

From Virtual to Physical: An Exploratory Study on how Online Social Networks and Communities Influence Decision-Making in Everyday Crafting

Lo Lee
University of Michigan, Ann Arbor
lololee@umich.edu

Melissa G. Ocepek
University of Illinois, Urbana-Champaign
mgocepek@illinois.edu

Abstract

The popularity of the maker movement has prompted extensive research on how the maker spirit enhances learning and redefines entrepreneurship. However, what is left unknown is the dynamic process of making as a hobby and how it may cut across virtual and physical media. To seal this gap, we conducted a qualitative study to investigate how online social networks and communities (OSNCs) may play a role in influencing making-related decisions. We carried out diary studies and semi-structured individual interviews with 25 arts and crafts hobbyists. The findings show that YouTube and Pinterest are the top two mentioned sources to facilitate ideation about what to make. Participants mostly turned to YouTube and Reddit to address problems when getting stuck. We demonstrate the direct and close relationship between tangible making and OSNCs as a multidimensional source, showing how virtual user-generated content can impact everyday hands-on practices.

Keywords: Online social network, online community, the maker movement, leisure, qualitative research.

1. Introduction

The maker movement has been celebrated for its potential to democratize making and empower people to access and learn new technology. Broadly defined as “participation in the creative production of physical and digital artifacts in people’s day-to-day lives,” making is an information-rich and dynamic process (Lakind et al., 2019, p. 235). Originating in Europe and booming in the United States since MIT established the first Fab Lab in 2003, the maker movement has redefined entrepreneurship leading to new business models (Davies, 2017; Dougherty, 2016; Langley et al., 2017). Makerspaces are one essential embodiment of this culture wherein makers have a “shared commitment to open exploration, intrinsic interest and creative ideas” (Dougherty, 2013; Pepler & Bender, 2013, p. 23). Makerspaces are informal workspaces geared for learning and creation (Makerspaces.com, 2015;

Sheridan et al., 2018) and are usually a springboard for successful start-ups like MakerBot and Square (Fu & Lin, 2014). The popularity of making increases with the outbreak of COVID for making is seen as a novel strategy to react against difficult times (Kurutz, 2021). A surge in revenue is found in a craft marketplace like Etsy, whose profits soared in 2020 during the pandemic (Cheng, 2021). Truly, the maker movement brings substantial economic benefits and spurs ample research and political endeavors to support this community (Hirschberg et al., 2016; Wolf-Powers et al., 2017).

Among various making-related networks, online maker communities are acknowledged to motivate creative practices (Oehlberg et al., 2015). Prior research suggested that makers valued collaboration and were prone to share (Browder et al., 2019), revealing a positive relationship between maker performance and community participation (Kwon & Lee, 2017). Nevertheless, beyond the maker movement writ large, less is known about how online communities, including social media, are situated in the making process to affect individuals’ decision-making. Therefore, we are prompted to ask our research question: How do online social networks and communities (OSNCs) manifest in an everyday making context to influence decision-making? We aim to foreground the processual aspect of making to study how physical making as an individual leisure pursuit may relate to online user-generated content. We cover people interested in diverse forms of making, from digital fabrication to handcrafting.

The rest of this paper is structured as follows. We begin with a literature review on the background of online communities in the making sphere and creators’ information acquisition behaviors. We then explain our methods, report the findings, and discuss our results to answer the research question. We conclude this research by highlighting the significance of OSNCs in a making context and potential future work.

2. Related Work

The maker culture has been characterized by its open nature to promoting entrepreneurship (Van Holm,

2015). This worldwide movement has allowed innovation to occur locally outside of firms having well-equipped laboratories, bringing makers to become “accidental entrepreneurs” and producers in the sharing economy (Browder et al., 2019; Van Holm, 2015, p. 24). With the belief that the maker movement can be the next industrial revolution, human capital is vital here because makers having different expertise usually collaborate during the making process and build communities with dense networks to exchange information (Browder et al., 2019; Hatch, 2014; Shan & Wang, 2021; Van Holm, 2015). Following the development of the Internet, there is a considerable discussion on how makers work together online to establish social bonds and contribute knowledge. However, little research examines how OSNCs manifest in an everyday making context. This study is part of a bigger interdisciplinary project theoretically underpinned by de Certeau’s (1984) everyday life practice theory. Throughout this paper, we apply Leimeister and colleagues’ (2004) definition of virtual communities to define OSNCs.

“A virtual community consists of people who interact together socially on a technical platform. The community is built on a common interest, a common problem or a common task of its members that is pursued on the basis of implicit and explicit codes of behavior. The technical platform enables and supports the community’s interaction and helps to build trust and a common feeling among the members.” (p. 1)

This section first reviews prior work on online maker networks and communities, followed by creators’ information acquisition behaviors. We discuss the literature on information acquisition to capture the potential role of information, mainly from the source perspective, in influencing making-related decisions.

2.1. Online maker networks and communities

Digital content has been increasingly valued by craft culture in this age, including the use of OSNCs in the maker population (Kouhia, 2020; Kwon & Lee, 2017). Based on the definition cited above, we see an OSNC featured with a strong relationship between members to develop trust and share history, vocabulary, and familiar feelings (Haythornthwaite et al., 2000; Leimeister et al., 2004; Stanoevska-Slabeva & Schmid, 2001). For example, Pinterest, whose first-quarter revenue in 2022 reached \$575 million, is the fourth most popular social media platform used by 31% of U.S. adults (Pew Research Center, 2021; Pinterest, 2022). Pinterest is famous for its *pin* function by which users can organize the artistic and visual content on *boards*, following or sharing with *pinners* (Gilbert et al., 2013; Linder et al., 2014).

Academic discourse in online maker networks and communities is not rare. For instance, Pepler and Bender (2013) showed the value of Instructables and DIY.org to support inspiration seeking and problem solving during making. Oehlberg and colleagues (2015) probed user behaviors on Thingiverse, the biggest virtual design community for digital fabrication, and noted the changing contributing behaviors and user engagement. Khanapour and colleagues (2017) used interview data to define two makerspace community dimensions: fluid and structured; regulated and unregulated. They illustrated an intriguing point where they treated lurking as an easy approach to joining a maker community, which was different from literature seeking to delurk or questioning lurking (e.g., Nonnecke et al., 2004). Holding a social network perspective, Resch and Kock (2021) investigated the relationship between people with a broker status in an online maker community and their access to diverse information on idea generation. In a leisure context, Kouhia (2020) observed a hobby craft group on Facebook and stressed the importance of social media information facilitating making. Yet, Kouhia revealed the potential harm of digital content and expressed that its convenient access may let hobby crafting fall into consumerism conflicting with the maker spirit. Indeed, previous literature has provided insight into the nuances of OSNCs in terms of their various benefits perceived by creators.

2.2. Making and information acquisition

Information acquisition can occur in active and passive forms to impact decision-making. With research on active information acquisition, information seeking has been the most widely discussed topic (Case & Given, 2016). In analyzing seeking, previous scholars tended to classify information sources, such as seeing OSNCs as networked sources (Savolainen, 2007). Compared to active seeking, passive information acquisition received relatively scant consideration; for example, encountering (i.e., stumbling upon information of potential interest, see Erdelez & Makri, 2020) and monitoring (i.e., maintaining alertness to a possibly helpful or intriguing topic, see Bates, 2002). Beyond purposeful and unintentional information acquisition, the affective dimension of information experiences is also discussed, including negative feelings resulting from overload and anxiety (e.g., Bawden & Robinson, 2009; Lee et al., 2014).

Information acquisition in the maker setting is an ongoing conversation in the literature, though most target youth. One representative example is Li’s (2021) research examining youth’s information-seeking behaviors in the library makerspace. Li analyzed how young people interacted with information to accomplish

maker projects, recognizing activities like Asking, Searching, Connecting, and Learning. Koh and colleagues (2019) identified the flow of high schoolers' information-seeking behaviors, indicating that while information searching was prominent in the initial planning stage, it became less prevalent as maker projects continued. Beyond schooling, Minahan and Cox (2007) praised the convenient access of new technology to exchange information and trigger ideation in the leisure realm. Orton-Johnson (2014) argued that Web 2.0 blurred the distinction between technology and handcrafting and offered crafters a new technique for expressing and interpreting creativity. In the art domain, information seeking is quite common, and a wide variety of online and offline sources are found when artists practice making (Hemmig, 2009; Mason & Robinson, 2011). These existing studies display that information acquisition and use are crucial and idiosyncratic when creators address making-related needs to come to decisions. However, our lack of understanding of how adult creators utilize information circulated in OSNCs remains limited, prompting us to conduct this study to survey the making process.

3. Methods

This research is a naturalistic inquiry theoretically underpinned by de Certeau's (1984) everyday life practice theory, based on which we intend to foreground the discoverable nature and the natural setting of where participants are (Lincoln & Guba, 1985). We applied purposeful and snowball sampling to recruit people to reflect our exploratory research question. We conducted recruitment in multiple rounds to encompass as many forms of arts and crafts as we could using personal contact, social media, and a university newsletter system. An eligible participant would meet three criteria: being over 18 years old, having a self-declared interest in arts and crafts, and planning to begin a maker project soon. A total of 25 arts and crafts hobbyists were recruited, among which 2 people, Nicole and Una, did not join the entire research due to scheduling issues. Their data is still included for analysis. Table 1 lists the pseudonyms of each participant and the type of maker projects they worked on. Using a random name generator (random-name-generator.info), we assigned pseudonyms based on the U.S. census data delineated by gender. This section explains our research procedures, including data collection and analysis.

Table 1. Participants and their maker projects.

Pseudonym	Type(s) of projects
Anne	Painting
Betty	Stained glass
Connie	Digital sculpture

Doris	Leatherwork
Evelyn	Polymer clay
Fannie	Quilting, crocheting, embroidery
Gloria	Quilting
Hazel	Woodwork
Ivette	Video making
Joyce	Sewing, crocheting
Kimberly	Metalwork, glasswork
Lynne	Papercraft
Martha	Animation
Nicole	Papercraft
Oliver	Bonsai
Phyllis	Stained glass
Ruby	Woodwork
Stella	Pottery
Timothy	Papercraft
Una	Papercraft
Violet	Knitting
Willie	Papercraft
Xavier	Photography
Yvonne	Watercolor
Zoey	Lampwork

3.1. Data collection

This qualitative research comprised two data collection phases: diary studies as Phase I and semi-structured individual interviews as Phase II. Before Phase I began, we ran initial briefing sessions to build rapport and introduce research agendas to participants. In Phase I, we requested participants to keep two-week diaries to document their making processes. To embody the creative spirit of the maker culture, we made our diary studies flexible to cater to participants, time scales, and a variety of crafts. Participants were asked to make an entry every time they progressed on their projects, though we did not limit how much time they should spend on their work each day. The data was collected between February and August 2021, when most participants still had limited access to making outside the home. We did not set a rule on how many entries participants should make, and we allowed small extensions if needed. We provided a diary template informed by probes and portfolios (Gaver et al., 1999; McKay et al., 2015) and encouraged participants to adopt any visual techniques when documenting. We offered optional prompts adapted from previous protocols (e.g., Bowler & Champagne, 2016; Chang et al., 2016; Keller, 2012; Shankar et al., 2018) to elicit responses. These prompts were all open-ended questions addressing different aspects of making, such as How are you getting on with your project? Where are you when working on your project? What is something

surprising during your making today? A total of 168 entries were obtained, with a minimum of 1 entry and a maximum of 19 entries per participant.

After Phase I, each participant was invited to join a semi-structured individual interview. All interviews were carried out remotely, among which most of them were done on Zoom, followed by voice calls on Facebook Messenger and Line, and instant messaging on Google Hangouts. We utilized interview sessions to let participants clarify confusing entries, debrief their participation, share their general experiences of arts and crafts, and demonstrate their artwork. Interviews were recorded for transcription with participants' agreement. On average, Phase II ran about 50 minutes. We compensated participants with a \$20 Amazon e-gift card at the end of their participation.

3.2. Data analysis

With the open and flexible nature of our methods, we collected both visual and textual data. We would not dig into our analysis of photos gathered through diary entries as visual data since the current study focused on the interview data. The first author was the main analyst and coder of this project and followed the general steps of reflexive thematic analysis (Braun et al., 2019) to analyze interview transcription. The second author served as the faculty advisor to provide support throughout the analysis stage without direct intervention. To begin with, the first author walked through interview transcripts to familiarize herself with empirical data. She then began to do open coding to surface potential themes and iterated this coding process to add and merge a couple of codes. After the first author had the candidate themes, she reviewed, refined, and named the themes to produce the deliverable. While this study was sensitized by de Certeau's theory, we interpreted our coding as inductive because the analyst paid attention to code development to ensure that it was not prescribed by existing work. Memos were created to document any random thoughts emerging throughout data analysis. To establish the authenticity of this naturalistic inquiry, we offered thick descriptions using quotations in our findings to gain credibility and transferability (Lincoln & Guba, 1985; Shenton, 2004). We also employed other techniques to enhance the trustworthiness of our bigger project (e.g., data triangulation, member checking), which are not detailed here to save space.

4. Findings

Several OSNCs are found throughout the making process. Two primary situations where participants interacted with digital content to arrive at decisions are

when they sought inspiration, shown in 30 cases, and when they came across problems, shown in 8 cases. This section reports the two situations in a loose chronological order. As mentioned earlier, although we amassed various data forms, we focus on presenting interview data through thick descriptions here to capture participants' situations and contexts writ large (Shenton, 2004). Table 2 lists participants' names and the OSNCs they visited when making decisions in each situation.

Table 2. List of participants and the OSNCs visited.

Situation	OSNC	Participant(s)
Inspiration seeking	YouTube	Connie, Evelyn, Fannie, Hazel, Joyce, Kimberly, Oliver, Yvonne
	Pinterest	Anne, Evelyn, Fannie, Gloria, Joyce, Kimberly, Lynne
	Reddit	Gloria, Hazel, Timothy, Violet
	Instagram	Anne, Evelyn, Lynne
	Ravelry	Hazel, Violet
	Etsy	Violet
	Tik-Tok	Anne
	Instructables	Willie
	Behance	Lynne
	Paper Modelers	Timothy
	Country of Masters	Nicole
	Online course	Yvonne
	Problem solving	YouTube
Reddit		Gloria, Willie
Pinterest		Joyce
Quilting Arts		Fannie
Online course		Yvonne

4.1. Seeking inspiration

Before delving into a maker project, participants usually engaged in inspiration seeking to review and refine existing ideas. In order of descending frequency, the OSNCs participants went to at this early stage include YouTube, Pinterest, Reddit, Instagram, and Ravelry. As the top online community found in this research, YouTube is discussed by eight people. For example, Connie expressed that she liked to see what others have done for a potential project: "I get

inspiration from others mostly. I watch those YouTube videos, and if those Youtubers do something I like, I would be like, ‘Oh, I want to try that!’” Besides Connie’s serendipitous experience, YouTube is a great source to stay updated on craft interests. Fannie shared that she found a kit that she had never done before from a channel she subscribed to, which informed one of her craft projects on photo embroidery.

“I started working on a quilt kit that I had seen originally on YouTube. It was a quilt kit that was created by Riley Blake fabrics. [...] The site is called Fat Quarter Shop, and I follow them because I like Riley Blake fabrics. It helps me see what new fabric lines they have out, which makes me run to my nearest quilt store to grab their newest line of fabrics. They have a quilt kit I’ve never used before called Let’s Stay at Home. [...] That’s when I got the idea that, [...] wouldn’t it be fun to include family photos on the fabric in the windows and doors of all the houses?”

YouTube is also an ideal source for learning when participants sought inspiration from it, as said by Gloria:

“Sometimes, if there’s a technique that I’m trying to learn or a technique that’s tricky, YouTube helps because I’ll find somebody who’s taking a video of themselves doing it, and that’s easier for me to understand. I like looking at pictures as I’m a visual learner.”

In addition to the benefits above, Joyce depicted how she utilized a video clip collected on YouTube as a point of departure for personal creation. Doing a baby blanket project for her upcoming grandson, Joyce walked us through her making process. Figure 1 displays the YouTube video Joyce watched.

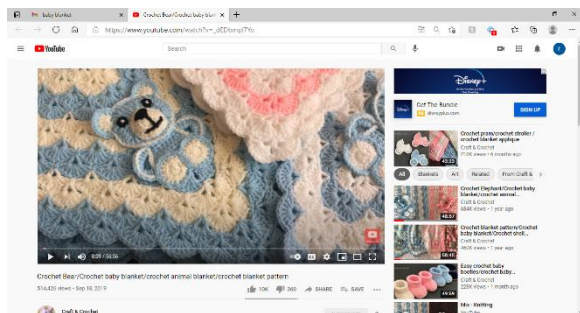


Figure 1. Screenshot of the video inspiring Joyce.

“For the crochet blanket, it was a lady on YouTube that was showing you how to do it. I used that one for my [other] grandson who is turning one in a week or so, so I started with that pattern and finished it on my own. I got it to the dimension that I thought looked good, and I did the teddy bear.”

Apart from textile crafts, YouTube is considered helpful for other forms of making. When sharing her habit of visiting OSNCs for woodwork, Hazel

articulated that “There are some Subreddits that have a lot of people showing off projects they’ve made, but not necessarily as much information-wise. For information, I would say YouTube.” Reddit is the third most popular community network, which will be covered later.

Following YouTube, Pinterest is the second most frequently mentioned media, discussed by seven people. Famous for its *pin* function and the thematic *board*, Pinterest is developed to support discoveries of images and animated content on the Internet. Fannie vividly described how information-rich Pinterest was, saying, “Pinterest is a black hole for me! I spend a lot of time on Pinterest, and I save a lot of things to my craft folder on Pinterest.” One of the three projects that Fannie worked on, the one called Red Bear’s Friend, originated from an idea encountered on Pinterest. Fannie said, “The Alma Gummy Bear, I discovered that last year, and I didn’t even know it was a thing. I stumbled upon it on Pinterest, and I’ve gone nuts within. I love to do it because it’s so versatile.” In a like manner, Anne recounted how she adapted a picture found on Pinterest for her artwork. When asked if she built on the work of others, Anne responded,

“Just one painting. For the couple, there was a really beautiful painting on Pinterest. [...] In that artwork that I saw, the couple was in a similar position. But I changed the colors of the dress and the way that the couple looked to make it a little bit more customized.”

Although the fertile nature of Pinterest seemed to be useful for most participants, Kimberly illustrated how Pinterest made her unpleasant feeling resulting from creative block harder. Kimberly stated, “I love Pinterest, and it gives me lots of ideas. But it’s also terrible because I’m like, ‘Everything’s been made!’ So, I’m trying to come up with something new.” Kimberly is one of the two participants who covered this perspective of OSNCs. Fortunately, Kimberly is a trained artist with a solid background in art, thereby realizing what to expect in this situation and where to seek support to be active again. Evelyn, a polymer clay hobbyist, also mentioned this overwhelming feeling. Unlike Kimberly talking about Pinterest, Evelyn expressed that seeing what others shared on Instagram shook her confidence in making something innovative.

The third most frequently mentioned OSNC in the situation of inspiration seeking is Reddit, discussed by four people. Hazel, a textile and a woodcraft hobbyist, stated how she passively sought out inspiration by following Subreddits to see what others have done: “I use Reddit a lot, and I follow the knitting Subreddit and woodworking Subreddit. Then, when I’m on the website, I’ll see what other people are making, but I don’t often go out specifically looking for that stuff.” In addition to obtaining information for potential work,

participants shared how they treated Reddit as a learning venue while looking for inspiration. Gloria recounted that she borrowed a quilting technique from her interest group on Reddit for her baby quilt.

“The technique for how to make the squares faster, [...] that was something that I had learned from someone in my quilting group [on Reddit]. That was an idea shared by others, so I didn’t invent that. I learned that from somebody else.”

Instagram and Ravelry are the fourth and fifth options when participants sought inspiration about what to make. They are discussed by three and two people, respectively. Usually, Instagram is mentioned alongside other social media, as we can see in Anne’s quotation: “Since a lot of my work is inspired by things that already exist, sometimes I’ll find something cool on Tik-Tok or Instagram. That will be like a point of reference.” For Ravelry, because it is very domain-specific, the use of this community is limited to participants engaging in textile crafts, chiefly knitting. Of course, this type of information source is not only found in textile making but also in papercraft (e.g., the Paper Modelers website in Timothy’s case) and watercolor (e.g., the online course in Yvonne’s case). Often, they can be more professional, as revealed in Lynne’s case. Lynne is a recent college graduate launching a papercraft project to convey gender inclusion. In her interview, Lynne stated that she planned to add her project to Behance, the largest creative community run by Adobe, to document and showcase her design and illustration work. Based on all these above examples, OSNCs are valuable sources of information in an inspiration-seeking situation during the making process. Apart from this source perspective, they are useful for stumbling serendipity, supporting learning, monitoring, documentation, and sharing work with potential audiences. Such a finding reveals that OSNCs do not simply act as a venue for participants to digest inspirational information while deciding what to make. Rather, they can encompass substantial benefits facilitating various aspects of the making process.

4.2. Solving problems

Making is usually not a smooth process. Overall, the making activity can encompass a wide range of trial and error, which can be fun and playful and lead to a great learning experience (Hatch, 2014). In this research, most participants faced difficulties throughout their participation. These making-related issues are idiosyncratic and cover different types, such as how to master a specific technique, how to overcome the lack of material, and how to use a delicate tool, to name a few. Human sources, including friends, family members, colleagues, instructors, neighbors, and an offline interest group, are the top resources participants

draw on when getting stuck. Networked sources are also found, particularly OSNCs (Savolainen, 2007). We identified five of them from our data: YouTube, shown in four cases; Reddit, shown in two cases; Pinterest, the online course, and Quilting Arts, all shown in one case. For YouTube, similar to how this media motivated inspiration seeking, participants found it helpful when they tackled making-related issues. YouTube appeared more valuable when participants expected to see some real-time demonstration rather than simply reading tutorial guides full of texts. Hazel recalled how she dealt with a small obstacle when building her table.

“I watched some YouTube videos for like techniques at different parts. I spent a pretty long time turning the legs because I wanted them to all be uniform. But I just made a jig for that out of nails.”

From a different point of view, Kimberly talked about why she usually preferred digital content on YouTube to an online course that cost money.

“Honestly, I would say, with most things nowadays, if I’m stuck or stymied, I usually end up turning to YouTube because there are so many good and bad examples of how to work on things. I’m trying to learn how to do aluminum casting and sand casting, and pretty much how I’ve been researching the whole thing is watching a variety of people who have different workshop setup and how they’ve done it. And then, I use all the information and try to distill it down and figure out what might be the best way for me to do it. It’s not necessarily easy, especially as a solitary craftsperson. If you aren’t in a place where there are a lot of artists or there is a school, you’re kind of on your own. [...] I know there are many online courses you can pay for, but as an artist, we don’t usually have a lot of money to throw at stuff like that.”

Other than YouTube, Reddit is another popular networked source to tap into. This is especially true for an open-ended question that, to address, participants have to interact with people to some degree. For example, Willie, a papercraft hobbyist working on a paper model inspired by the Boba Fett helmet, mentioned how users in different Subreddits pointed him in distinct directions for his inquiries.

“There is a Reddit group, but most of my questions involve the 3D modeling vs. the actual building part. There is a small amount of overlap between the papercraft and low polygon Subreddits, and often they tend to point me to the other one when I need help.”

In a similar vein, Gloria made an interesting comparison about how she switched between sources in a making context. According to Gloria, while Google could be a good starting point to find answers for a specific problem, she favored talking to people, including family and OSNC users, to seek subjective input and advice.

“If it’s a more open-ended question, like if I’m trying to decide whether this fabric goes here, or like, ‘What style do I want to use to do the topstitching?’ or things that you can’t really find an answer on Google, that one I’ll share pictures with my mom and my aunt. Or, I’ll go to my Reddit group because you can ask them like, ‘Hey, I’m trying to decide if this pattern or that pattern would be better.’ Then you have people, rather than just Google results, who may say, ‘Oh, I like this one better’ or ‘Oh, I tried this kind when I made mine, and it works really well.’ And so, if it’s a more open-ended question, I’m more likely to go to a person than a website to check out advice or an opinion.”

Here, we can see that OSNCs play a dynamic role in bringing participants to access information. To Reddit, although it acted more as a venue to obtain information in an inspiration-seeking situation, it boosted human interaction in the problem-solving situation to help decision-making. This finding portrays how OSNCs serve not merely as a passive channel for information consumption but as a catalyst to foster makers’ collaborative spirit (Dougherty, 2016).

As for an online course, Yvonne recorded in her diary her experience of class participation and her use of materials provided by the instructor and classmates to resolve problems. About Pinterest, it is mentioned by Joyce. Interestingly, unlike other participants often pointing out difficulties encountered during the making process, what Joyce saw as a problem that took her time to address was her lack of ideas. In other words, the two identified situations referred to the same thing for her. In this case, Pinterest well fulfilled her needs.

“If I get stuck, like if I have a lot of something, say, a lot of crochet yarn or something, I’ll go on Pinterest, and I’ll type in what I have and look for crafts that use what I have, seeing if there’s anything that interests me with what I have.”

Regarding Quilting Arts, Fannie shared how she utilized information there to surmount obstacles.

“Quilting Arts is the place I go for solutions; Quilting Arts, that website, and that company in general. They also have a show on PBS that I watch all the time. There are so many extraordinary artists in the craft world, and what Quilting Arts does is, elevate; we’re all gonna call ourselves crafters, but we’re not really crafters. We’re artists. I think the diminutive of artists is when you assign crafter to it. I don’t think it really describes the effort you put into something and how much time it took you to figure out how to do it.”

This quotation implies a double meaning for Fannie. To her, Quilting Arts are more than a venue to seek advice on how to solve making-related problems. Additionally, she shared the same passionate belief in arts and crafts with the group of members on the website. Here, unlike earlier inspiration-seeking

examples where online social networks are bound to negative feelings, we illustrate another affective dimension where the sense of belonging can be a reason to inform decision-making. We suggest that this positive social bond, as reflected in the definition of Leimeister and colleagues (2004), led Fannie to trust information gathered in this community while making decisions.

5. Discussion

We elaborate on our findings to respond to our research question: How do OSNCs manifest in an everyday making context to influence decision-making? The two overarching situations where OSNCs appear are inspiration seeking and problem solving. This section reports three themes regarding how OSNCs shaped information experiences, including affection, and how they influenced making-related decisions.

5.1. Passive information acquisition

How information is acquired online to inform making-related decisions varies per participant. Active information acquisition is common during the making process, mainly in problem-solving. Participants usually had a concrete question in mind and knew what they wanted to find through OSNCs. YouTube and Reddit are the two most frequently visited media among participants across the making stage. The use of these two sites supports prior literature on the benefit of the technology, particularly Web 2.0, in enriching craft experiences at leisure (Minahan & Cox, 2007; Orton-Johnson, 2014). Beyond purposeful information acquisition, we recognized that passive information acquisition also occurred on YouTube and Reddit. For instance, we found that an encountering episode (Erdelez & Makri, 2020) was typical and could lead participants to decide what to make while seeking inspiration. As shown in Connie’s case, she shared the moment of running into something exciting on YouTube and said, “Oh, I want to try that!” The other passive form of information acquisition on YouTube is monitoring (Bates, 2002), presented when participants followed users of interest to be aware of their latest posts. For example, Fannie engaged in monitoring by subscribing to a YouTube channel whose content inspired her to develop an innovative craft idea. The monitoring episode is also seen on Reddit. As Hazel said, “I use Reddit a lot, and I follow the knitting Subreddit and woodworking Subreddit. Then, when I’m on the website, I’ll see what other people are making [...],” her following of other Reddit users allowed her to keep abreast of popular craft ideas. We suggest that this monitoring behavior is vital to Hazel, who did not actively look for inspiration as often as other

participants. The result shows the value and meaning of OSNCs in an everyday making context in terms of their strength in facilitating passive information acquisition for people to decide what to build. Other than continuing the academic conversation on OSNCs, we argue that this finding can be of interest to designers while building information systems fostering innovation and creativity. To hobbyists, the discoverable and monitorable values of OSNCs are significant, thus affording practitioners insight into developing tools to support these properties without jeopardizing findability.

5.2. Sharing and lurking

Sharing took place in diverse forms when participants employed OSNCs to seek inspiration and reach decisions. What is intriguing to discuss here is the result indicating how participants selected which media to share their work. For example, people showcased their creations on Instagram with close friends. Sharing also happened when participants targeted a more professional audience, as exemplified by Lynne and her use of Behance. According to Lynne, while she relied on Pinterest, Instagram, and Behance to seek inspiration, she tended to share her work only on Behance. This instance may be unique because Lynne was a recent college graduate with a strong background in design and illustration. When involved in this research, Lynne was on the job market, which possibly made her pay much attention to think of promoting her artistic accomplishment. Despite this, we present the dual role of Behance as an online social network to enhance sharing while encouraging inspiration seeking.

Participants did not always share what they did with OSNCs. This is also true for domain-specific media devoted to one specific craft genre, including Ravelry and Quilting Arts catering to textile crafts, Paper Modelers for papercraft hobbyists, and the online course Yvonne joined to learn watercolor. While participants exploiting sources on these media usually had great experiences, they did not necessarily contribute content back and preferred to lurk. We suggest this may be because some participants, including Hazel visiting Ravelry and Timothy frequenting Paper Modelers, considered making an individual practice. Therefore, although prior research noted that collaboration and contribution were underlying tenets of the maker movement (Browder et al., 2019; Hatch, 2014; Kwon & Lee, 2017; Shan & Wang, 2021; Van Holm, 2015), we shed new light on the relationship between making and community participation. We contend that the intimate and individualistic aspect of making may attribute to the lurking behavior in the online setting, expanding the literature on lurking to a sphere characterized by partnership and community spirit. Moreover, we

highlight that while lurking, participants still saw OSNCs as beneficial and, as found in Fannie's case, placed trust in them. This expresses a differing viewpoint on the earlier discussion of lurking (e.g., Nonnecke et al., 2004) to broaden our understanding of this nuanced behavior.

The other interesting finding emerging while discussing sharing and lurking is the high information consumption of participants visiting OSNCs dedicated to a specific craft. To our surprise, all participants visiting genre-specific OSNCs were inclined to frequent other sites to allocate as many resources as possible before finalizing ideas. This argument is also true for Yvonne, who seemed to solely rely on her watercolor learning community at first glance. According to Yvonne, as she moved further on her learning journey, she often referenced YouTube to review and advance her watercolor skills. This result expands earlier research on community building in a distance learning program in higher education (Haythornthwaite et al., 2000). We show the resourcefulness of an online learning community helping people gain knowledge and supporting the long-term pursuit of leisure careers. In providing a novel angle to perceive learning communities as OSNCs in the leisure realm, we think this finding can be a potential path for practitioners to consider how OSNCs may be entwined with longitudinal learning. This can be another layer of thought to add to our earlier discussion on passive information acquisition, i.e., the discoverability and monitorability of OSNCs, displaying a more complex and multidimensional landscape of these media.

5.3. Affective dimension of OSNCs

In addition to the cognitive and behavioral facets of OSNCs, we report their affective dimension. While previous literature acknowledged the information-rich nature of online maker networks and communities (e.g., Instructables, see Pepler & Bender, 2013; Pinterest, see Gilbert et al., 2013; Linder et al., 2014), we found that they had a dark side in a making context. A symbolic example is Kimberly's perception of Pinterest, where she thought that seeing what others achieved would discourage her from moving forward. The other relevant case is Evelyn, who complained that she often lacked confidence after browsing social media like Instagram. Based on Evelyn, she would begin procrastinating when plagued with self-doubt, though she realized how to get used to it as an artist and a hobbyist. Such a finding is aligned with the negative outcome of information overload (Bawden & Robinson, 2009) and how emotions hamper innovation and contribution (Lee et al., 2014). We demonstrate that OSNCs are a double-edged sword that, though informative, can bring gloomy

moods that build barriers to creative efforts, which is opposed to the fun essence of hobbies.

6. Conclusion

The maker movement has democratized making and redefined entrepreneurship. Underpinned by de Certeau's (1984) everyday life practice theory, we conducted diary studies and semi-structured interviews with 25 adult arts and crafts hobbyists to uncover the potential relationship between making and OSNCs. The findings show that two major situations where OSNCs affect decision-making are seeking inspiration and solving problems. YouTube and Pinterest are the two most frequently mentioned media for ideation, and participants turned to YouTube and Reddit the most when getting stuck. We also report three themes regarding how OSNCs shaped decision-making to better understand the creating process.

One of the main limitations of this study is that our data on OSNCs may not be exhaustive due to the small sample size. We also acknowledged an uneven distribution of arts and crafts types that may make generalizations difficult when applying the findings to the entire maker community. Reflecting on these weaknesses, we suggest future work conducting mixed or quantitative research to explore how making hobbyists lurk, interact, and contribute to OSNCs in the long term. Further, we would like to highlight the value of utilizing diaries to probe making, which we have addressed more in another paper, including its potential problems. We believe taking a creative approach to exploring the maker community is significant to conceive practical implications for service and system development, empowering people to seamlessly navigate media while producing knowledge.

7. References

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