journal/honeywell-im-home-the-inte

[25] William Odom, John Zimmerman, and Jodi Forlizzi. 2010. Designing for dynamic family structures: divorced families and interactive systems. In Proceedings of the 8th ACM Conference on Designing Interactive Systems (DIS '10). ACM, New York, NY, USA, 151-160.

[26] William Odom, Abigail J. Sellen, Richard Banks, David S. Kirk, Tim Regan, Mark Selby, Jodi L. Forlizzi, and John Zimmerman. 2014. Designing for slowness, anticipation and re-visitation: a long term field study of the photobox. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14). ACM, New York, NY, USA, 1961-1970.

[27] Doenja Oogjes, William Odom, and Pete Fung. 2018. Designing for an other Home: Expanding and Speculating on Different Forms of Domestic Life. In Proceedings of the 2018 Designing Interactive Systems Conference (DIS '18). ACM, New York, NY, USA, 313-326.

[28] Marianne Graves Petersen, Aviaja Borup Lynggaard, Peter Gall Krogh, and Ida Wentzel Winther. 2010. Tactics for homing in mobile life: a fieldwalk study of extremely mobile people. In Proceedings of the 12th international conference on Human computer interaction with mobile devices and services (MobileHCI '10). ACM, New York, NY, USA, 265-274.

[29] James Pierce, Phoebe Sengers, Tad Hirsch, Tom Jenkins, William Gaver, and Carl DiSalvo. 2015. Expanding and Refining Design and Criticality in HCI. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). ACM, New York, NY, USA, 2083-2092.

[30] James Pierce. 2016. Design Proposal for a Wireless Derouter: Speculatively Engaging Digitally Disconnected Space. In Proceedings of the 2016 ACM Conference on Designing Interactive Systems (DIS '16). ACM, New York, NY, USA, 388-402.

[31] Wila Rea, Jennifer Yuen, John Engeland, and Roberto Figueroa. 2008. The dynamics of housing affordability. Perspectives on Labour and Income, 20 (1), 37.

[32] Tony Salvador, Genevieve Bell, and Ken Anderson. 2010. Design Ethnography. Design Management Journal (Former Series) 10, 4: 35–41.

[33] Jo Shin, Gabriella Aceves-Sepúlveda, and William Odom 2019 (in press). "Collective Wisdom": Inquiring Into Collective Homes as a Site for HCI Design. In Proceedings of SIGCHI Conference on Human Factors in Computing Systems Glasgow, UK. (CHI '19). ACM Press.

[34] Irina A. Shklovski and Scott D. Mainwaring. 2005. Exploring technology adoption and use through the lens of residential mobility. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '05). ACM, New York, NY, USA, 621-630.

[35] Joshua Tanenbaum. 2014. Design fictional interactions: why HCI should care about stories. interactions 21, 5 (September 2014), 22-23.

[36] Alex S. Taylor, Susan P. Wyche, and Joseph 'Jofish' Kaye. 2008. Pottering by design. In Proceedings of the 5th Nordic conference on Human-computer interaction: building bridges (NordiCHI '08). ACM, New York, NY, USA, 363-372

[37] John Vines, Mark Blythe, Stephen Lindsay, Paul Dunphy, Andrew Monk, and Patrick Olivier. 2012. Questionable concepts: critique as resource for designing with eighty somethings. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12). ACM, New York, NY, USA, 1169-1178.

[38] Jill Woelfer and David Hendry. 2011. Homeless young people and living with personal digital artifacts. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11). ACM, New York, NY, USA, 1697-1706.

[39] Allison Woodruff, Jay Hasbrouck, and Sally Augustin. 2008. A bright green perspective on sustainable choices. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '08). ACM, New York, NY, USA, 313-322.

[40] Allison Woodruff, Sally Augustin, and Brooke Foucault. 2007. Sabbath day home automation: "it's like mixing technology and religion." Proceedings of the SIGCHI conference on Human factors in computing systems - CHI '07, ACM Press, 527-536.

[41] Susan Wyche, George Hope Chidziwisano, Florence Uwimbabazi, and Nightingale Simiyu. 2018. Defamiliarizing the Domestic: Exploring "M-Kopa Solar" and Sustainable Practices in Rural Kenyan Households. In Proceedings of the 1st ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS '18). ACM, New York, NY, USA, Article 35, 11 pages.