

# Community Commerce: Facilitating Trust in Mom-to-Mom Sale Groups on Facebook

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## ABSTRACT

Consumers are turning to Facebook Groups to buy and sell with strangers in their local communities. This trend is counter-intuitive given Facebook's lack of conventional e-commerce features, such as sophisticated search engines and reputation systems. We interviewed 18 members of two Mom-to-Mom Facebook sale groups. Despite a lack of commerce tools, members perceived sale groups as an easy-to-use way to quickly and conveniently buy and sell. Most important to members was that the groups felt safe and trustworthy. Drawing on these insights, we contribute a novel framing, *community commerce*, which explains the trust mechanisms that enable transactions between strangers in some groups. Community commerce fosters trust through (a) exclusive membership to a closed group, (b) regulation and sanctioning of behavior at the admin, member, and group level, and (c) a shared group identity or perceived similarity (though, surprisingly, not through social bonding). We discuss how community commerce affords unique and sometimes superior trust assurances and propose design implications for platforms hoping to foster trust between members who buy, sell, or share amongst themselves.

## Author Keywords

Consumer-to-consumer; e-commerce; online communities; community commerce; trust; Facebook

## ACM Classification Keywords

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

## INTRODUCTION

For over 20 years, a cornerstone of eBay's success has been the feedback and reputation system that enables trust between buyers and sellers [16,35,59]. More recently, that same kind of reputation system-based trust undergirds many sharing economy applications. Platforms like Airbnb, Uber, TaskRabbit, and Upwork all rely on reputation systems to

promote trust, to enable the exchange of goods and services among strangers [75]. From these successes, intuition would suggest that consumer-to-consumer (C2C) transactions online could not succeed without the ability to vet and review buyers and sellers.

In this paper, we investigate why buying and selling on some Facebook sale groups seems to succeed despite the lack of traditional e-commerce tools. Facebook sale group features were launched in 2015 to support closed groups of individuals from the same geographic area who buy, sell, and trade goods among themselves [55]. However, Facebook sale groups do not offer standard C2C e-commerce features such as sophisticated product search engines and filtering. E-commerce trust assurances are also noticeably absent from the platform—Facebook does not offer feedback or reputation systems, conflict resolution systems, fraud detection, escrow payment services, or consumer protection programs that offer money-back guarantees for failed transactions.

We focus on how trust—a necessary mechanism in e-commerce—can be established despite this lack of traditional e-commerce assurances. We conducted semi-structured interviews with 18 members of two active Mom-to-Mom (M2M) Facebook sale groups based in the suburbs of a large Midwestern city. M2M sale groups, made up primarily of mothers who buy and sell gently-used children's clothing and toys, were chosen for study because they are one of the most common and publicized types of sale groups on Facebook [1,4,30,84] and because they build on offline traditions like rummage sales and church swaps.

We found that members liked transacting through M2M sale groups because they were perceived as an easy-to-use way to quickly and conveniently buy and sell. Most important to members, however, was that the groups felt safe and trustworthy. Indeed, members perceived M2M sale groups as *safer* than other, more established, platforms such as eBay and Craigslist. We contribute a novel framing, which we call *community commerce*, to explain the trust mechanisms enabling transactions between members of these M2M sale groups, absent traditional e-commerce assurances. For these groups, *community commerce* fosters trust between buyers and sellers through (a) exclusive membership to a closed group, (b) the regulation and sanctioning of behavior at the admin, member, and group level, and (c) a shared group identity or perceived similarity based on commonalities such

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as life-stage and geographic location. Perhaps surprisingly, social bonding and relationship building is not necessary for community commerce to build trust and was not common among the people we interviewed.

We discuss how community commerce can afford members unique and sometimes superior trust assurances in comparison to traditional C2C e-commerce tools. We argue that in community commerce, successful, sustained membership is perceived as a strong signal of an individual's trustworthiness. Further, we argue that membership is more difficult to fake or manipulate, making it a more warranted [69] signal of trust than reputation system ratings. These findings may inform other platforms aiming to foster trust between transacting members, though we also identify contexts where the community commerce model may not apply. We also discuss the potential risks for discrimination when a centralized admin decides who is and who is not trustworthy enough to join a group. We conclude with a proposal for how a large C2C platform, such as eBay, can implement community commerce among its own members.

## RELATED WORK

### *Commerce Requires Trust*

Transactions between buyers and sellers necessarily involve risk. In traditional commerce (see Table 1 for definitions), consumers perceive risks associated with financial loss and product performance [32], product safety [32,68], and time loss [68]. E-commerce presents additional risks. Since the early days of business-to-consumer (B2C) e-commerce in the 1990's, online shoppers have worried about being deceived by inaccurate product descriptions or fraudulent sellers, not being able to physically inspect products, not being able to easily contact customer service, and becoming victim to privacy or payment security issues [50]. As such, consumers are more likely to shop online for products perceived as low in purchase risk [44]. More recent research has demonstrated that online shoppers continue to worry about product performance, financial loss, time loss, and feelings of general disappointment with their purchase [29].

The risks presented by online shopping explain the necessity of establishing trust between buyers and sellers online. Trust in an e-commerce context has been defined as a set of beliefs regarding the seller's (a) integrity or honesty, (b) ability or competence, and (c) benevolence or general goodwill toward the buyer [27]. These dimensions work to create a feeling of confidence that the other party can be trusted [27]. Trust in an online vendor predicts intent to use that online vendor [2,27,54], as well as actual frequency of use [54]. When deciding whether to use an online vendor, trust has been shown to be as influential as the perceived usability of the vendor's website [2,27,54].

### *Trust in Consumer-to-Consumer E-Commerce*

Unlike B2C e-commerce, C2C e-commerce involves buying and selling directly between individuals. Brokered C2C e-commerce can take place on auction sites, such as eBay,

<b>Traditional commerce</b>	Brick and mortar, business-to-consumer (Barnes & Nobel)
<b>B2C e-commerce</b>	Online, business-to-consumer (Amazon)
<b>C2C e-commerce</b>	Online, consumer-to-consumer
▪ <b>Brokered</b>	3 <sup>rd</sup> party broker (eBay)
▪ <b>Unbrokered</b>	No 3 <sup>rd</sup> party broker (Craigslist)

**Table 1. Definition of business models.**

while unbrokered C2C can take place on discussion forums, online communities, email groups, and online classified listings, such as Craigslist [14,46]. In addition to the risks associated with online shopping, C2C e-commerce poses its own unique concerns. C2C auction sites, such as eBay, have been vulnerable to fraudulent bid activity designed to drive up auction prices [10]. Online classifieds sites, such as Craigslist, have been used to sell illegal, stolen, and recalled products [6,13,53], to run advance-payment scams [26,76], and, though very rarely, to commit violent crimes against unsuspecting buyers [53].

Several factors have been shown to influence buyers' trust in C2C e-commerce generally, including perceived website quality, third-party seals of approval, and the fear of information asymmetry favoring the seller [33,34]. Research on C2C commerce through USENET newsgroups and auction sites revealed that buyers' most important criteria for selecting sellers were price and the trustworthiness of the seller, where the seller's reputation was the most important factor in determining their trustworthiness [74]. In a randomized field experiment on eBay, sellers with established reputations had a higher probability of sale on matched items, and higher prices [61]. However, attitudes specifically about buying and selling differ. Trust and low perceived risk with sellers correlate with more positive attitudes about buying through C2C [45]. On the other hand, attitudes about selling are not influenced by the perceived risks posed by buyers (i.e., sellers generally don't worry that buyers won't pay) [45].

Trust in a C2C platform also predicts higher user satisfaction [47], while mutual trust among users can positively influence trust and loyalty in the actual platform [9]. In the case of brokered C2C, some have argued that buyers, sellers, and the corporation (e.g., eBay) comprise a "community (of commerce)," which creates an expectation for ethical behavior and therefore enhances trust [8]. Other work investigating platform preference (eBay or Craigslist) revealed that consumers felt eBay's institutional assurances—such as their consumer protection policies—made the platform feel safer, while Craigslist's face-to-face transactions raised safety concerns [52].

### *Designing for Trust*

The HCI community has long been concerned with designing for trust in e-commerce [12,19,51,66]. Trust is considered an important component of the consumer's user experience

[72]. Prior work has explored how online vendors signal trust to consumers [65], how the use of photography can affect an online vendor's perceived trustworthiness [63,64,73], and how to best measure an online shop's trustworthiness [67]. Designing for trust in C2C platforms has focused more on reputation systems, designed to help the user identify trustworthy parties, to incentivize good behavior, and to deter bad actors [35,59]. Other work has framed the effectiveness of reputation systems within warranting theory, where cues that are more difficult for sellers to manipulate, such as feedback scores, are perceived as more informative and trustworthy [69]. However, reputation systems are not perfect; feedback is often the product of reciprocation and/or retaliation between buyers and sellers [60], feedback can be manipulated by sellers to boost their ratings [36,70], and reviews are sometimes copied across many sellers [15].

Trust is also important in the design of platforms that support C2C sharing [39,48]. For example, in the sharing economy, establishing trust is essential for face-to-face interactions between strangers in someone's home or car [7]. Prior work explored how Airbnb's design features can help reduce uncertainty and enhance trust between hosts and guests [21,40]. Robust reputation systems have also been shown to foster reciprocity and trust between members of a sharing economy community [43]. Other work has shown that perceived dissimilarity between members of a single-parents group on a local sharing economy platform inhibited trust and participation in the group [41].

Prior work has yet to investigate an emerging form of unbrokered C2C e-commerce—groups of individuals who buy and sell amongst themselves through social media platforms, such as Facebook sale groups. While product transactions have taken place since early Internet adoption on sites like Usenet and the WELL [62], the scale of these transactions has grown dramatically and is no longer confined to early Internet adopters. The M2M context studied here offers insights into a particular demographic of consumers who have been heavily studied in marketing contexts but not in C2C contexts. This research begins to fill this gap.

## **METHOD**

We conducted an interview study with members of two M2M Facebook sale groups. Prior to recruiting, the first author joined, observed, and participated in one of the groups for approximately 6 months, from August, 2015 to February, 2016. Once interviews began, the lead author joined and observed three additional groups (i.e., groups mentioned by interviewees) for approximately 5 months (from February-June, 2016). During these periods of participant observation, the lead author regularly took notes of member interactions. This observational research informed the study's interview questions as well as contributed to the overall understanding of how M2M sale groups work.

We recruited participants by posting a message to two different M2M Facebook sale groups (recruitment messages

were posted with the group admin's permission). The two groups selected were based in the suburbs of a large Midwestern city and were selected because the groups were active with regular interaction between members and a critical mass of communication and members [38]. At the time of the study, the two groups reported 3,715 members (with 1 admin) and 8,144 members (with 3 admins) respectively. The geographic territories of the two groups—as indicated by their official Facebook group names—substantially overlapped (sharing 4 out of 5 towns) and spanned approximately 18 miles between its farthest points. Those towns ranged in population from roughly 6,000 to 95,000 residents, representing a total population of approximately 260,000. According to Census Bureau figures, the population of these towns ranged between 72% to 94% white, with a median household income range from approximately \$70K to \$94K. More detailed information about the specific towns and groups is intentionally omitted in order to protect the privacy of participants.

## **Procedure**

We conducted semi-structured interviews between February and June 2016. Interviews lasted on average 53 minutes and ranged from 39 to 65 minutes. We conducted interviews until we reached data saturation. In total we conducted 18 interviews (1 via phone, 17 in-person) with 10 participants from the first group and 8 participants from the second group. Participants were provided a copy of a consent form.

Participants were first asked about their Facebook use (e.g., when they joined the site, the number of groups they belong to). Participants were then asked about how Mom-2-Mom sale groups work and about any particular favorite (or disliked) groups. Next, participants were asked to describe their experiences buying and selling products through M2M sale groups. Finally, participants were asked how their experience with M2M sale groups compared to their experiences with other sites like eBay or Craigslist. The interviews concluded with a short paper-based demographics survey. Participants were compensated with a \$25 gift card. The authors' Institutional Review Board determined that the study was exempt.

We audio recorded the interviews and then transcribed them using a transcription service. We analyzed the transcripts using an inductive approach to identify themes and develop codes. The first author read through all transcripts to identify high level themes. Then, four of the 18 transcripts were coded with those themes in mind to develop a more comprehensive list of 62 codes. A fifth interview transcript was then coded independently by two coders, who discussed and refined the codebook. Finally, a sixth interview was coded independently by the same two coders with a resulting inter-rater reliability Fleiss Kappa of .71, demonstrating sufficient agreement between coders [24,42]. The full corpus of interview transcripts was coded using ATLAS.ti. The two coders independently coded nine transcripts and then reviewed the coding of the other nine transcripts.

All 18 participants were female and on average 35 years old (ranging from 27-53 years). The majority (56%) of participants indicated that they worked outside of the home, while 33% were stay-at-home moms. All participants were married or living with a partner. One participant self-identified as black or African American; the rest self-identified as white or Caucasian. As a result, this study oversamples white Americans, which according to US Census data only represent 62% of the US population [81]. Participants also reported a higher household income than the national median household income of \$55,775 [86]; 89% of participants reported a household income greater than \$50K per year. See Table 2 for additional demographics.

Participants were active Facebook users with a median of 9 years on the platform (ranging from 5-13 years), averaging about 368 Facebook friends. Participants indicated they were members of a median of 7 Facebook sale groups (ranging from 2-30 groups), with a median of 4 groups specifically being M2M sale groups (ranging from 1-20 groups). Two participants identified themselves as both members and admins of M2M sale groups. On average, participants were members of the M2M sale group (from which they were recruited) for approximately 14 months but membership ranged from 2 to 24 months.

### How Facebook Sale Groups Work

We begin with a general description of how Facebook sale groups work, based on both group observation and interview data. Facebook Groups launched in 2004 to provide a private space for small groups of friends to interact [22]. Eleven years later, one of the most common types of Groups on Facebook are “buy, sell, trade” groups [55] (also known as “sale groups”). Sale group members typically live in the same geographic area. The groups are managed by one or several volunteer admins and their product focus can vary from generic “online garage sale” groups to “guy stuff” groups and “antiques/collectibles” sale groups. In 2015, Facebook launched features for creating sale posts and flagging products as “sold” or “available” [55]. As of 2016, Facebook does not offer common C2C e-commerce tools, such as a sophisticated product search engine, reputation and feedback systems, or consumer protection policies.

In order to participate in most Facebook sale groups, members must request to join; group admins determine who can and cannot join. Members can participate as both buyers and sellers (for clarity, we refer to members as buyers when they are describing their experiences buying and vice versa for sellers/selling). The selling process begins by creating a sale post with a price, photo, and description of the product. Facebook provides a standard sale post form for groups set to “buy, sell, trade”. Otherwise, sale posts are created using discussion posts or, more rarely, by posting to a group’s photo albums, which represent product categories. Sellers use a variety of acronyms in their sale posts (see Table 3). Sales posts are typically tagged as “PPU” (Porch Pickup), meaning the seller will leave the product on their front porch

		Participants (N=18)	US Population
<b>Education</b>	High School	11%	30%
	Associates/Trade	28%	9%
	Bachelor’s	39%	19%
	Master’s or above	22%	11%
<b>Household Income</b>	< \$25K	0%	22%
	\$25-49K	11%	23%
	\$50-74K	16%	17%
	\$75-99K	28%	12%
	\$100-\$149K	28%	14%
> \$150K	17%	12%	

**Table 2. Additional participant demographics and US Census data for education [83] and income [84].**

to be picked up by the buyer, who will leave payment under the door mat. It is less common for members to meet face-to-face, though exceptions are made for larger or more expensive products.

New sale posts are either pushed to a buyer’s phone (depending on a user’s Facebook settings) and/or are displayed within a buyer’s Facebook News Feed. Sale posts are also visible on the Facebook Group’s main page, though buyers reported rarely visiting the page directly. Buyers also reported that they rarely used the Facebook Group’s search bar to look for products. When a buyer wants to purchase a product, they comment on the sale post with “int” or “interested.” This creates a soft agreement between the buyer and seller. Group members indicated a strong norm that sellers will sell to the first buyer who responds. Bidding (above the advertised price) is not allowed, nor is arranging sales through private messaging. Buyers and sellers use Facebook Instant Messenger to address product questions, to arrange a pick-up time, and to share the seller’s address. Once these details are confirmed, sellers typically comment on the sale post that the sale is “pending” or “pending pick-up.” Occasionally, a buyer will change their mind after learning more about the product through private message, in which case the seller will proceed to the next buyer who responded or will comment “available” to solicit new potential buyers.

Members indicated several motivations for participating in M2M sale groups. Buyers were mainly interested in finding good deals on gently used children’s gear. Sellers were mainly motivated to declutter their homes and recoup some of the money originally spent on their children’s items. The money earned selling was commonly used to purchase items from other members. Some members cited sustainability motivations for buying and selling used goods.

### RESULTS

We first describe the perceived risks of using M2M sale groups, followed by a description of the platform features that were most salient to participants. We then report on themes of safety and trust, as well as comparisons made to other C2C platforms like eBay and Craigslist.

### Perceived Risks of Facebook Sale Groups

Buyers commonly mentioned that products might not be “as described”; for example, items described in a sale post as being in GUC (“good, used condition”) may have rips or stains. This was especially concerning for buyers given the strong group norm against haggling or changing your mind once a pick-up has been arranged (even if disappointed after physically inspecting the product). While there are exceptions to this practice (buyers can walk away from a product that was blatantly misrepresented by the seller), the group norm for completing transactions is so strong that some members rarely even inspect the product when picking it up, “*I don’t actually even look at the item when I get there. I put it in the car, leave my money, and go home*” (G).

For sellers, theft was one of the most commonly mentioned risks. Sellers worried about unscrupulous buyers taking products without payment, leaving only partial payment, or taking cash left by previous buyers. Some sellers had strategies for mitigating these risks when selling pricier items, such as arranging to meet the buyer at a public location; however, face-to-face meetings were described as rare by both sellers and buyers. Sellers also complained about the risk of “no-shows,” when a buyer does not show up to pick up and pay for a product. Sellers often included “no holds” in the language of their sale posts because they perceived a greater risk of a no-show if the pick-up did not occur immediately.

Members were also aware of the risk of being “scammed” on the group. M2M sale groups sometimes get requests from struggling mothers who are looking for free diapers, formula, or other products. However, some requests come from “fake” members who join to solicit donations with a dishonest story of hardship or tragedy. Sometimes, members discovered that their donated goods were not actually needed if they were immediately posted for sale on another group or site; “*People put the post out that they’re in need of something. I have a seven week old newborn coming, baby came early, and then they sell it on other sites for profit*” (J).

Members also spoke to potential but non-specific safety risks. For example, members acknowledged that sharing their address with buyers could be risky, “*I sometimes think that’s a little bit dangerous ‘cause I sometimes don’t want people to know where I live*” (B). Other members avoided doing any pickups after dark; one member occasionally asked her husband to accompany her to a pickup in a less familiar neighborhood. One African American member described the risks she associated with doing porch pick-ups in predominately white neighborhoods, despite being a resident of a similar, neighboring community. She explained, “*That nervousness is always there when I roll up on someone’s home and I’m walking to the porch and grabbing something off a porch. Like, waiting for the police to come*” (J). We return to this in the discussion.

INT	Interested (in product)
PPU	Porch Pickup
Pending	Sale is pending pickup
Available	Sale fell through, product available
POOS	Posted On Other Sites (or sale groups)
EUC/GUC	Excellent/Good Used Condition
NWT/NWOT	New With/Without Tags
ISO	In Search Of (looking to buy)
FCFS	First Come First Serve

Table 3. Common terms used on M2M sale groups.

### Features of Facebook Sale Groups

#### *Sale groups are easy and convenient*

Buyers described M2M groups as an easy and convenient way to shop because buyers can shop from their phone at times that are convenient for them. Some buyers mentioned that they regularly used Facebook, which also made sale groups convenient. Buyers also liked not needing to physically sift through many products at a store or garage sale. “*Instead of it getting delivered to your mailbox like a package would, you just drive to the porch, which if you’re smart, you can do it on your way grocery shopping... You can put it into your day where you’ll just swing by, jump out of the car, grab it, you’re good to go*” (F). As such, buyers’ favorite M2M groups were those located within a short drive of their home. Other buyers appreciated how products are pushed to their phones and News Feeds without the effort of a product search or having to check the group’s homepage: “*This is nice ‘cause it just kinda pops up a whole bunch of different things you might not even know you want until you see it*” (H). However, two members reported that the number of sale posts in their feeds could at times feel overwhelming. Other members mentioned that the group was not useful for finding specific products that they needed right away, such as specific sized clothing for a child.

Selling was also described as easy and convenient. The selling process was commonly described as requiring three “easy” steps: create a sale post, schedule a pick-up, and leave the product on the porch; for example, “*I just took a picture of six pairs of shorts that my son won’t wear... I took a picture and I made twenty dollars... It took five minutes to do it. I put it on the porch, they picked it up, and it’s done*” (N). Sellers felt that selling items through garage sales, consignment shops, or church swaps required more effort and time, and did not easily allow for selling a single item or small batches of items at a time. Selling on eBay was also described as requiring more work, especially in terms of packaging and shipping items, or as one participant explained, “*Who wants to go to the post office every day?*” (I). Sellers also appreciated that Facebook is free, unlike sites like eBay that charge listing and/or service fees.

#### *Sale groups are speedy*

Sellers noted that they often receive responses to their sale posts within minutes of posting. In contrast, sellers felt that

it takes longer to receive responses on Craigslist, which could take several days or weeks. Some members also observed that, unlike Craigslist's e-mail-based system, Facebook's instant messaging feature facilitates speedy and efficient communication between buyers and sellers, "*The mom-to-mom thing seems to be a little more quick in response, like Craigslist you have to wait for an email. So if somebody isn't checking their email every day or every hour, you might wait a week to hear back from them, and then to find out that the thing's been sold*" (H).

Buyers also preferred M2M groups because, unlike on eBay, they do not have to wait for their purchase to ship—they can typically pick it up the same day. Some buyers also mentioned that they dislike paying for shipping on eBay. Both buyers and sellers mentioned avoiding eBay because of the auction/bidding system which they perceived as more work, more confusing, and requiring more time for transactions to close. In contrast, sale group members liked knowing right away that they "won" the product (i.e., because they were the first buyer to respond).

#### *Sale groups are effective for buying and selling*

Both buyers and sellers preferred more active M2M groups—those with many sale posts daily. Buyers appreciated the constant stream of new products. Sellers valued quick responses and appreciated selling to a clearly defined target audience, "*It's your target audience. If I'm selling kids' stuff, I'm gonna go to a mom-to-mom sale site, 'cause it's easier*" (E).

Despite generally describing sale groups as effective, both buyers and sellers noted some disadvantages. Buyers were pleased with the number of new products offered daily but were sometimes frustrated with the competition between buyers to be the first to respond. "*You see something, and you're like, 'Oh my gosh, this is great,' and there's 10 people who say they're interested and you know it's never going to get to you. That can be frustrating*" (O).

Sellers who were usually able to sell items quickly were confused when some sale posts received no responses at all. Sellers wondered if their sale posts went unseen in News Feeds when many sellers were posting products at the same time. Other sellers suspected a flaw in Facebook's News Feed, "*Because if it's a popular group, your stuff can get buried very quickly... So if it's a popular item, and there's five people that want the item, and they're all commenting on it, that [sale post] is gonna sit at the top. So even more people are gonna see it*" (E).

#### **Sale Groups Are Perceived as Safe and Trustworthy**

The most emphasized benefit of M2M sale groups was their safety and trustworthiness, which members attributed to exclusive group membership, behavior regulation at multiple levels within the group, and a shared group identity.

#### *Exclusive Membership*

Most M2M groups are closed groups meant primarily for mothers (while fathers are present in some M2M sale groups,

they are rare). This means that the general public cannot participate in transactions; sale posts are not visible to non-members. Members cited this as an important feature that enhanced feelings of safety and trust, "*I feel safer dealing with moms in my local community, and some of the buy-sell-trade groups are pretty much open groups, and I don't like that. I like a closed group*" (A). Members noted this as a distinct advantage over other platforms, such as Craigslist and eBay, which they described as "too open."

Most members were also aware that admins screened new members, "*I strongly prefer mom-to-mom groups. I think that being more selective on who they let into their group makes it a better group in the end*" (B). Admins described how they decide whom to let into the sale group, "*Before I let anyone in the group, I check out their Facebook profile. So if I look at their Facebook profile and they're talking about doing drugs or it just doesn't look good to me, doesn't fit for my group, and I know this sounds very judgmental, but I'm trying to look out for my members, so I don't allow them into the group*" (A). Although most members did not know the criteria that admins use to admit members, they trusted and valued their judgment, "*I don't know how [the admin] picks and chooses who gets accepted into it. My guess would be that she goes on your profile and sees that you're actually a mom and you're not some 55-year-old dude that's trying to get in on something. Then you just hear all the Craigslist horror stories and I will never ever do that*" (P). A common theme from members was that they entrusted the group moderators with the authority and power to make centralized decisions on behalf of the group.

#### *Regulating Behavior at Multiple Levels*

Members described the many ways that behavior is regulated on M2M groups: through actions by individual members, by the admin, and by the larger group as a whole. At the individual level, members report buyers and sellers to the admin for no-shows, theft, suspected scams, or dishonest sale posts. In some cases, members don't just privately notify the admin, they also issue a public warning (e.g., of a scam) by posting to the whole group. Members also monitor interactions on the group and tag the admin (a way to publically notify the admin) in discussion threads that have become heated over a transaction dispute. Members, who often participate in multiple sale groups on Facebook, will also broadcast warnings about known "scammers" who have surfaced in other local sale groups.

Feelings of safety and trust were also frequently attributed to the admin's role in regulating behavior. In general, members felt that admins were very active and performed an important role. "*[The admins] help take care of and protect us. So if somebody is inappropriate or somebody is scamming or whatnot, they're very quick to remove that person from the group*" (B), or as another member explained, "*[The group] is monitored by admins who do make sure that people will follow through, and if they're getting complaints about*

people, they get kicked out. So, that's a higher incentive for the people on the group to follow through" (G).

According to members, admins create group rules, remind members of those rules, actively monitor the group, are visibly present in the group, act as a mediator for dispute-resolution, are responsive to complaints, investigate potential scams or fake members, issue warnings, track repeat offenders, and remove and block members when necessary. Some members were also aware that admins from different local M2M groups communicate with each other, "[Admins are] in contact with other admins from other mom to mom groups, and what happens if it's a member that's done something that wasn't particularly kind, they'll alert and those other sites will block them from joining the groups. So it kind of keeps the riff-raff down" (J). In fact, one admin explained that all the local M2M sale group admins are members of a separate admins-only Facebook group, where they discuss and share information on blocked members and potential scams.

Finally, members attributed perceived safety and trust to group-level activity. Several members shared anecdotes about how the group was collectively able to identify "scammers" (e.g., individuals who dishonestly request donations): "There was one girl who was looking for donations, she said she was having a hard time, 'I have no money, I can't work because I don't have a car. My baby needs diapers. Can you give me some Easter baskets? I don't have any for my kids.' I was going to donate something and then a bunch of other people said, 'Oh, she's a scammer, she has been on other sites selling all this stuff that has been donated to her'" (P).

Several members noted that they avoid eBay because of their experiences with scams. "I feel like there's a lot more fraudulent people on eBay versus these mom sites...Because I've bought stuff off eBay as well, and it's just been fraudulent items shipped from China. The account's closed after you buy it. You can tell it's a completely counterfeit item" (N). Some members worried about fraudulent sellers, despite eBay's refund policy, "I know there is buyer protection if you buy something that isn't what was advertised on eBay... But eBay, I don't know, it's a little shady now because there is so many people trying to sell illegitimate things" (Q).

Beyond scams, other rule violations on M2M groups are also publicly shared with the entire group, a practice that members refer to as "putting someone on blast." Many members described reading posts about individuals who were repeat no-shows or who dishonestly described a product's condition. As a result, sellers often mentioned taking extra care to disclose any blemishes, rips, or stains in their sale posts, aware that their reputations as sellers can be affected by negative comments posted to the group. "So, I really don't want you to come pick up the item and be like, 'Well, it's not in as good a condition as you said it was gonna be in.' And then, if people say that on the group, that could

damage my reputation. Because it does go a lot on reputation. You know what I mean? Like, people have posted, 'Don't buy anything from this person because I bought something and it was not in the condition that they said it was in,' and this and that" (E). However, some members considered public negative feedback to be a form of "public shaming," which often led to "drama" within the group. In an effort to curtail this drama, one group's admin even expressly prohibited putting members "on blast"—doing so was in itself grounds for being removed from the group.

Members felt that the collective work of the sale group to create accountability was an advantage over other platforms. Unlike on eBay and Craigslist, transactions through M2M groups are visible and semi-archived within the group's history. When complaints arise, the group can inspect the language used in a sale post and its discussion thread. When posts are intentionally deleted to avoid the group's scrutiny, members sometimes share screenshots of original sale posts and private message threads, and even photos of purchased products. Members indicated that having transactions and interactions publicly visible creates a group-level of protection and a greater sense of security: "...there's just something about Facebook and having that community. It's kind of assurance that you're not going to get screwed over...in the group setting there's witnesses to what's going on, the transactions. I guess I like that better" (D).

#### *Shared Identity*

When describing a sale group's trustworthiness, many members alluded to the group's shared identity or commonalities among members. Because of the nature of "porch pick-ups", members were part of the same or neighboring communities. Some members acknowledged that this meant that members shared similar demographics, "Just the moms are really similar to myself and probably because I live in [town name]...so same type of moms...just like age, income, household makeup, education" (J).

Motherhood was also cited as the basis of a shared group identity. Members described how they generally trusted other mothers, how mothers understood each other and their needs, and how helping other mothers was a rewarding part of the experience of transacting through M2M groups. "Cause I feel like, as a mom, we're all kind of in this journey together...it's very random that you're gonna get a mom who wants to scam another mom" (I). Many members also described how Facebook, unlike Craigslist, provides profile pages which helps members gain a sense of the person with whom they are transacting; for example, some members inspected profile pages for photos with children to ensure the buyer or seller was in fact another mom.

However, for other members, the group's shared identity as mothers was a strong enough signal of trust that they rarely inspected the profile pages. As one member explained, "I'm always more nervous with Craigslist because you're not in a specific grouping. You know, like the mom-to-mom site on Facebook, it's all moms...Craigslist, you really have no idea.

*At least, I mean, no, I don't really look at their profile or anything like that, but they're in a mom-to-mom sale group. I'm going to assume that they're a mom, and moms are cool with me" (E).*

Many members expressed similar feelings about inherently trusting other mothers. In some instances, this shared identity led to non-commerce conversations, where moms asked for and shared baby advice, doctor recommendations, and general moral support for the challenging aspects of motherhood. However, despite this sense of shared identity and member's geographic proximity, social meet-ups, such as playdates, were described as very rare. Group members were rarely Facebook friends, and none of the members were comfortable with referring to other members as friends: at best, some would describe other members as online acquaintances. Others described them plainly as strangers.

## DISCUSSION

The goal of this research was to understand why some individuals conduct commerce using Facebook, a platform that lacks common commerce tools. Our results show that, actually, commerce through M2M Facebook sale groups is perceived as easy, speedy, and effective. Members reported liking shopping via their News Feeds and described it as less work and a "fun" way to discover products.

However, some platform limitations surfaced. At times, some buyers felt that their News Feeds were overrun with sale posts (which could be addressed by letting users temporarily suspend sale posts in their feed). Many buyers were frustrated by the competition for products, with some sale posts receiving responses from twenty to thirty members. At the same time, sellers were confused when some of their sale posts received no activity at all. Because Facebook's algorithm privileges posts with a high volume of comments and posts that have been commented on recently, Facebook may be unintentionally resurfacing products that have already sold—potentially crowding out other sale posts. One solution is to ensure that "available" products are prioritized in the News Feed. Sellers may also benefit from knowing how many members saw their posts—a feature currently only available for Facebook Groups with fewer than 250 members [88].

However, trust was the most salient benefit that M2M sale group members reported. For these groups, *community commerce* on Facebook fosters trust through (a) exclusive membership to a closed group, (b) the regulation and sanctioning of behavior at the admin, member, and group level, and (c) a shared group identity or perceived similarity between members. Community commerce is an instantiation of Coleman's *communities of mutual trust*, where each member is both a trustor and trustee [11]. M2M Facebook sale groups have found early success by designing communities that foster such mutual trust. First, simply designating the community as "closed" can bolster trust within the group by creating a minimal barrier to entry for bad actors and limiting the ease with which they can enter

and exit the marketplace [37]. In addition, admins' screening of members who request to join the community is another barrier to entry; potential members must not only request to join but must also appear to have some claim to the group's shared identity or interest.

M2M sale groups have enacted effective practices for regulating behavior. Coleman argued that within communities of mutual trust, trustworthiness is reinforced by sanctioning violations of community norms [11]. Within community commerce, the visibility of transactions and interactions between buyers and sellers affords the entire community the ability to observe, report, and sanction bad behavior. In contrast, on platforms such as eBay or Craigslist, the onus of reporting bad actors falls primarily on the parties directly involved in the transaction. The visibility of transactions may also have a deterrence effect against bad behavior. Research has shown that even subtle suggestions of being watched, such as the inclusion of eyeballs on an anti-littering poster, can enhance cooperative behavior [20]. For community commerce, the comment activity on a sale post can signal the transparent and public nature of the transaction, potentially deterring bad behavior, encouraging conformity to group norms, and consequently enhancing trust among members.

Finally, perceived similarity between members of a group increases attraction and cohesion between members and boosts compliance with group norms [31]. Groups high in perceived similarity are also more likely to reject members who do not conform to group norms [31]. Further, when members feel an identity-based attachment to one another, members are more likely to conform to community norms, especially when that shared identity is relevant to the group's purpose [58,59]. For online groups, user profiles are one tool to help communicate similarities between members, which in turn has been shown to enhance trust [28]. However, even when a group shares a strong, common identity, such as a group of single-parents, perceived differences among members can inhibit the group's ability to establish trust [41]. With community commerce, perceived similarity between members and a shared identity that's directly related to the group's commerce (e.g., children's goods) may enhance compliance with group norms, inevitably boosting levels of perceived trust among buyers and sellers.

### *Limitations of Community Commerce*

For members of the sampled M2M sale groups, trust was established through the three pillars of community commerce. However, trust may not manifest under these conditions for other groups and communities. For example, exclusive membership may have been easier for the sampled groups to maintain, given the groups' specific basis of shared identity: motherhood. The admins of more general groups may have less concrete criteria with which to determine eligibility into the group, which may lower barriers to entry. Further, relying on shared identity to engender trust requires a shared identity that actually creates feelings of trust (i.e., in this case,

<b>Brokered C2C E-Commerce</b> Example: eBay	<b>Community Commerce</b> Example: Facebook sale groups	
<b>Product Finding</b> <ul style="list-style-type: none"> <li>• Sophisticated search engine and product filters</li> <li>• Product categories</li> </ul>	<b>Product Finding</b> <ul style="list-style-type: none"> <li>• Monitoring News Feed</li> <li>• Mobile push notifications</li> <li>• Basic search engine</li> <li>• Photo albums for product categories</li> </ul>	<i>Member perceptions</i> <ul style="list-style-type: none"> <li>— News Feed is less work than searching</li> <li>— Sale posts in News Feed sometimes overwhelming</li> <li>— Search function and photo albums rarely used</li> <li>— Not ideal for finding very specific products</li> </ul>
<b>Product Delivery</b> <ul style="list-style-type: none"> <li>• For Buyer: shipped to home</li> <li>• For Seller: shipping tools</li> </ul>	<b>Product Delivery</b> <ul style="list-style-type: none"> <li>• For Buyer: drive to pick up on porch</li> <li>• For Seller: put product on front porch</li> </ul>	<i>Member perceptions</i> <ul style="list-style-type: none"> <li>— For Buyer: convenient; no shipping wait</li> <li>— For Seller: easy process; no packaging and shipping; some risk of no-shows or theft</li> </ul>
<b>Marketplace (Global)</b> <ul style="list-style-type: none"> <li>• For Buyer: large pool of products</li> <li>• For Seller: large pool of buyers</li> </ul>	<b>Marketplace (Local, Restricted)</b> <ul style="list-style-type: none"> <li>• For Buyer: fewer products</li> <li>• For Seller: smaller pool of buyers</li> </ul>	<i>Member perceptions</i> <ul style="list-style-type: none"> <li>— For Buyer: high competition for products</li> <li>— For Seller: clear target audience; items usually sell quickly; other sale posts seem to get lost in the feed</li> </ul>
<b>Trust</b> For Buyer & Seller: <ul style="list-style-type: none"> <li>• Reputation systems</li> <li>• Escrow payment systems</li> </ul> For Buyer: <ul style="list-style-type: none"> <li>• Fraud detection</li> <li>• Consumer protection policies (money-back guarantees)</li> </ul>	<b>Trust</b> For Buyer & Seller: <ul style="list-style-type: none"> <li>• Membership in closed group</li> <li>• Regulation of behavior by admin, members &amp; group <ul style="list-style-type: none"> <li>○ Transactions visible to group</li> </ul> </li> <li>• Shared group identity <ul style="list-style-type: none"> <li>○ Profiles</li> </ul> </li> </ul>	<i>Member perceptions</i> <ul style="list-style-type: none"> <li>— Feels safer; other platforms are “too open”</li> <li>— Admin acts to “protect” members</li> <li>— The group collectively creates accountability</li> <li>— Knowing other members are “like me” fosters feelings of trust, but not necessarily friendship</li> </ul>

**Table 4. Comparison of brokered C2C e-commerce and community commerce features.**

mothers were perceived to be trustworthy). Other identity groupings may either be too broad to create feelings of trust or too narrow to attract a critical mass of members.

Some members cited geographic proximity and demographic similarities as contributing to the group’s shared identity. This highlights a limitation of the groups sampled in this study, which come from a relatively homogenous area in the US (i.e., predominately white, suburban, middle-upper class, and Midwestern). Other sale groups based in more heterogeneous populations may be less able to rely on shared identity or perceived sameness in order to build trust. Indeed, Putnam, citing evidence from a large survey carried out in 2000, argues that greater diversity within a geographic community is associated with lower trust both between groups and within groups [57].

*Membership: A Better, Warranted Signal of Trust*

Our results suggest that Facebook, while not designed for commerce, supports community commerce, a unique context that in many ways affords superior trust mechanisms for buyers and sellers. One seeming disadvantage of community commerce is the lack of institutional assurances, such as eBay’s consumer protection guarantees and dispute-resolution resources—a limitation that could hinder trust in transactions [49]. However, our results suggest that with community commerce, the admin helps to fill this gap. Admins, who hold a position of authority in the group, are viewed by members as the “protectors” or “police” of the community. Admins act as mediators for dispute-resolution between members and expel members who commit a serious violation of group rules. An admin’s responsiveness and

engagement with the community may actually negate the need for higher-level institutional assurances. It is notable that while all Facebook users have the option to report sale posts directly to Facebook, not one participant mentioned this functionality—all members spoke to their ability to rely on the admin to address problems.

Another potential disadvantage of community commerce is the lack of formal reputation or feedback systems, which can help users identify trustworthy parties [35,60]. However, it is not clear that reputation systems adequately reflect the different dimensions of trust that are important to buyers and sellers. Trust in an e-commerce context has been conceptualized as encompassing three dimensions, a party’s ability or competence, a party’s honesty or integrity, and a party’s benevolence or good will [49]. While reputation systems are designed to reflect a party’s competence and honesty, the systems themselves can be manipulated by malicious or unscrupulous sellers [36,71]—casting doubt on a reputation system’s ability to communicate those aspects of trust. In contrast, in community commerce, membership in the group, which is more difficult to manipulate, signals competence and honesty. Further, membership in a community that is based on a shared identity or perceived similarity is also likely to signal a member’s general benevolence or good will toward community members in general, an aspect of trust that is not as easily captured in traditional reputation systems.

A useful theoretical frame for discussing signals of trust in C2C e-commerce is warranting theory [70]. Warranting theory states that cues that are more difficult to manipulate

are more informative and trustworthy (e.g., a seller's description of a product is more easily manipulated by a seller than a photograph of the product) [70,79]. Feedback on reputation systems is often the product of reciprocation and/or retaliation between buyers and sellers [61] and can be manipulated by sellers to boost their ratings [36,71]. In contrast, what could be more difficult to manipulate than the successful, maintained membership in a closely monitored community? Membership signals not only that you were able to gain admittance to the exclusive group but that you have refrained from any behavior that would result in your immediate removal from the group. You cannot fake or manipulate membership—you are either a member or you are not, and if you shouldn't be, you won't be for long.

#### *Bias and Exclusion with Centralized Moderation*

There are potential risks for having a centralized admin controlling who can and cannot participate in community commerce. An admin's explicit or implicit biases could lead to the exclusion of, for example, minorities and low-income individuals. Similar concerns have been raised with Airbnb hosts discriminating against clients with distinctively African American names [18]. Further, a community's shared group identity may be used as justification for excluding others based on gender, race, sexual orientation, religion, or political beliefs. For example, while the M2M sale groups sampled in this research did not explicitly prohibit males, transgender mothers, or mothers in same-sex relationships, it's plausible that some groups do.

However, bias and prejudice in C2C markets might be mitigated through careful design decisions. Nextdoor, the neighborhood social network site, recently implemented an algorithm that checks for racially-charged terms and asks users to revise their posts [72]. Airbnb has similarly recognized and admitted that discrimination is a problem on their platform and has pledged to roll out changes to address it [3]. Our data was not sufficient to observe if these same problems are plaguing Facebook; however, our anecdote from Participant J about physical safety as an African American in a white neighborhood suggests they are likely to. It may also be that regions typically characterized by distrust and safety concerns will require different features to support community commerce.

#### **Designing Trust into C2C E-Commerce**

Sale groups are not Facebook's first venture in C2C commerce. In 2007, Facebook launched a classifieds tool called Marketplace [80] but by 2009 the tool was transferred to oodle.com and eventually removed from Facebook [81,89]. Marketplace allowed users to buy and sell locally within the broad Marketplace network or exclusively within a user's friend network. More recently, Facebook relaunched Marketplace [86] to join a growing class of similar C2C apps like LetGo and OfferUp. These platforms rely on transactions with strangers or friends, but *not* transactions within sub-communities of trusted strangers (i.e., community commerce).

These and other C2C e-commerce platforms could implement design features to support community commerce. For example, eBay could use a consumer's shipping address, purchase history, and browsing history to recommend different community commerce groups (e.g., local M2M groups). eBay could also identify highly engaged consumers (through purchase and product review activity) who are likely to be engaged and active admins. Actual admittance into the community could still be determined by the admin, who could require proof of a new member's claim to the group's shared identity or interest. Because eBay supports both C2C and B2C transactions, small businesses and vendors who satisfy these same criteria could also request to join the group.

In order to encourage regulation at the admin, individual, and group level, transactions and interactions should be visible to the whole community. One way to accomplish this is to conduct sales through a public board, allowing the community to witness and, when necessary, sanction bad behavior. A similar approach could be implemented in other online contexts, such as in traditional B2C settings (e.g., Amazon), small business settings (e.g. Etsy), and sharing economy settings (e.g., Airbnb).

#### **Limitations**

The results of this study should be considered in light of various limitations. This study most likely suffers from selection bias; members who generally trust other members are more likely to participate in an interview study advertised on their sale group. Future work should capture the perspectives of less trusting members and members who have voluntarily or involuntarily left sale groups. This study also samples Facebook sale groups that were active and had engaged admins—less successful sale groups would likely exhibit different properties. Similarly, trust in offline communities varies by community—urban, low income communities may experience trust differently than the demographics in our study, highlighting an important area for future work. Finally, this study focuses on sales groups for mothers—a population that may be more or less trusting than other populations. Women are more trusting of others [23] but are also more risk averse than men [5,17,78]. Women perceive more risk with online shopping than men but are more influenced by website recommendations by friends [25]. Sale groups with different populations (e.g., men, non-fathers) may negotiate trust in different ways.

#### **CONCLUSION**

While traditional e-commerce tools are absent from Facebook, the unique affordances of *community commerce* provide a strong trust mechanism that supports buying and selling between geographically proximate strangers. As individuals continue to find new ways to transact, share, exchange, and collaborate with each other online, they will need reliable indicators of trustworthiness—we argue that they'll find it within community.

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