On Vintage Values: The Experience of Secondhand Fashion Reacquisition

Anne E. Bowser
iSchool
University of Maryland
College Park, MD, USA
abowser1@umd.edu

Oliver L. Haimson
Dept. of Informatics
Univ. of California, Irvine
Irvine, CA, USA
ohaimson@uci.edu

Edward F. Melcer
NYU Polytechnic School of Engineering
Brooklyn, NY, USA
eddie.melcer@nyu.edu

Elizabeth F. Churchill
eBay Research Labs[1]
San Jose, CA, USA
churchill@acm.org

ABSTRACT
Secondhand fashion is a rapidly growing, lucrative market with both off- and online outlets. Studies of secondhand consumption have focused primarily on people's motivations for secondhand shopping, highlighting sustainability and/or thrift. We extend this work by looking at the motivations and practices of secondhand shoppers who are driven instead by style, playfulness and treasure-hunting. We present findings from ethnographic observation and interviews with 13 secondhand shoppers. Three secondhand shopping orientations emerged. *Perfection Seeking* involves seeking items that fit with an individual look or personal brand. These items are seen as unique, and demonstrate an alternative to mainstream fashion and consumption. *Casual curiosity* is less focused, more engaged in browsing, and driven by both secondhand objects and the secondhand experience itself. *Digging* involves the focused pursuit of hidden "gems" or treasures, following the belief that unusual items are waiting to be found. We offer ideas for designing secondhand shopping experiences to support the needs for storytelling, experiential pleasure, and negotiation around durable value.

Author Keywords
Fashion; Recirculation; Value-centered design; Sustainable HCI; eCommerce Consumption; Recycling; Field Study

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H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION
Secondhand fashion is a growing global phenomenon. As a market sector, the US secondhand retail industry reports annual revenues of $12 billion, with used clothing accounting for 25% of this value [19]. This is not restricted to physical stores; eBay, the world's largest secondhand eCommerce platform, made $11 billion in 2011 [10].

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The cultural standing of secondhand fashion is also changing. Once associated almost exclusively with charity donation outlets or "thrift stores" like Goodwill in the US and Oxfam in the UK, secondhand fashion now is found in high end "vintage" stores, in designer-focused consignment stores, and in boutiques that target young and "trendy" shoppers. Diverse online retailers are emerging to challenge established marketplaces like eBay. Examples include The Real Real, Threadflip and Etsy, with premium sales sites like RueLaLa and ideel also featuring more high-end used items. Although commonly associated with thrift, previous studies of secondhand shoppers reveal a broader range of motivations, including nostalgia, eco-consciousness, anti-consumerism, and experiential pleasure [9, 15, 17].

Much HCI research on secondhand shopping has focused on understanding decisions to acquire, preserve, and dispose of objects (or not) for furthering sustainable design [13, 27]. Focusing on the goods themselves, Pierce & Paulos describe secondhand consumption as "acquisition, possession, dispossession and reacquisition." Sustainable HCI research has also focused on fashion, exploring how fashion thinking can support sustainable design [28], or by designing new tools for sustainable consumption [4]. But, despite these early efforts the spaces of fashion and sustainable HCI have yet to fully converge.

Our ethnographic exploration of secondhand fashion, conducted through 13 field interviews with shoppers in the San Francisco Bay Area, is one synergy of fashion and sustainable HCI research. Additionally, we expand previous research on secondhand consumption such as [13, 27, 29] through the use of a method that selects the *experience* and not the *object* as point of entry into understanding key practices. We report a range of experiences related to the values and identities of our shoppers, the objects they select, and the spaces where secondhand interactions unfold. Through distilling these experiences we identify three distinct secondhand fashion consumption orientations, which imply different needs for consumption spaces, both physical and online. Finally, we return to previous research in our discussion, by reflecting on and in some cases expanding the design implications posed by [13, 27, 29].

[1] Now at Google

BACKGROUND

Our research contributes to the literature on secondhand consumption, found both within and outside of HCI.

HCI Research on Secondhand Consumption

Our work builds on several secondhand consumption frameworks developed by HCI researchers. Odom et al. examined how the function, symbolism, and material qualities of objects determines how they are valued and preserved [27]. Notably, only one of the qualities these researchers identified—*perceived durability*—is a property of the object itself. *Engagement*, *history*, and *augmentation* are qualities that arise out of the interaction between object and owner, and may occasionally involve third parties as well. These interactions contribute to the "ensoulement" of objects that become precious heirlooms over time [22]. Gegenbauer and Huang extended Odom et al.'s framework through personal inventories with 17 Swedish households [13]. They add one quality inherent in objects—*perceived worth*—and two, *earned functionality,* and *sufficiency,* earned through human use. These researchers also challenged designers to prototype novel technologies based on their extended framework, an exercise that designers found "inspiring." Others studying consumption or preservation of items focused directly on technologies, either generally [12] or by examining classes of devices like PDAs [18].

Our work also builds on Pierce and Paulos' study of secondhand interactions [29]. While [13] and [27] focus primarily on preservation, Pierce and Paulos are interested in the entire re-acquisition cycle, defined as buying, selling, and/or trading of goods (we adopt this definition for our research as well). They advance four reacquisition orientations. *Casual reacquirers* and *necessary reacquirers* are traditional secondhand shoppers, motivated primarily by budget. In contrast, *critical reacquierers* are driven by social, political, or ethical considerations, and *experiential reaquirers* enjoy the experiential or aesthetic qualities associated with reacquisition. Secondhand shoppers that fall within these last two categories, labeled *invested reacquirers*, comprise the population we recruited.

Recognizing that many traditional distinctions between first- and secondhand shopping no longer hold (especially in online spaces), our work is also informed by HCI explorations of fashion thinking and practice. Pan and Blevis explored how fashion concepts can support sustainable design [28]. Their emphasis on the importance of social and community practices, and individual self-expression, is particularly relevant to our work. Juhlin et al's study of mobile technology for supporting clothing selection demonstrates the importance of observing actual dressing practices, and informed our selection of an ethnographic approach [21].

The Secondhand Fashion Experience

Within HCI, work on secondhand consumption often takes an object-centered approach informed by conducting personal inventories [26], an ethnographic methodology used by numerous researchers [12, 13, 18, 27]. In contrast, researchers writing from the perspectives of market research and consumer psychology are more likely to study secondhand shoppers' values, motivations, or experiences.

In these domains, researchers often construct consumer profiles of shoppers with shared values, motivations, and practices. For instance, Guiot and Roux identified four types of secondhand retail shoppers [15], three of which are similar to [29]'s *invested reacquirers*. *Polymorphous enthusiasts* are driven equally by economic motivations and the need to be unique; *thrifty critics* express economic motivations and anti-consumption norms; *nostalgic hedonists* simply enjoy the secondhand experience. A final category, *specialist shoppers*, are only incidentally secondhand consumers (e.g., [29]'s *non-invested reacquirers*). Other research reveals a range of values and motivations. Some secondhand shoppers are driven to craft a unique fashion identity [6]. Others express eco-conscious values. These shoppers may set limits on their consumption, seek out apparel with environmentally preferable attributes (e.g., organic fabrics), buy from local sources, or prefer "classic" styles [17]. Both secondhand shoppers and other recirculaters, such as those who attend swapmeets, may be motivated by anti-consumption, anti-consumerism, or even anti-capitalism [2]. Finally, buyers may be driven by thrift not as a utility but as a moral value linked to sacrifice [3].

The spaces where secondhand fashion consumption unfolds are also of interest. These are recognized as places (as in [16]) formed through the convergence of individuals with distinct values and identities, the objects they buy, sell, gift, or trade, and physical or online spaces [2]. These places are designed to convey a distinct style or taste and to transmit key norms and expectations, including information about price [9]. Within secondhand retail, vintage stores are especially adept at visual merchandising, achieved through a wealth of mechanisms including advertising, display, merchandise selection, merchandise information (such as tags), sales staff, store atmosphere, and store layout [25].

In the case of transient spaces such as vintage markets, which are cyclically built and removed from a space, the opportunity and necessity of mood is particularly salient. Transient spaces establish identity by anchoring to more permanent spaces (such as a restaurant serving food on vintage china), become predictable by giving old vendors preference over newcomers, and maintain a persistent online presence [9]. These practices allow shoppers to form attachments both through their interactional past, described by [23] as former associations with a site, and through their interactional potential. With this background in mind, we present our contribution.

METHODS

We conducted an ethnographic study of 13 re-circulators in the San Francisco Bay Area.

Procedure

Participants were recruited via a snowball sample, soliciting friends of friends and colleagues. We targeted participants who purchased secondhand fashion items "*to craft a unique personal style,*" or those who purchased secondhand "*to enact a set of values*." From our pool of initial respondents we conducted phone screeners with 20 participants. These screeners ranged from 22 to 47 minutes in length, and were designed to confirm two key criteria: (1) consistent engagement with *recirculation of fashion items*, and (2) secondhand consumption for reasons other than budget, i.e. to support a unique personal style or to enact values. Thirteen participants were selected for in-person ethnographic interviews based on fit to the above criteria and availability.

Fieldwork with each participant included a formal sit-down interview followed by exploration of a thrift, consignment, or vintage store. During the interview, participants answered a range of questions regarding personal history, consumption values, shopping preferences, and style. Prior to the interview, we asked each participant to bring or be prepared to talk about *"One piece of clothing and one accessory that you really truly love."* This "homework" [30] was designed to inspire contemplation.

After the sit-down interview, we asked our participants to take us to a favorite stores and *"show us what you do when you go shopping."* In some cases multiple stores were patronized, including a mix of first- and secondhand. We visited thrift stores such as Goodwill and the Salvation Army (N = 5), mid-range consignment stores such as Crossroads and Buffalo Exchange (N = 4), upscale vintage/consignment boutiques (N = 5), and firsthand specialty retailers (such as those specializing in eco fashion; N = 2). Once in the store, we asked participants to *"please 'teach' us how you go [thrifting/ consignment/ vintage shopping], assuming we know nothing about this practice."* This mechanism of "show and tell" is designed to elicit deeper reflections than sit down questions alone, while also providing data regarding participants' actual behavior to balance the biases inherent in self-report [30].

Ethnographic interviews ranged from 1 hour and 45 minutes to 5 hours and 30 minutes, with an average time of 2 hours. Of our 13 participants, 11 shopped alone and 2 requested to participate together. Prior to interviews, all participants signed a consent form to "opt in" to different types of data collection and data sharing. All were compensated for their contribution with Visa gift cards.

Participants

Participants were secondhand shoppers in the San Francisco Bay Area (namely, Albany, Alameda, Berkeley, Campbell, San Francisco, San Jose, and Oakland). Select demographic information is presented in Table 1. The majority of our participants were engaged in multiple types of recirculation, including buying, selling, swapping, gifting, and giving away. Specifically, all 13 purchased both first- and second-hand goods; 9 utilized a mixture of online and offline channels. All 13 reported some experience with selling, although these experiences varied widely. While we did not ask specifically about swapping, 7 participants reported attending swap meets or otherwise sharing clothes. All 13 donated clothing consistently, or had donated clothes in the past. Thus, for our participants, reacquisition was a true landscape, as also observed by [29]. As revealed in Table 1, we interviewed more women then men. This is in line with our snowball sampling procedure, and we do not believe our female skew is a limitation.

	Alias	Age	Gender	Occupation
1	Lucy	20s	F	Retail Employee
2	Rachel	20s	F	Fitness Instructor
3	Alicia	20s	F	eBay Seller
4	Ruth	20s	F	Park Service Ranger
5	Jackson	20s	M	Artist
6	Madeline	20s	F	Radio Host
7	Axel	30s	M	Accountant
8	Maura	30s	F	University Admin.
9	Kiera	30s	F	Special Ed. Teacher
10	Alexandra	30s	F	Student; Law clerk
11	Agnes	40s	F	University Admin.
12	Vivian	40s	F	Jewelry Designer
13	Lidiya	40s	F	Acupuncturist

Table 1. Participant demographics (names have been changed).

Data Collection and Analysis

Two or three researchers were present for each trip. One was primarily responsible for asking contextualized questions, while another documented the experience through audio recordings, photographs, videos, and screen captures. Data analysis was an iterative process that began with debriefing, as researchers shared key insights and contemplated emerging themes immediately following each interview. Following best practices for conducting ethnographic interviews, in addition to debriefing each researcher compiled field notes codifying their reactions in greater depth [30]. Phone and in-person interviews for each participant were recorded and transcribed. These documents were analyzed along with field notes in an iterative process similar to Thematic Analysis. Thematic Analysis is an iterative approach similar to grounded theory considered appropriate when researchers have existing conceptions of key themes [5]. For example, prior to fieldwork we understood secondhand consumption to be a complex reacquisition process driven by values and identity practices, but we did not understand secondhand shoppers' more specific motivations or shopping orientations.

FINDINGS AND DISCUSSION

We report how our participants experienced secondhand retail shopping, and present our typology of three secondhand shopping orientations.

Values and Identities

While participants expressed a number of values, six key themes emerged. These take the form of positive/ negative value pairs: for example, our shoppers valued items that **were** made locally, and **were not** made in the third-world. These value pairs are presented in Table 2. The values expressed by our shoppers are not stable, but rather are negotiated, both across an individual's lifetime, and as practices come into conflict with ideals.

Lifetime Negotiations

The first negotiation is a departure from the values and practices of mainstream consumption. Many participants began shopping with their families. Some participants were drawn to thrift shopping as a practice to support popular "remix style." As Agnes explains: *"I used to subscribe to Seventeen Magazine. And I remember there was an article probably in '79, '80 I think, and it had like you know 'wacky ways to mix your clothes'… So I guess that article, I was like 14 or something, really kind of gave me, confirmed, supported my ideas of what to wear."* Many identify multiple roots. Axel began secondhand shopping to support his own version of remix style (inspired by *GQ Magazine*) while simultaneously acting on anti-consumerist values. Others began secondhand shopping for one reason, and continue for others. Kiera was a recreational thrifter in her teens, but realized the ethical value of her practices after reading the book *No Impact Man.*

Short Term Negotiations

Values also shift in response to different scenarios. For many shoppers, practices often fail to live up to ideals. Maura reported, *"I can't afford to buy everything locally made and I think it's pretty much impossible*." Additional conversations clarify that this is a question of budget and also source: like Kiera, Madeline, and Lucy, Maura reported that it is difficult or undesirable to find items such as bras, underwear, socks, and undershirts secondhand. This example is notable because two negative values come into conflict: the cultural taboo of buying certain (personal) items secondhand, and personal ideals against firsthand consumption (as also noted by [14]).

For Vivian, the information burden of ethical consumption is too severe: "*I'm not informed enough at that level to know, 'Oh if it says from this particular location that means blah blah blah."*" Kiera sees a solution in secondhand consumption: *"I feel really trapped by the idea of like always trying to look, like where were my clothes made, and so for me the easiest way for me to feel like I'm not contributing to maybe people being paid unfair wages and so forth is to buy things secondhand*."

The majority of the shoppers we interviewed placed limits on their consumption. For Maura, "*my general rule is, for every piece I bring in, something else has to go out*." Some, like Ruth, also guard against accumulation: "*I do a big spring cleaning… it's sort of cathartic.*" These restrictions may conflict with other values. Maura tries to limit the amount of clothing she owns, but worries about donation: "*If I get rid of it, it has the potential of going into a landfill, so that sort of bucks up against this waste issue, right?"* While giving items to friends and family directly enhances the likelihood they will be used, this is not always possible.

Value pair	Illustrative Example
Re-constructing consumption/ Embracing consumption myths	On swapping: *"it kind of separates the fun part out of it?...we have bodies and dressing our bodies is like a creative act."* "*You have a bad day and you feel like 'oh I need to buy something' I would fall prey to that more when I was younger."*
Ability to craft an authentic personal style/ Adherence to fashion authority	*"I'm more of a person who sees something in a magazine and then I'm like…how can I make it my own?"* *"I don't like the feeling of being told what I'm supposed to be into right now"*
Fixing or re-purposing/ Unrestrained buying	*"Why I'm so thrifty with clothes and I believe in reusing or repurposing stuff is because of [my Grandmother]. She never wasted anything."* *"With the rise of just really inexpensive fashion… people just buy a lot of stuff and get rid of it really quickly."*
Desire to limit possessions/ Disdain for constant consumption	*"If I'm going to bring in 5 new things, I have to get rid of at least three"* *"We're a consumer nation. We just keep buying stuff."*
Items made locally/ Made globally	*"Somebody got paid to make that here, and they had a job, and it was presumably at least minimum wage."* *"…a chain retailer that probably has their clothing sold in China or you know any sort of sweat shop in a random country."*
Items with meaning/ Generic items	*"I think of clothing a bit like I think of animals? You know they have their own life…they have their stories, they tell stories, they hold stories."* *"I definitely like having things that are more meaningful than just picking them up from say Forever 21"*

Table 2: Common value pairs of the secondhand community

Of course, secondhand shoppers continue to buy despite anti-consumption values. Many construct their consumption to allow intrinsic and social values to outweigh perceived costs. Maura takes pride in her ability to support local artists, *"local women, in particular."* Kiera similarly justifies buying a hat: "*It was pretty and I wanted it, and someone local made it…I rarely buy something that I don't need unless I'm contributing in a way that makes me feel, it's okay to be less frugal.*" Clothing swaps, where guests exchange items in the absence of currency, are more powerful contrasts to mainstream consumption. Lidiya describes taking her step-daughter, who often feels guilty spending money on clothing, to swap meets: *"This thing is*

Figure 1. "What gems, within the detritus."

like a total healing balm. This clothes swap. Because we go, and everything is free."

Some researchers suggest that when secondhand markets supplement rather than replace firsthand markets, they contribute to overconsumption [29]. Some experienced re-circulators believe that secondhand consumption may involve even *more* acquisition and dispossession than mainstream retail. Alicia, who makes her living selling secondhand, explains: *"We like have enough money to just keep buying, keep buying. And you'll get rid of stuff. You'll keep changing out your closet. And I'd be hard pressed to find somebody who has something in their closet that they've worn to bits…its kind of unfortunate in a way I feel but it does help my business."*

Negotiated fashion identities

Many participants cultivate signature styles, which often visually distinguish them from mainstream consumers. Madeline, who prefers clothing from the 1960s, is *"affectionately called by good friends the walking couch because of all the patterns that I wear."* Those with strong personal style derive intrinsic pleasure from the act of getting dressed. They also consider style a form of communication [21], both sending and receiving cues: Vivian describes, *"a visual impact of identifying your tribe."* Ruth appreciates "*when people are wearing certain brands that I like, and I know the ethics behind them."*

But style is not always stable. The concept of faceted identities suggests that individuals share different aspects of their selves in different contexts [11]. Many participants expressed faceted style identities. One obvious distinction is between clothing worn during and outside of work. Rachel maintains two separate wardrobes: vintage is *"just for fun."* Kiera will wear the same clothing for work and play, but explains, *"I'll wear an undershirt so that I can have a different top on, and I would take that undershirt off with the same top."* Such manipulations allow her to easily transition from one life context to another.

Maintaining faceted styles frustrates people to varying degrees. Axel, who goes to work *"in the shirt and tie and khaki pants and nice shoes"* would prefer to wear his quirky, vintage-driven style in all life contexts. But others derive pleasure in their ability to, as Lucy explains, *"be a chameleon."* Agnes describes her style as *"this anarchy dressing where anything goes,"* but does not mind dressing differently for work events: "*If everyone else is dressed like that I certainly feel like I fit in, and its comfortable, I wouldn't want to draw attention to myself."* Thus, some who identify primarily with alternative styles still pride in their ability to dress appropriately for mainstream roles.

Objects

The value of secondhand objects is far from static. Objects' values shift in relation to general cultural valuations, or the contextual needs of a buyer. Importantly, individual objects can acquire a nostalgic, transcendent quality, narrated through stories, that drastically enhances their value [22]. Secondhand objects often do not yield to "rational" choices about quality nor to simple price consciousness, but rather are priced through a personal and social evaluation of worth that extends far beyond the properties of the object itself.

Cultural valuation

Most objects must reach a certain age before they are considered "vintage" or "antique" [9]. While Agnes loves a particular style of Japanese spoon, she reported that it lacks market value because *"It's not old enough yet"* (she was quick to qualify that the spoon's young age does not decrease its value for her). Value is also determined by cultural trend. Jackson's success as a seller rests on his ability to find rare pieces, and also to keep on top of a changing market. Alicia searches for pieces cut in *"that retro silhouette that people go crazy over."*

Situational Need

An object's value is elastic in response to situational need. Needs may be practical, as in response to life changes; Ruth had to "*buy a whole new wardrobe*" to fit her new job. Valuation also changes based on emotional or psychological needs. Madeline described her "need" to find a new dress after landing a new DJ gig: *"I'll know I'm going to have a moment where I'm going to look at my closet and go like UH… if I have time and its in my budget I'm going to spend, you know, Thursday night before I go DJ…that will be my time that I'm going to go get that dress. And I'm going to go try my damndest to find that dress."*

The Transcendent Quality of Objects

As noted by [13, 27], objects gain value through the effort exerted in their acquisition. Due to this effort, secondhand consumption is often considered a practice that requires expertise [9]. Agnes's practice involves the act of literally digging (see Figure 1, left) for *"what gems, within the detritus."* Lucy prides on her ability to search and rescue objects from thrift stores and other sources. She showed off a fabric sample salvaged from her company's giveaway bin (see Figure 1, right). She explained, "*We have this sample closet where we keep a lot of the collaborative work…I pull things from those booths quite often, the giveaway bins, they throw away a lot of fabric so I'll bring it in."* This repurposing is a creative exercise as well as a statement

against waste. If Lucy hadn't rescued these fabrics, *"we probably would have just thrown those out."*

But, as secondhand objects acquire value through the effort required to find them, they may also derive value simply from being a part of the secondhand market. For example, if items are purchased from a local consigner, secondhand consumption can also cleanse poor manufacturing practices by essentially re-branding the pieces as local goods. As Axel explains, *"while I'm still buying the same clothing that may have been made in another country at least I know the money isn't going directly to that company, its going to a local business."* Ruth is similarly willing to purchase brands such as Juicy Couture secondhand that she would never consider firsthand—because she is practically and morally opposed to the price, and because she dislikes the conspicuous experience of the Juicy Couture retail space.

Because fashion objects may reflect the values of their designers [28], not all objects can be 'cleansed' through recirculation. The belt Kiera wears (see Figure 2, left) has a detachable buckle, which enables the wearer to utilize both belt and buckle on separate occasions. In contrast, another belt (see Figure 2, right) contains a buckle sewn on to the belt. While Kiera was initially drawn to the belt's aesthetics, she would never purchase this item because of its design. In this way, conspicuous consumption is *"told"* by the way different pieces are constructed; refusing to buy such pieces is a refusal to accept the values they represent. Other participants (including Alicia, Axel, and Lucy) expressed a similar sentiment through their refusal to buy items with obvious logos, even secondhand.

The sacred nature of gifts and inherited items is well understood [7]. Lucy showed off a sweater knitted by her grandmother, remarkable for both its quality and personal association: *"If I wear something of hers, it's just kind of honoring her."* Many participants described items that they would not part with, except possibly to close intimates. The logic underlying these evaluations is that a part of the owner is transferred to an object through use, and strangers would not recognize this value outside of the insider knowledge context that friends and family enjoy.

Yet, secondhand shoppers also find value in possessions touched by unknown others. In some cases, the ability to wonder and re-construct the relationship between an object and its former owner enhances the object's appeal. As Madeline explains, "*it will be a subconscious thought out of nowhere, like, 'I wonder where this piece of clothing was like summer of 1987. Where was this? Was it in a closet? Was it in another crazy girl's box who couldn't give her clothes away?*" Awareness of (and appreciation for) an unknown other is a common value supported through social interaction. Ruth describes how the story of a dress she purchased was shared, first between its previous owner and an employee, and later between that employee and Ruth:

Ruth: "*The other thing that's kind of cool on the back of it, it's got a Moonstone Garnet half-moon pendant? Left there on purpose by the lady who formerly owned it. And she's like, 'I want the next person to have this as well.' Because her husband gave it to her. And she left it with that dress."*

Researcher: "*How do you know that?"*

Ruth: "*The lady at the store*."

A final way that objects gain transcendent value is through collective negotiation. Kiera asked one researcher for advice *"as a woman"* (i.e., implicit insider) while trying on a shirt. Ruth will send her mother and sister text messages of items she is considering after trying them on.

Secondhand Sellers and the Construction of "Cool"

Many secondhand shoppers also rely on external experts whose sense of taste helps determine an object's value. Both sellers we interviewed, Jackson and Alicia, are acutely aware of this dependency, and work to convey a sense of taste that enhances the value of the objects they sell. On one hand, these sellers are valued for insider knowledge of their respective retail domains—contemporary fashion for Alicia, and vintage style for Jackson. One fascinating feature of the secondhand market is the degree that brands acquire and lose value over time [11]. Thus, while brand is the traditional authority that determines whether something is "cool," its power diminishes in secondhand retail. Instead, discernment is in the hands of retailers, who act as intermediaries between the totality of secondhand goods and those that reach curated markets. Sellers vet goods in various ways. Jackson does "*market research*" to verify the authenticity of the items he buys, like by learning the "*tells*" of counterfeit pieces. Alicia conducts her research while shopping, evaluating the value of different brands via their performance in secondhand marketplaces such as eBay. Sellers not only value items, but communicate value to potential buyers. This process requires establishing trust, which Jackson claims is crucial in online vintage markets, as buyers must convey and sellers must accept the non-ideal condition of items that still hold value.

An object may be made "cool" by the "cool" person carrying it [31]. Secondhand sellers not only determine

Figure 2. Kiera's belt (left) and a lesser model (right)

whether an object has value, but actively contribute to its value through association with their *personal brand*. Both Jackson and Alicia manage their personal brand to convey a valued sense of taste. For example, both sell on eBay and also maintain a "*professional*" presence on platforms like Pinterst and Instagram. Jackson's Instagram feed shows a rare vintage bike jersey he is extremely proud of finding, but has no intention of selling. Yet, the photo generates market value as testament to Jackson's ability to find and discern what is "cool." Both Jackson and Alicia experimented with the use of digital logos or physical tags to convey their personal brand.

Places

Secondhand shopping is a cultural practice deeply rooted in place. Place is evident in cultural norms regarding secondhand consumption, the influence of geography, and the deliberate design and construction of retail spaces. Many interviewees noted that cultural norms regarding secondhand shopping are changing. This frustrates many who consider theirs a lifelong practice. Agnes, for example, complained that some of her favorite shops are now *"picked over"* by college girls. Cultural norms regarding secondhand consumption are also a function of unique geographies. Vivian speaks to both dependencies:

"I always did consignment shopping, ever since high school. And I would say that, sort of like online dating was just a completely stigmatized thing when it first started and then it would be the cool thing to do, consignment shopping on the East coast was something you maybe did but never would admit to. And here, the friends I got when I came here they loved it as much as I did."

Participants also revealed geographic detriments of "cool." According to Kiera, *"In Colorado I think I probably felt a little more comfortable, you know with the sporty, outdoors-y look? But here kind of that burning man gypsy look… that part of me feels more accepted in California.*" While Kiera appreciates how geography enables her to express multiple facets of her style identity, Lidiya sees the practical benefit of local style, noting that it's easy to find clothes because *"all the women here dress like me."* But Agnes describes the Berkeley Baby Boomer aesthetic as "*shapeless, and it looks like you've given up and don't care any more,"* and is irritated by how such clothing clogs the supply line of her favorite store.

Figure 3. Vintage visual merchandising.

Online and offline secondhand spaces are constructed to impart a desired experience, such as through visual merchandising [25]. We observed many such constructions in our ethnographic exploration of retail spaces. For example, color (e.g. vintage paint), material (e.g. racks constructed from old drain pipes), and curation (e.g. by decade) contribute to the "mood" of a space (see Figure 3).

Participants responded to visual cues and noted other sensory experiences. Alicia explained that the feel of a dress is as important as its aesthetic appeal; she is personally drawn to items that feel "*like silk*." Music in a retail setting conveys a sense of culture. Maura complimented a store's soundtrack, while Kiera hummed as she shopped. Madeline loves the "*familiar*" smell of Mars Vintage; Lucy is drawn to items that smell "*like an antique cedar chest*." These sensory experiences are not uniformly positive. There are some fabrics Agnes refuses to buy secondhand because of an unpleasant odor that persists "*no matter how many times you wash it*."

The design of retail environments is also linked to a set of enacted community norms. In "thrift" spaces like Salvation Army and Goodwill, we observed multiple interviewees knock clothing off hangers and then either leave the items on the ground, or throw them carelessly on a nearby rack. In contrast, shoppers who took us to upscale consignment shops or vintage boutiques often explicitly requested that we respect the norms of those places. For example, both Madeline and Lidiya asked us to seek permission from shop employees prior to photographing their space. Finally, the physical design of retail environments affords a set of behaviors. This is most evident in digital spaces; eBay, for example, is currently designed to maximize support for standard keyword search, while platforms such as Etsy and Pinterest make it at least as easy to browse. Physical spaces also support different behaviors, in ways explored below.

Shopping Orientations

As we consider the findings reported above, we identify three primary secondhand fashion orientations: perfection seeking, casual curiosity, and digging.

Perfection seeking shoppers value individuality, and are driven to support a unique personal style. Their orientation is inward, e.g., *it's perfect for **me***; as such, they desire a relatively low level of social interaction during shopping. But, perfection seekers do enjoy sharing their finds with a like-minded community, either by wearing items or through gifting. Offline, these preferences lead perfection seekers to spaces such as vintage stores, boutiques, and, less frequently, medium-sized consignment shops. Online, perfection seeking is facilitated by spaces with extensive

search functionality. For example, two perfection seekers used eBay to construct advanced queries and set alerts for new items that fit their exact specifications. For these shoppers, the best items are puzzle pieces that fit perfectly with a unique personal brand. Disappointment takes the form of a promising item that does not quite fit, or a small hole in an otherwise perfect piece.

Casually curious shoppers value social interaction and storytelling. Their orientation is shared, e.g. ***we*** *are having fun*. They seek interaction with friends (including co-shoppers and via technologies like cell phones), other shoppers, and employees. Casually curious shoppers are passionate about the narratives of pieces, as these carry emotional traces from previous owners. Offline, spaces such as medium-sized consignment shops and large thrift stores (with friends) best support their preferences. Online, they are drawn to visually rich and even interactive websites such as Etsy, Pinterest, and Instagram. These sites are valued for inspiration and user experience above their ability to connect buyers with goods; note that only one of the three examples above is an eCommerce platform. For these shoppers, the most appealing items are those with real or invented stories. Disappointment manifests in a poor experience overall.

The *digging* orientation characterizes the treasure hunters driven to find spectacular things. Their orientation is outward, e.g. *I found* ***it***. While social interaction during shopping minimizes their engagement with items and efficiency at finding gems, they do enjoy showing off their pieces through social sharing (many of our diggers are passionate users of Instagram). Offline, large thrift stores are the best places for diggers to find gems. Online, diggers are committed explorers of retail spaces. They both search and browse inventories extensively to become familiar with the full range of possibilities prior to making a purchase. Favored items are those salvaged through cleaning or repair. Diggers agonize over missing finds, and wonder about items "*passed over*" during earlier trips.

Unlike researchers such as [1, 6, 29], who believe that consumers fall into one or potentially two orientations or groups, we observe that these orientations are highly fluid. For example, many of our interviewees grappled with the question, *"Do you prefer to shop alone, or with other people?*" Vivian, for example, likes to shop with other people *"because its fun."* She simultaneously noted, *"I don't tend to prefer to go with people because it's slower."* These statements are not contradictions, but demonstrate how different shopping orientations are experienced at different times. When shopping as a compromiser, Vivian delights in social aspects of shopping, in particular the degree that she is respected for her personal taste. When shopping as a digger, Vivian finds joy in "*the treasure hunt aspect, the lottery aspect."* In order to enact this orientation effectively, she must be *"laser focused"* and thus alone. Like our findings on faceted styles, these observations support the faceted or flexible nature of identity (e.g., [11]), and emphasize the need to account for fluidity in design.

The invested orientations advanced by [29] included critical reacquierers, who were motivated by a set of values, and experiential reacquierers, motivated by "positive experiential or aesthetic qualities." To some extent, our orientations can be seen as three subsets of the latter. All of our shoppers are driven by some values, though these were less important overall than *experiences*. Importantly, values are sometimes compromised in a way that orientations are not. When Kiera decided to buy her hat, she prioritized her desire for that hat (and to a lesser extent her desire to support local artists) over her value of anti-consumerism. This decision carries moral weight. When Vivian acts as a digger or a compromiser, she is simply enacting a different aspect of herself, in the absence of critical evaluation.

DISCUSSIONS OF DESIGN

Key work by [27] and later [13] studied how the properties of objects can support sustainable design. Pierce & Paulos similarly focused their study on objects [29], but noted that participants "emphasized ways in which the process of reacquiring was an important, intrinsically valuable experience." We build on this work by taking a perspective that emphasizes experiences first, and objects second. Our investigation was conducted specifically with a future goal to design new interactions that better support people's actual practices. Below, we offer recommendations for designing secondhand experiences to support the practices observed.

Of the attachment categories explored by Odom et al., *histories*, *augmentation*, and *perceived durability* are most relevant here [27]. Regarding *histories,* we note that in secondhand fashion, attachment is formed not only through personal history, but through appreciation of an item's previous existence and owner. Lucy values her grandmother's clothing because it carries traces of her grandmother. Madeline derives similar pleasure from imagining previous owners of her dresses. We also find *augmentation* to support attachment. Recirculators like Axel and Lucy repair or embellish clothing, a process that personalizes and renews these pieces. We observe two distinct types of *durability.* The eBay sellers in our study, Alicia and Jackson, scrutinize items they buy to determine whether their quality and condition offsets their age. By communicating wear and tear through photos and text, they enable potential buyers to replicate this valuation. Buyers and sellers also assess the durability of a piece; as noted in our findings, this value may be individually, jointly, or culturally constructed.

Gegenbauer and Huang identify three additional categories of attachment [13]. Attachment by *earned functionality* occurs when an object is valued "because of the time and effort spent becoming familiar with it" [13]. This category is manifest in our diggers, whose objects acquire value through pursuit. We depart from [13] on a second point: they characterize perceived worth as "of a logical and

pragmatic nature, rather than one that is strongly emotional." With the exception of sellers, we find the opposite. Ruth's attachment to her dress with the half moon pendent, for example, is entirely sentimental. Furthermore, Agnes's qualification that flatware that does not hold market value as an antique still holds value *to her* suggests a conscious departure from economic valuation. Thus, the *experienced worth* of objects is subjective and shifting.

Pierce and Paulos offer a number of design "opportunity areas" based on their findings [29]; we re-assert two of these. *Recoding the reacquired and reacquiring* recognizes that many objects are disposed of while some of their value remains. This is a key frustration for Lucy, who repurposes items salvaged from a retailer's giveaway bin, and is expressed in general terms by many of our participants. *Simplifying dispossession* [29] suggests that it should be easier to sell, gift, or donate goods. Participants including Maura described their angst about donating clothing that may be subsequently thrown out. Adding to these reflections, we propose the following suggestions for designing secondhand experiences:

Support the need for pleasure

Observing the same practices performed by our diggers, Pierce and Paulos recognize that pleasure is found in the acquisition experience itself, and caution against over-simplifying reacquisition [29]. We also believe that technology should actively enhance the reacquisition process, like by providing complex sensory experiences around objects and atmospheres. In the near future, tactile feedback could convey the feel of a dress. Further out, olfactory information could be linked to individual objects, either by conveying an actual scent (e.g., to help Agnes avoid certain items) or an ideal scent designed to evoke powerful associations (e.g., Lucy's antique cedar chest). In a similar vein, researchers find that beautiful objects bring pleasure and are more likely to be reused [27, 28]. Designers might provoke users to consider the inherent beauty of objects first, and later to identify a function that fits a particular form.

Observing the practices preferred by our casually curious shoppers, we also understand that pleasure comes from social interaction. Online and offline spaces serving these shoppers should be constructed as social spaces where each user may establish their identity for that particular sociotechnical context, whether through use of a profile page, avatar, or other means.

Support the need for storytelling

Shoppers expressing our casually curious orientation are also inspired by narrative and history. But in secondhand consumption, narrated histories are works in progress. New owners add to existing histories, and determine the salient stories from an object's past. For Leah's pendant narrative, its previous owners' wedding is key historical value; for Tara, discovering the spoons is a narrative that affirms the act of digging itself. This narrative reconstruction is similar to the recoding described by [29], where context helps recode value into 'junk.' To allow narrative reconstruction, design should support rich and varied interpretations (e.g., by augmenting standardized product listing, which are necessary to support search, with human curated tags). To support collective storytelling, design should integrate social and commerce spaces (e.g., by linking spaces for public and private dialogue to a product page). Researchers working in collaboration with Oxfam charity conducted one study where they tagged donated items with RFID and QR codes, allowing shoppers to access "the tales of things" via their Smartphones [8]. These could also be used to let sellers or donators know when their item finds a new owner, thus alleviating concerns expressed by participants like Maura. Though associated privacy implications would need to be carefully considered, those who sell and donate goods may also enjoy seeing how their old items earn new lives. Additionally, HCI design could support storytelling by linking historical data from secondhand items with storytelling applications like Storify and Storehouse to allow users to write items interactive, shareable histories.

Support negotiations around value and durability

In secondhand consumption, two types of gatekeepers construct the value and meaning of items [20]. Human sellers in both online- and offline environments curate 'cool.' Online, algorithms act as gatekeepers through the ordering of search results and curated recommender sites. Alicia and Jackson are far better recommenders than algorithmic systems, and occasionally buy pieces with certain sellers in mind. Effective C2C platforms should offer sellers a place to establish their taste, like through the opportunity to show off goods that both are and are not for sale. Such an infrastructure would also enable recirculates such as Lucy to show off how items that may appear unsalvageable are effectively transformed (e.g., Lucy's planned reconstruction of the shirt in Figure 1). This use case would support Lucy's need for creative individual expression, while also inspiring the larger community to "*recode*" similar goods. Algorithmic solutions might be constructed to match buyers and sellers, or support search and/or browse functionality allowing users to discover items tagged by, for example, decade or mood.

LIMITATIONS AND FUTURE WORK

We conducted 13 ethnographic interviews with secondhand shoppers in the San Francisco Bay Area. Our geographic scope is a limitation of this research, especially in light of our findings about regional culture and style. Comparative studies conducted in other geographies is an area for future research. Recirculation is a cyclical process that involves the acquisition, ownership, and disposal of goods. While we were able to examine acquisition and disposal by watching our participants buying and selling secondhand clothing, these practices were observed over a single day. Future research should examine long-term recirculation behaviors and the practices that unfold over the course of an

individual's life, as styles, identities, and values change. Finally, our focus was on shoppers driven by values or identity practices; future HCI research might examine the practices of shoppers driven by economic necessity.

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REFERENCES

1. Ailawadi, K., Neslin, S., Luan, J. and Taylor, G. Does retailer CSR enhance behavioral loyalty? A case for benefit segmentation. *International Journal of Research and Marketing, 31,* 2 (2013), 156-167.
2. Albinsson, P. and Perera, Y. Alternative marketplaces in the 21st century: Building community through sharing events. *Jour. of Consumer Behavior, 11* (2012), 303-315.
3. Bardhi, F. and Arnould, E. Thrift shopping: Combining utilitarian thrift and hedonic treat benefits. *Journal of Consumer Behaviour, 4,* 4 (2005), 1572-0817.
4. Bosch, L. and Kanis, M. Encouraging sustainable fashion with a playful recycling system. *Proc. BCS-HCI 2013,* British Computer Society (2013), Article No. 46.
5. Braun, V. and Clarke, V. Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 2 (2006), 77-101.
6. Cervellon, M., Carey, L. and Harms, T. Something old, something used: Determinants of women's purchase of vintage fashion vs second-hand fashion. *International Journal of Retail & Distribution Management, 40,* 12 (2012), 956-974.
7. Cheal, D. "Showing them you love them": Gift giving and the dialectic of intimacy. *The Sociological Review, 35,* 1 (1987), 150-169.
8. deJode, M., Barthel, R., Rogers, J., Karpovich, A., Hudson-Smith, A., Quigley, M. and Speed, C. Enhancing the 'second-hand' retail experience with digital object memories. *Proc. Ubicomp* (2012), 451-460.
9. Duffy, K., Hewer, P. and Wilson, J. 'Granny would be proud': On the labours of doing vintage, practices and emergent socialities. *Advances in Consumer Research, 40* (2012), 519-525.
10. eBay beats expectations with $11B in revenue in 2011. http://venturebeat.com/2012/01/19/ebay-q4-earnings/
11. Farnham, S.D. and Churchill, E.F. Faceted identity, faceted lives: Social and technical issues with being yourself online. *Proceedings of CSCW* (2011), 359-368.
12. Gegenbauer, S. and Huang, E. Inspiring the design of longer-loved electronics through an understanding of personal attachment. *Proc. DIS* (2012), 635-644.
13. Gegenbauer, S. and Huang, E. iPods, Ataris, and Polaroids: A personal inventories study of out-of-use electronics in Swiss households. *Proc. Ubicomp* (2012), 531-534.
14. Gregson, N & Crewe, L. Second-hand cultures. *Journal of Design History, 18,* 2 (2005), 214-216.
15. Guiot, D. and Roux, D. A second-hand shoppers' motivation scale: Antecedents, consequences, and implications for retailers. *Journal of Retailing, 86,* 4 (2010), 389-399.
16. Harrison, S. and Dourish, P. Re-placing space: The roles of place and space in collaborative systems. *Proc. CSCW* (1996) 67-76.
17. Hiller-Connell, K. Exploring consumers' perceptions of eco-conscious apparel acquisition behaviors. *Social Responsibility Journal, 7,* 1 (2011), 61-73.
18. Huh, J., Nam, K. and Sharma, N. Finding the lost treasure: Understanding reuse of used computing devices. *Proc. CHI* (2010), 1975-1884.
19. Industry Statistics & Trends. http://www.narts.org/i4a/pages/index.cfm?pageid=3285
20. Juhlin, O. and Zhang, Unpacking social interaction that make us adore: On the aesthetics of mobile phones as shopping items. *Proc. MobileHCI* (2011), 241-250.
21. Juhlin, O., Zhang, Y., Sundbor, C. and Fernaeus, Y. Fashion shape switching: Explorations in outfit-centric design. *Proc. CHI* (2013), 1353-1362.
22. Jung, H., Barzdell, S., Blevis, E., Pierce, J. & Stolterman, E. (2011). How deep is your love: Deep narratives of ensoulment and heirloom status. *Int. J. Design, 5,* 1, 59-71.
23. McCracken, G.D. *Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods and Activities*. Indiana University Press, 1990.
24. Milligan, M. Interaction past and potential: The social construction of place attachment. *Symbolic Interaction, 21,* 1 (1998), 1-33.
25. Nobbs, K., McColl, J., Shearer, L., Canning, C. & McBride, L. An exploratory study into the strategic significance of visual merchandising: The case of fashion retailing. In Pedroni, M., Ed., *From Production To Consumption*. Oxford: Interdisciplinary Press, 2013.
26. Odom, W. Personal inventories: toward durable human-product relationships. *CHI EA* (2008), 3777-3782.
27. Odom, W., Pierce, J., Stolterman, E. and Blevis, E. Understanding why we preserve some things and discard others in the context of interaction design. *Proc. CHI* (2009), 1053-1062.
28. Pan, Y. and Blevis, E. Fashion thinking: Lessons from fashion and sustainable interaction design, concepts and issues. *Proc. DIS* (2014), 1105-1014.
29. Pierce, J. and Paulos, E. Second-hand interactions: Investigating reacquisition and dispossession practices around domestic objects. *Proc. CHI* (2011), 2385-2394.
30. Portigal, S. *Interviewing Users.* New York: Rosenfeld Media, 2013.
31. Raptis, D., Kjeldskov, J. and Skov, M. Understanding 'cool' in Human-Computer Interaction research and design. *Proc. of CHI* (2013), 53-62.