Crowdfunding: Motivations and Deterrents for Participation

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Crowdfunding is changing how, why, and which ideas are brought into existence. With the increasing number of crowdfunded projects, it is important to understand what drives people to either create or fund these projects. To shed light on this new social phenomenon, we present a grounded theory of motivation informed by the first cross-platform qualitative study of the crowdfunding community. By performing 83 semi-structured interviews, we uncover creator motivations which include the desire to raise funds, expand awareness of work, connect with others, gain approval, maintain control, and to learn; and supporter motivations which include the desire to collect rewards, help others, support causes and be part of a community. We also explore deterrents to crowdfunding participation, including, among creators, fear of failure, and, for supporters, lack of trust. Based on these findings, we provide three emergent design principles to inform the design of effective crowdfunding platforms and support tools.

1. INTRODUCTION

Crowdfunding—the online request for resources from a distributed audience often in exchange for a reward - provides a new way for individuals and teams to solicit financial support from a distributed audience. Unlike traditional fundraising methods, such as applying for funds from banks or foundations, crowdfunding allows creators, people who request resources, to appeal for funds directly from supporters, people who give resources, through online platforms [Gerber et al. 2012].

Since the first crowdfunding platform was launched in 2001 [Knowledge @ Wharton 2010], crowdfunding has supported a wide range of project types and fundraising goals; from video game designers who raised more than $1,000,000 from 60,000 supporters to create a game console [Kickstarter.com 2012a], to product designers who raised over $30,000 from 2,000 supporters to produce an eco-friendly pencil [Kickstarter.com 2012b], to an architect who raised $4,000 from 100 people to improve a local park [Kickstarter.com 2011a].

Today, there are 452 platforms across the world which together channeled $1.47 billion in donations in 2011 [Esposti 2012]. Crowdfunding platforms charge fees for processing donations resulting in over $60 million in revenue for crowdfunding platforms. Despite the rapid growth of the online community of creators and supporters linked by crowdfunding platforms, our understanding of this new social phenomenon is limited. To gain much-needed insight, we designed and implemented a qualitative study to understand this emerging online community. Our research seeks to answer the following question:

What motivates and deters participation in the crowdfunding community?

By understanding motivations and deterrents, as human computer interaction researchers, we can identify opportunities to refine and redesign crowdfunding platforms to improve the user experience, and to better recruit and sustain participation in this rapidly growing community [Kraut and Resnick 2012].

We organize this paper into three sections. The first section introduces crowdfunding and related research. The second section presents our findings, identifying motivations and deterrents from both the creators and supporters perspective. The third section offers emerging design principles to inform the design of crowdfunding platforms and support tools.

2. CROWDFUNDING

Crowdfunding is derived from the broader concept of crowdsourcing, the outsourcing of problem solving tasks to a distributed network of individuals [Howe 2006]. Crowdfunding makes it possible for those with limited access to traditional sources of financial backing, such as banks or venture capitalists, to acquire financial resources necessary to pursue their projects. Through online transactions, crowdfunding also gives people with disposable income a new way to give to others and "invest" in projects that might not happen without their financial support.

Popular crowdfunding platforms such as Kickstarter, IndieGoGo, and RocketHub rely on existing web-based payment systems like Amazon Payments to facilitate the exchange of resources between creators and supporters.[1] Crowdfunding platforms provide dedicated project pages, analytics and project monitoring, and tutorials prior to and throughout the campaign. Creators also rely on additional social media platforms like Facebook and YouTube to publicize their request for funds from supporters.
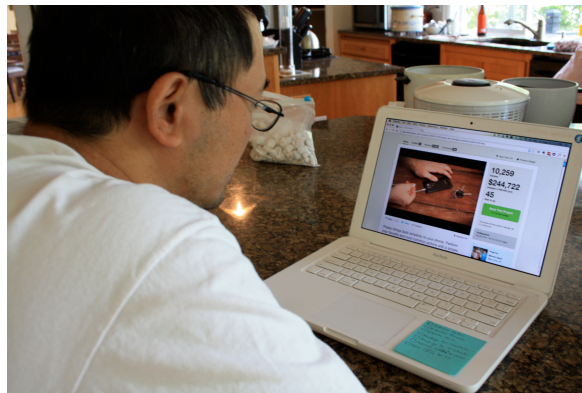

Figure 1: A supporter considers donating $10 to a campaign creator who had already raised 200,000 dollars to design and manufacture an iPhone flashlight app.

To launch a crowdfunding campaign on an online platform, creators engage in five types of work [Hui et al. 2013]. First, they *prepare* the campaign material. Preparation involves creating a project profile, which typically includes a title, video, description of planned use of funds, funding

[1] Online crowdfunding platforms differ in their use of terminology referring to people who request funds as "creators," "creatives," "designer," "inventor," or "activists" [Kickstarter.com 2013b; IndieGoGo.com 2013; Rockethub.com 2013]. People who pledge funds are referred to as "backers," "fuelers," or "funders" [Kickstarter.com 2013b; IndieGoGo.com 2013; Rockethub.com 2013]. In this paper, we refer to people who request funds as "creators" and people who provide resources as "supporters".

goal, campaign duration, and reward descriptions. Creators fill out these recommended and required fields online, and if the project is approved by the platform, the platform presents their work in a pre-formatted page where visitors can choose to donate (see Figure 2). Next, they *test* their campaign material. In this stage, creators solicit feedback on their video and campaign description as well as engage their audience in deciding the design direction. Third, they *publicize* the project during the live campaign. Publicizing involves reaching out to potential supporters to request support. Creators use a variety of means to reach potential supporters, including the crowdfunding platform itself, email, and online social media, as well as offline communication technologies and in-person requests. Once the campaign is over, they *follow through* with their proposed project. This stage of work involves producing and delivering the promised rewards [Hui et al. 2013]. Rewards range having one's name acknowledged in the movie credits, to getting the new crowdfunded product, to receiving a simple "thank you" email from the creators. While some may consider these four stages as all the stages of crowdfunding work, we also identify that many creators also go on to contribute back to the community by providing advice and funding other projects.

For example, two friends with an idea but no connection to capital raised $306,944 in 37 days to develop a coffee accessory on Kickstarter, a popular crowdfunding platform [Kickstarter.com 2011b]. In the process of crowdfunding, they explained in a video and written description how their accessory worked, marketed the product through the crowdfunding platform and social media, engineered the product, and delivered the final product to 4,818 supporters.
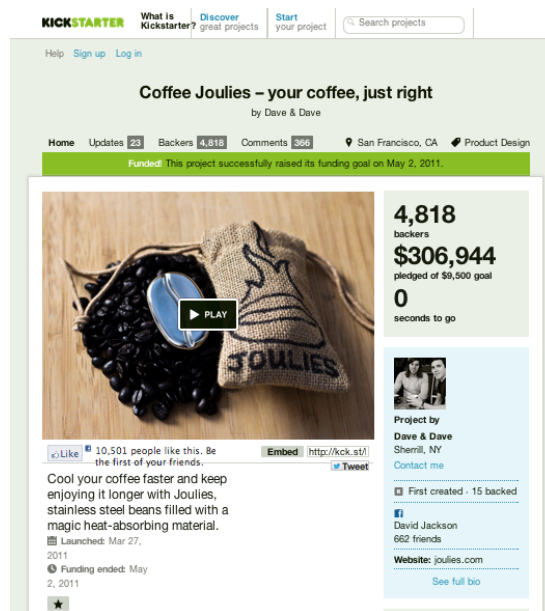

Figure 2: Kickstarter project page for a coffee accessory including a video, written description, links to social media, contact information, status updates on number of "backers," dollars pledged, and time remaining in campaign. Screenshot with permission of Coffee Joulies.

Online crowdfunded projects vary in scope and span across many fields, including art, comics, dance, design, fashion, film, food, games, music, photography, publishing, technology, theater, science, and service. Amounts raised range from a couple dollars to over ten million dollars. The percentage of people who reach their goal on the most popular crowdfunding platform,

Kickstarter, is 43% [Strickler 2011].[2] Regardless of whether the goal is met, creators maintain intellectual property.

Crowdfunding platforms employ two different funding models: *all-or-nothing* or *all and more*. The *all-or-nothing* funding model, employed by Kickstarter, requires all funds to be returned to the supporters if the creators do not reach their stated goal [Kickstarter.com 2013b]. The *all and more* funding model, employed by RocketHub allows creators to keep all funds even if their funding goals are not achieved [Rockethub.com 2013; IndieGoGo.com 2013]. If the goal is reached, platforms require the creators to pay a platform usage fee to the crowdfunding platforms for services (between 3-9% of funds raised) and payment processing fee (between 3-5% of funds raised) to an established online payment processing system, such as Amazon Payments or PayPal [Kickstarter.com 2013b; IndieGoGo.com 2013; Rockethub.com 2013].

3. RESEARCH ON CROWDFUNDING

Despite the growing popularity of crowdfunding, there is little scholarly research in this domain. Economists have noted that crowdfunding avoids some of the barriers that can impede offline financial transactions and that crowdfunding can be used by creators to disseminate product information, increase consumer awareness, and estimate consumer willingness to pay [Belleflamme et al. 2010]. Crowdfunding can also provide insight into the experience goods market, where some have argued that participation is governed more by peer effects than network externalities [Ward and Ramachandran 2010].

Despite the link between motivation and contributions to online communities [Kraut and Resnick 2012], few HCI scholars have investigated motivations for crowdfunding through online platforms. In a 2010 study, Lambert and Schwienbacher analyzed results from a questionnaire taken by 21 entrepreneurs, only 3 of whom used an online platform to seek funding [Lambert and Schwienbacher 2010]. The remaining 18 entrepreneurs used personal websites and other online social media tools to crowdfund. Lambert and Schwienbacher concluded that entrepreneurs were motivated to raise money, get public attention, and obtain feedback. In addition, Schwienbacher and Larralde also performed a case study of one company that raised money using crowdfunding techniques [Schwienbacher and Larralde Forthcoming]. Through one interview with the company founder and a survey questionnaire taken by company supporters, Schwienbacher and Larralde concluded that the creator participated in crowdfunding not only to raise funds, but also to expand his network, while supporters expressed the desire to partake in the "exciting adventure of building a startup" and also to expand their network with other supporters.

In an exploratory study, Muller and colleagues at IBM Research allocated money to 511 employees at IBM Research to better understand "enterprise crowdfunding" – or crowdfunding within an enterprise [Muller et al. 2013]. The research team asked employees to "spend" money on employee-initiated proposals posted on an Intranet site. The trial resulted in proposals that addressed diverse individual and organizational needs with high participation rates. Further, they found that "enterprise crowdfunding" supports inter-departmental collaboration, including the discovery of large numbers of previously unknown collaborators and the development of organizational goals [Muller et al. 2013].

Our work extends prior research by exploring the factors that motivate or deter participation among crowdfunding creators and supporters. In this study, we investigate a sample of online crowdfunding users who either launch or fund projects on crowdfunding platforms. By studying independent creators and supporters who use crowdfunding platforms, we hope to gain a broader

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[2] Success rates for other platforms are not publicly available.

understanding of the community. Findings from our research can inform the design of new tools to support the growth of crowdfunding platforms.

4. RELATED RESEARCH

Crowdfunding combines elements of online philanthropic behavior, online consumer behavior, online peer-to-peer lending, and online peer production. Therefore, we examine research from psychology, marketing management, economics, information science, and human computer interaction. In each case, we seek to sharpen our theoretical expectations for why people choose to participate or refrain from participating in crowdfunding.

4.1 Online Philanthropic Behavior

Online philanthropy is online giving of financial and social capital to promote human welfare. Researchers find that supporters are motivated to give because of feelings of sympathy and empathy toward the cause [Rick et al. 2008]; feelings of guilt for not giving [Cialdini et al. 1981]; and hopes of strengthening their social identity [Aaker and Akutsu 2009] and social status [Becker 1974; Glazer and Konrad 1996]. Management scholars find that non-profit organizations are motivated to fundraise online predominately because it allows for the easy and safe transfer of funds from donors [Waters 2007]. Many crowdfunding projects are framed as philanthropic, and as such we expect some of the same motivations to figure in crowdfunding as they do in online philanthropy. For non-philanthropic crowdfunding projects, we expect feelings of empathy and guilt to be less relevant, while social identity and social status concerns may figure more prominently.

4.2 Online Consumer Behavior

Crowdfunding can be framed as a type of market, where creators produce and market their ideas or products, and supporters consume them. Thus, aspects of marketing and consumer research are relevant to understanding motivations for participants in crowdfunding. Psychologists and marketing scholars find that goals, information and affective processing, involvement [Jenkins 2009], and perceptions of choice [Iyengar and Lepper 2000] are key drivers of the consumer decision process. Research in information systems and management find that online consumption is facilitated by perceptions of internet security and by navigation functionality [Chellappa and Pavlou 2002; Kim et al. 2011; Sefton 2000; Miyazaki and Fernandez 2001]. Many of these relationships interact with context and user type: Economists, for instance, find that novice internet users make purchase decisions based on brand recognition, but become less trusting of brands as they become more proficient with internet searching [Ward and Lee 2000].

Similar to e-commerce, crowdfunding platforms allow supporters to safely and easily exchange financial resources for a particular product, service, or experience again and again. Unlike on e-commerce platforms, such as on Amazon.com, crowdfunding supporters often pay to receive a product many weeks or months prior to its production, and there is always a risk the product will not come into being at all. We expect concerns about trust to be relevant for crowdfunding supporters who give in exchange for a specific reward.

4.3 Online Peer-to-Peer Lending

The interpersonal creator to supporter intimacy that exists on crowdfunding platforms also resembles elements of peer-to-peer lending, another nascent phenomenon similar to crowdfunding, in which individuals bid on microloans sought by individual borrowers. Like crowdfunding, few peer-to-peer lending sites existed before 2005, and thus scholarly research on the phenomenon is currently scant. Like peer-to-peer lenders, supporters on crowdfunding platforms take a financial

risk when giving money to a project creator. Unlike peer-to-peer lending sites, supporters do not expect to be repaid monetarily. With regard to the motivations that drive individuals to engage in peer-to-peer lending, scholars of information science and computer science find people are more likely to lend money to peers who share reputable hard information in their extended network [Lin et al. 2009], such as those with a good credit score [Potzsch and Bohme 2010]. These researchers find that soft information, such as personal information, leads to a more positive perception of the borrower, but it is not enough to reduce borrowing interest rates [Potzsch and Bohme 2010].

4.4 Online Peer Production

Among the phenomena we have addressed thus far, online peer production for crowdsourced platforms, such as Wikipedia, is the one where scholars have shown the most interest in understanding the issues of motivation for participating online. Both the apparent surprise of individuals working without financial compensation as well as the prospect of leveraging the collective intelligence and efforts of the crowd to tackle the world's problems have attracted the observed scholarly attention [Malone 2009]. Scholars have identified a variety of motivations for contributing to online communities including participants' anticipation of learning, increased social standing, peer companionship and approval, autonomy, and the prospect of improving society [Kraut and Resnick 2012]. While the aforementioned motivations are all located in the individual, scholars have also noted a variety of relational mechanisms that affect participation; these include recruiting and clustering similar others to increase identity based commitment, careful socialization and integration of newcomers, encouraging commitment over time, and coordinating contributions to maximize benefits for the community [Kraut and Resnick 2012].

While this research has highlighted the critical role of recruiting and retaining members of voluntary and "free" online communities primarily organized around knowledge sharing, few researchers have examined the role of recruiting and retention in the crowdfunding context which is characterized by the sharing of information and financial resources in exchange for rewards. Like communities built on peer production, we expect that crowdfunding platforms rely on similar individual and relational mechanisms to motivate creator and supporter participation.

5. METHOD

5.1 Study design

We followed a grounded theory approach and performed semi-structured interviews with a representative sample of participants from the crowdfunding community, a common method in qualitative studies in human computer interaction [Bailey and Horvitz 2010]. As is typical with grounded theory [Glaser and Strauss 1967] this study was initiated with open qualitative data collection. Given the limited research in this domain, we did not want to propose specific hypotheses about what was to be found and unnecessarily constrain the emergent framework by precisely identifying and operationalizing variables [Glaser and Strauss 1967]. The study was framed with a broad research question: **What motivates and deters creators and supporters from participating in crowdfunding?**

An examination of a diverse set of participants including all types of creators and supporters from multiple platforms and project categories in the crowdfunding community is needed to provide a rigorous framework for why people create and support projects on crowdfunding platforms. Gathering contextual details about motivation will inform our three empirically grounded design principles for crowdfunding.

5.2 Participants

We interviewed 83 US-based participants (21 women) over an eleven-month period. Two participants had exclusively created projects; 10 participants had exclusively funded projects; 48 participants had both created and funded projects. We also interviewed 20 participants who considered participating in crowdfunding (as a creator or supporter) but decided against it.

Creators launched projects from the categories of Art (7), Comics (1), Dance (1) Design (15), Education (1), Fashion (2), Film & Video (7), Food (4), Games (10), Music (3), Photography (3), Publishing (6), Science (4), Technology (1), and Theater (3), which cover the main categories on the crowdfunding platforms that we observed. Approximately 50% of project creators met their fundraising goal on at least one of their projects. Thirteen creators launched more than one campaign, ranging between one to nine campaigns per creator interviewed. Most creators held a full-time profession outside of their campaign, while dedicating between 30 minutes and 11 hours a day on weeknights or weekends working on their crowdfunding project. Three informants relied on launching crowdfunding campaigns as their primary source of income.   Creator ages ranged from 20 to 52 years old and raised between $71 and $313,371. Supporters funded projects from all the main categories on the crowdfunding platforms that we observed, supporting between 1 and 81 projects with a mode of 1. Supporter ages ranged from 20 to 59, donating between $5 and $250 dollars with a mode of $10. We find that our sample of crowdfunding participants is representative of the crowdfunding population [Kickstarter.com 2013a].

We selected participants from Kickstarter, RocketHub, and IndieGoGo because they are the most popular and successful platforms in the US [Alexa.com n.d.]. Fifty percent of participants were recruited through random sampling and 50% through snowball sampling, which allowed us to identify both typical and unique members of the community. Participants were not compensated for their participation.

5.3 Procedure

We used semi-structured interviews to collect data. Each interview began with an explanation of the method and a description of our research interest in crowdfunding. We explained that we would be recording and transcribing interviews, and that we were not paid consultants or evaluators for any crowdfunding platform. We guaranteed that no informants' names, titles, project title, or positions would be revealed. We reiterated our commitment to objective recording and anonymity throughout the data collection.

Our semi-structured interview protocol was divided into three sections. In the first section, we asked participants about their professional background and the project with which they were involved. During the second phase, we asked participants to describe their introduction to crowdfunding platforms and current involvement. During the third and final phase, we asked them their motivations to make the choices they made and to share any additional comments.

The average length of the interview was 30 minutes. Sixty-four of the interviews were conducted over Skype or phone due to the wide geographic distribution of participants. The remainder of the interviews were conducted face-to-face. All interviews were audio-recorded and transcribed for analysis immediately following the interviews. Interviews were conducted at different stages of the crowdfunding process (before, during, and after their campaign) to understand if motivations differed over time. The advantage to this research approach is the ability to collect in situ data, not just reflective data; the disadvantage is that bias is introduced through self-report and participant observation [Spradley 1980].

5.4 Data Analysis

We employed selective coding and analysis [Spradley 1980] to understand what motivated or

deterred participation in crowdfunding. First, we began a process of selective coding in which we flagged each instance where informants communicated motivations or deterrents. After identifying all of the instances, we clustered motivations and deterrents into conceptual categories. Simultaneously, we researched pertinent literature to understand existing theory and uncover related phenomena. Initial data analysis began after 14 interviews. The remaining interviews were used to gather data pertaining to emergent themes [Mintzberg 1979]. Moving between inductive and deductive thinking, we uncovered motivations and deterrents for participation. This iterative process allowed for the development of initial inferences. We reviewed all relevant data and evaluated the strength of our evidence to inform whether inferences should be modified or abandoned based on insubstantial evidence. Coding was performed in parallel cycles where two researchers independently identified codes based on emergent themes. Both researchers then met once a week to compare codes and establish agreement. This pattern was repeated until all interviews were reviewed and the categories of themes stabilized and enforced with quotes.

The next section presents these themes grounded in data collected during the interviews. All quotations are directly transcribed from interviews without grammatical corrections. We believe these themes present a grounded theory for why people are motivated or deterred to participate in crowdfunding.

6. CROWDFUNDING MOTIVATIONS AND DETERRENTS

We present evidence from the semi-structured interviews with the creators, supporters, and those who chose not to participate. First, we discuss motivations to become a creator including a desire to raise funds, expand awareness of work, connect with others, gain approval, maintain control, and to learn. Second, we present findings on motivations for supporters including a desire to collect rewards, help others, support causes and be part of a community. We conclude with findings on deterrents for participation in crowdfunding. While we categorize motivations and deterrents as distinct from each other, in reality, they are inter-related [Reiss 2004]. We present the findings in the order of prevalence for creators and supporters.

	Motivations	Deterrents
Creator	Raise Funds Expand Awareness of Work Form Connections Gain Approval Maintain Control Learn New Fundraising Skills	Inability to Attract Supporters Fear of Public Failure and Exposure Time and Resource Commitment
Supporter	Collect Rewards Help Others Be Part of A Community Support A Cause	Distrust of Creators' Use of Funds

Table 1. Motivations and deterrents to crowdfund for creators and supporters.

6.1 Motivations to Become A Creator

6.1.1   Creator Motivation: Raise Funds

Creators are motivated to use crowdfunding platforms because it provides an easy, efficient, organized way to solicit and collect financial support from many people in a distributed network. By using web-based technologies, such as online payment systems and social media, creators are able to market and solicit resources safely and easily through crowdfunding platforms. A creator of a theater project described:

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"[Crowdfunding] was good for us because we didn't have a way to collect money."

Crowdfunding is particularly useful for people who are unable to get financial support from traditional funding sources, such as banks, angel investors, and venture capitalists. Instead of raising a large sum of money from one person or organization, creators report being able to raise similar sums of money through a large number of supporters contributing small sums. A creator of an educational toy explained:

"Instead of having one or two angel investors or manufacturers, you have like 50,000 micro-investors."

In addition, unlike applying for grants, which are not always approved, certain crowdfunding platforms, such as IndieGoGo and RocketHub, allow creators to keep all of the funds they raise. A researcher described his return on investment by launching a crowdfunding campaign:

"I'm batting 100% in terms of getting a couple of thousands of dollars."

Some creators are also motivated by the potential to raise funds quickly – perceiving crowdfunding as less time consuming than some other traditional fundraising methods, such as holding a fundraising event. A choreographer who raised approximately $16,000 on a crowdfunding platform reported:

"[A fundraising event includes] an auction, entertainment, food, bar, getting the space, decorations, invitations. All that easily takes 100 hours. The [crowdfunding] campaign took somewhere between 40-50 hours. There's no way you could do an event for that little time."

A game designer explained that other fundraising sources required extensive applications and if approved, required months of waiting before actually receiving the funds. He described how he was motivated to crowdfund because the financial response was more immediate:

"We needed to make a lot of money…in a short period of time, and we didn't have enough time to reach out to a foundation, or a grant or whatever…they told us we had to fill out a bunch of forms. It was just so complex; we decided…let's just go straight to the people."

The game designer was not only motivated by the potential speed of receiving funds but also the idea that supporters were able to chose or not choose to give.

"It feels, you know, democratic. They can choose to give or not to give."

Creators are motivated to participate in crowdfunding because they were able to request and receive financial support directly from many individuals in a distributed network. Creators perceived the method as efficient, given their limited time, and fair to people in their network who may decide to give or not give. These transactions are made possible by web technologies such as online payment systems and crowdfunding platforms.

6.1.2   Creator Motivation: Expand Awareness of Work

In addition to raising financial resources, creators are motivated to expand awareness of their work by publicizing their crowdfunding project. Unlike traditional fundraising methods in which only the application reviewers read about the project, crowdfunding provides an avenue for anyone on the Internet to view one's project through a brief video and written description. Creators expand awareness by posting links to their project in social media and sending emails about their

campaign to friends, family, and news media outlets. A dance project creator described how crowdfunding provided dual benefits of raising funds and spreading awareness:

"[Crowdfunding] is actually a really great way that we got more people to learn about our project. You do [crowdfunding] to fundraise, but you also do it for marketing to let people see [sic] about your project."

Another creator of a mobile app project described how he used crowdfunding solely to spread the word about and distribute his project:

"We didn't even really care if we got money because [our product] is such an insanely low cost thing to run. So, we ended up just doing crowdfunding in order to get [our product] out."

We found that some creators were motivated to use crowdfunding because of the potential to receive attention from the popular press. An anthropological researcher described how she was motivated to use her crowdfunding campaign to expanded awareness of her research beyond her academic peers:

"CNN covered [my research], and Forbes covered it. And then everything just went crazy after that... These are things that don't normally happen if you just have a grant proposal, or you have an article in the journal, you know, that maybe nobody reads."

By reaching out to the general public through news media, crowdfunding allows people to raise awareness with people with whom they are not closely connected. These people have the ability to reach new groups of people with whom the creator is not directly connected [Granovetter 1973]. In the popular press, creators advise reaching out to as many different audiences to amplify their reach [Burt 1992]. A creator who posted her non-fiction writing project on a crowdfunding platform explained:

"I really wanted to use it more as a way of sharing the project with a different audience. Most of the donors are not really like my closest friends. They're kind of on the outer rings of my universe."

Creators are motivated to expand awareness of work beyond the close social network. With crowdfunding, creators are given the opportunity to market their projects to the general public through social media and popular press.

6.1.3   Creator Motivation: Form Connections

In addition to raising funds and expanding awareness of work, our data suggests that creators are motivated to engage in crowdfunding to connect with people through a long-term interaction that extends well beyond a single financial transaction. Because crowdfunding platforms store supporter contacts and provide online messaging services, creators are able to easily communicate with supporters in answering questions and giving project updates. A creator of a board game project described his connection with supporters:

"[The funding process] creates a longer-term connection to people that, you know, weeks later, months later, you're still interacting, and they are expecting to get something… you can build relationships with people, you know, over the course of time."

Such long-term interactions allow creators to collaborate directly with supporters, engaging them in the creative process. A product designer asked his supporters which color binding they preferred for his winter sports gear product after showing them pictures of the production

prototypes in a project update. A creator of a community design project described her preference for consumer engagement throughout development. She noted:

"[Participating in crowdfunding] made me realize that I don't want my projects to be like only mine…I want others to share in my projects."

Crowdfunding platforms provide an easy avenue for communication and financial transactions between creators and a large group of people. For instance, some creators use crowdfunding to find more interested consumers in an effort to pre-sell their product. One creator of a product design project reported:

"[My project partner] already had enough interest that she knew that she wanted to go [through] with manufacturing. Essentially, we used crowdfunding to generate more preorders."

In contrast to traditional marketing methods, crowdfunding provides a quick and alternative way to advertising a product and building a fan base. A creator of a game project explained:

"You're building this group of people who are very enthusiastic about your idea. It can take years for a company to develop a fan base, but [with crowdfunding], you get these people who get in on the ground floor."

The long-term relationship stands in contrast to the short-term relationship that occurs in many online financial transactions, such as buying a product on the Amazon marketplace. However, this desire for social contact and peer companionship is consistent with many online communities that are not focused on financial transactions, such as online discussion communities [Kraut and Resnick 2012].

Creators are motivated not only to make connections with their supporters, but also other creators, which they see as similar to themselves. One creator described the experience of meeting a fellow creator:

"There's definitely…a secret handshake…If you met someone who created a [crowdfunding] project, you immediately have something to talk about…you can cut through any degree of small talk and talk about…something you really, truly care about."

The shared experience of crowdfunding connects creators on and offline allows for collaboration and informal learning. An interaction designer describes his relationship with other creators online:

"It's a give and take. Like, they ask me for advice and I look at their projects for advice...Every week or so, somebody emails me asking questions about [crowdfunding], like, "My project got rejected by [a crowdfunding platform], how do I redo it?" And I'm like, you need to change this, this and this...I can help you with that."

In summary, creators are motivated to participate in crowdfunding because they can expand their fan base and connect socially with like-minded people through an extended period of online engagement. Creators form connections through crowdfunding platform communication mediums, social media, and face-to-face.

6.1.4   Creator Motivation: Gain Approval

In addition to raising funds and awareness and establishing connections, the data suggests that creators are also motivated to satisfy a desire for approval – both for the self and for their work. The number of supporters and amount of dollars raised is often seen as a quantification of the

value of one's project. A writer describes how the community's approval increased her confidence in her work through online conversation:

"You sort of wonder if people are going to like you and like your work, and so I definitely got more confident once people were clearly interested in it and clearly engaging in the dialogue and supporting me financially."

In some cases, the desire for approval was a higher priority than the desire for funds. A non-fiction project creator commented on how community support gave her confidence to complete the project:

"The funny thing is, I probably gave other people as much money as I've just made on this [crowdfunding] campaign. So, I could have kept that money in my pocket. But, the whole thing is like, a load of confidence."

Creators seek funds from a community of people who care not just about the project, but also about the individual's success. People's beliefs in their ability increase when they have successful experiences and receive public recognition of their success [Bandura 1997]. A creator describes how crowdfunding provided validation:

"You are embedding yourself in an active community…You are being validated…Friends and families become evangelists for you…You have people saying, I believe in you."

Online encouragement and financial backing supports perceptions of approval, which strengthens beliefs in ability to complete a task [Bandura 1997]. A creator describes how approval of his first project convinced him to start a second:

"I don't think I would have been as empowered to go out and do [my second project] so much if I hadn't had the success with the first project…It's all about forging relationships with people and encouraging them."

Approval for an idea can also be considered as positive feedback on one's project. A creator describes how he uses funding success to minimize risk long term and determine that his work is worthwhile to pursue:

"I have no idea if people will want [my product]. So like if people don't want to buy it, and they don't like it … there won't be any. Then I won't have made them... It's just an incredible way to take a risk and it's a totally safe risk to take."

Creators are motivated to participate in crowdfunding to gain approval for themselves and their work. The approval can come in the form of monetary backing, evangelism, and feedback. Unlike other online communities, monetary backing strengthens validation. Crowdfunding platforms provide a unique opportunity to satisfy multiple motivations that traditional funding mechanisms, such as grants and venture capital funding, and online social communities, do not necessarily satisfy.

6.1.5   Creator Motivation: Maintain Control

Furthermore, we find that creators are motivated to participate in crowdfunding to maintain control over their work rather than forfeiting control to the investor. Unlike many traditional fundraising methods, funding is not contingent upon a select group of people's preferences, such as those of an angel investor or venture capitalist. For example, a video game designer explained:

"In game development, the problem is, publishers like Electronic Arts or anyone else invest in developing studios, so they get to say what they do, and they also get creative control over a lot of stuff because of the contracts they sign. And this way [through crowdfunding], it's the gamer that decides which projects they want to do, what they want the developer to do, and that's a big deal for us because we never had a say in any of it before. It's usually the guys with the billions of dollars that make all the decisions for us."

Before crowdfunding, creators often had to trade project control for funding and other benefits associated with working under a large label. Now that crowdfunding provides an alternative way to raise funds, creators have more freedom in deciding which development route to take. However, autonomy may come at a cost. One non-fiction project creator described the tradeoffs he made to maintain control of his work:

"Creative control [and] editorial control... You gain those in self-publishing, but you're trading marketing, an entrenched network of contacts, trustworthiness from being associated with an established label...I prefer the tradeoffs that I've taken for what I'm giving away."

Our findings suggest that maintaining control over one's project is often more valuable than institutional legitimacy associated with a major producer. As crowdfunding is becoming more well known, platforms themselves often provide institutional legitimacy that manufacturers once did.

Maintaining control gives people confidence in their ability to accomplish a task on their own, thus building self efficacy [Bandura 1997]. A creator of a food project described the exhilaration of working on her own terms:

"It was this whole fearless approach...It just kind of made me feel like, I can do anything, and I should do anything. Like, no one should be held back by you know, whatever. That was the first lesson for me, was just going for what I wanted with the support of the community with me."

Creators are motivated to participate to maintain control– making choices about the direction of the work. Autonomy supports feelings of competence and allows creators to execute their project true to their vision.

6.1.6   Creator Motivation: Learn New Fundraising Skills

Having control over a crowdfunding campaign forces creators to gain experience in areas outside their professional expertise. Although creators did not initially report being motivated to learn, those who had completed campaigns, both successes and failures, were motivated to participate again to improve skills to fundraise effectively, such as marketing, communication, management, risk-taking, and financial planning. As one creator noted:

"I went to art school. I went to graduate school. We didn't have one single class on fundraising. We didn't have anything on business at all. And I just think if you're going to make it as an artist, ...it's also about being persistent and strategic. [Crowdfunding] is a really do-able way to really practice and hone [entrepreneurial] skills."

In addition to getting hands-on business experience, crowdfunding also offers a key source of feedback that helps everyday people learn about the novelty and usefulness of their ideas in addition to providing a platform for implementation. Posting a project on a crowdfunding platform requires creators to address a general audience. A creator of a research project explains how posting on a crowdfunding platform required her to learn how to frame her work for different audiences:

"I really think [crowdfunding] helped me communicate with the public and get them interested in my work."

To communicate this work, creators learn new forms of communication in which they did not have prior experience, such as videography, photography, and writing for the general public. A creator reported enjoying learning how to make a video for her crowdfunding page:

"I've never made a video before for my research…it was really a lot of fun, so I really enjoyed that. That was not something I had ever done before."

Creators also learn what kind of language to use in their pitch. One informant noted:

"I learned all of those tips about, you know, keeping things very progressive sounding, and keeping the vocabulary very positive versus desperate."

Informants reported the usefulness of learning new ways of communicating in order to reach a larger audience. Each of these creators described how they plan to utilize these learned business and communication skills and strategies in the future if they start another campaign.

Overall, creators are motivated to participate in crowdfunding to raise funds, expand awareness of their work, form connections with others, gain approval for their work and themselves, maintain project control, and learn new skills. Crowdfunding platforms provide a unique opportunity to satisfy multiple motivations that traditional funding mechanisms do not necessarily satisfy. The next section reports findings of the research on supporters, those who provide resources to the creators.

6.2 Motivations to Become A Supporter

6.2.1   Supporter Motivation: Collect Rewards

One motivation of supporters in crowdfunding communities is the desire to collect external rewards such as an acknowledgment, a tangible artifact, or an experience. An acknowledgment may come in the form of a telephone call, while a tangible artifact may be a CD or gadget. An experience may involve, for instance, meeting with the creator. The creator's goal is to provide rewards that satisfy the supporters' desire to collect. A person who funded an iPad accessory describes his anticipation to use his future reward (the accessory):

"I like to buy things that I can play with."

Many supporters refer to the transaction as "buying" and "getting," suggesting that crowdfunding shares some elements with the consumer experience. However, unlike most transactions in the formal economy, supporters give money and then wait for several weeks or months before receiving their reward. Waiting is a common practice in the informal economy, which unlike the formal economy, is not taxed or monitored by government. For example, a person may pay their friend to create a custom bike frame in their garage and wait months before receiving the finished product. The supporter puts forth funds prior to product creation, trusting that the creator will deliver on his or her promise.

Even though supporters may delay gratification, they are motivated to increase their funding amount to get a desired reward. This suggests that supporters are aware of the value of the product, service, or experience that they will receive in exchange for their financial support. A supporter who contributed funds to a documentary film project commented:

"I'm not going to give them 5 dollars, I'm going to give them 10 dollars because 5 more dollars will give me a high definition download of this film. That's worth it."

Supporters exhibit consumer behavior, expressing interest in receiving a reward in exchange for giving money. However, the fact that they are willing to pay prior to reward creation and wait weeks or months sets this type of transaction apart from traditional consumer transactions.

6.2.2   Supporter Motivation: Help Others

While many supporters are motivated to collect, others are motivated to "give." This behavior resembles philanthropic behavior. Supporters express a strong desire to help creators with whom they have a personal or extended connection. One supporter explained:

"I've funded projects where I have a personal connection to the person making the appeal."

When posting projects on crowdfunding platforms, creators learned about supporters who had wanted to support them but previously weren't able to do so. An oceanographer noted:

"It turns out that there were a lot of friends and family that wanted to support what I was doing and didn't have an avenue to do so. [Crowdfunding] provided an avenue."

Yet, the connection to the creator is not always personal. In one example, the keyboardist of the British band, Marillion, explained to his fans that the band could not embark on a US tour for lack of funds. In response, the fans created a crowdfunding campaign and raised more than $60,000 to fund the tour [Spellman n.d.]. Fans contributed time, effort, and money to help the creators.

Our data also suggests that supporters can be willing to prioritize others at their own expense to help a friend in need. A supporter described how she decided to monetarily support her friends even though she had limited financial resources:

"After having lost my job in May, I haven't had any extra money whatsoever. I hardly have five dollars to my name...But, for the most part, if a friend is in need I'll try to help him out as best as I can."

Supporters are also willing to support people whom they do not know well. A young professional who supported a journalism project stated:

"It's [my friend's] brother, I'll just give him some money. Like, that will be nice…I think they were pretty close to their goal, but they hadn't quite reached it at that point."

Supporters report the desire to help creators who are close to their funding goal in hopes that they make a meaningful impact. And they can track the creator's progress towards on the project page. A supporter describes his desire to help a friend who wanted to sell his music album:

"[His project] was something like $500 short at the time, and I told him, if it doesn't go over the number the day before, I will put the rest of the money in…I'd seen him work so hard on this material. It was really important to me to make sure that the project got funded."

If a supporter has a personal connection to a creator, he is also more likely to be aware of the amount of work the creator has put into the project. Crowdfunding provides supporters with a way to support creators with unique ideas. One supporter of community design projects reported:

"I like supporting creative people that I feel have authentically good ideas and maybe wouldn't get mainstream support from the public. So, they might be doing something unusual...but you can see that there is something valuable there."

When projects are successfully funded, the success is shared between creator and supporter. Supporters are motivated to help others with whom they are strongly and weakly tied. These ties could be from friendship and/or shared interests.

6.2.3   Supporter Motivation: Be Part of a Community

In addition to supporting individual creators, crowdfunding also provides a way to feel part of a community of like-minded people. One serial technology supporter stated:

"There's definitely a sense of community…some sort of responsibility [to support]."

Supporters express the desire to see evidence of being part of a select group. Crowdfunding platforms achieve this by listing who has supported a project on the project supporter page. A supporter of a design project described how she liked seeing a photo of herself on this page:

"I was like, oh that's cool that my picture will be on the [supporter page]. So, that's neat. I'm part of this community that's supporting [this project]."

This page allows supporters to easily see who supported the same project. Being part the project-supporter community also allows supporters to have a say in the design of the final product. One supporter of a video game project described his interaction with other supporters in the design process:

"[I follow the campaign] fairly closely. I check the [project website] once or twice a day in the forums and I interact with the community online…Mostly the backers…[We] decide which direction we feel the game should go."

This aspect of collaborative design is a unique characteristic of the crowdfunding community. Supporters also report being motivated to support people that they trust. One supporter described how this aspect of trust made him feel more comfortable with giving money to unknown others:

"I think that all or almost all [projects] were done by people that I don't know...There's something about the nature of [the crowdfunding] community, I'm a little more willing to trust."

Trust is a common basis for monetary transactions [Gefen 2000], and crowdfunding platforms are able to foster trust between supporters and creators and other supporters. Overall, supporters are motivated to participate in crowdfunding because it provides a visual form of acceptance and gives them a unique opportunity to interact with and contribute to a like-minded group of people.

6.2.4   Supporter Motivation: Support a Cause

In addition to supporting creators, crowdfunding supporters are motivated to support causes analogous with their personal beliefs. When asked what types of projects she funds, a supporter replied:

"Design to create social impact…My goal is to be as supportive of these initiatives as possible…From an identity standpoint, that's something that I would want to be associated with."

Identity influences what actions people take and why they give. People support efforts that are consistent with their identity or the identity to which they aspire [Aaker and Akutsu 2009]. Some supporters even decide to forgo the reward and have 100% of their funds go directly to the project cause. A supporter who contributed funds to a weather prediction application described his frustration with creators who spend money on rewards that are not directly inline with the success of the project:

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"Don't spend that money on making t-shirts, spend it on building software…I want to see that my money is being used well."

Supporters prioritize motives differently. Although some people are motivated to collect a reward, others are primarily motivated to support a cause. Some creators consider allowing the creator to maintain project control as one worthwhile reason to participate in crowdfunding. One technology supporter reported:

"I really like the idea of people being able to get off the ground without needing to buy into a big giant corporate structure. And I like the way that people put the ideas they want out instead of having to compromise those ideas in order to get their product out."

Supporters are motivated to support non-traditional means of production that allow creators to maintain creative control. A supporter of design projects noted the differences in community behavior between those who participate in crowdfunding and those who use more traditional fundraising methods:

"In other domains…people could have a tendency to feel competitive with people who are doing something similar. But, what I think what's unique about this space [crowdfunding], is people feel more collaborative. So, I feel more like funding these types of projects as an act of good will, and say like, hey you guys are doing great stuff...I just wanted to be a part of that uplifting force."

Cooperation remains a normative behavior for many online communities [Kraut and Resnick 2012]. While supporters of both causes and creators are primarily motivated by philanthropic behavior, they often appreciate a memento of their giving experience. A supporter who contributed to a project that employed local women in a Chile commented:

"I thought it would be nice to get something that would remind me of the project that my friend was doing and kind of connect me to the culture and the community that I was supporting."

Crowdfunding provides an avenue for supporters to be part of a community of like-minded individuals and express their beliefs through the exchange of resources (primarily financial), whether it is for the creator or project cause.

6.3 Deterrents to Become A Creator

In addition to describing their motivations for participating in crowdfunding, informants also indicated several factors that significantly reduce their likelihood to solicit resources and contribute. To understand the deterrents to becoming a creator, we interviewed people who participated despite concerns about crowdfunding and people who considered crowdfunding, but decided to use an alternative funding method for their projects. For creators, these factors included hesitance to publically solicit funding, concerns about the time commitment relative to other funding mechanisms, fear of failure, and concerns about privacy and plagiarism. Supporters were mainly concerned about waiting for and not receiving rewards and ineffective use of funds. We briefly discuss findings for creators and supporters.

6.3.1   Creator Deterrent: Inability to attract supporters

Many creators choose not to crowdfund because they believed that existing crowdfunding platforms did not currently or would not attract a sufficient number of supporters to fund their project once launched. One creator of a web networking application who initially considered Kickstarter but ultimately chose to pursue another source of funding described his concern:

"[Crowdfunded projects] have to appeal to a large group of people…It has to resonate with large crowds…We didn't think [our project] would resonate with a large group of people, specifically the kind of people that are on Kickstarter"

Instead, this creator sought $60,000 dollars in funding from an angel investor in a major metropolitan area. Another creator developing a medical device designed for nurses and doctors examined past crowdfunding successes and decided against participation:

"We looked at who has been successful on Kickstarter, and all the ones that have been successful in the past are like consumer products…you know, video game consoles or iPhone accessories and things that the mass market and consumer market are looking for…We didn't feel like [our project] would have gotten enough appeal to have gotten the amount of money we were looking for…There's a certain type of product that does well on Kickstarter and there's certain types of products that don't do well. And we didn't think ours would do well. Nurses would probably get [our product], because that's who it's really designed for, and then maybe mothers and germaphobes…We didn't see those people visiting Kickstarter."

Because publicizing one's project can take up to eleven hours a day, one creator who needed funds to manufacture a toy for diabetic children described how she felt her efforts were best used at targeting her specific audience members face to face at outreach events rather than online through an unfamiliar platform:

"It just was just not the right audience sort of thing… I think [our market] is a little bit challenging because it is a small population that you need more of the direct approach to make families buy [our product]."

This creator decided to attend a conference for parents who have diabetic children. There, the parents were able to pick up and test the product in real time with their children before putting in an order. Much of these beliefs stem from the idea that crowdfunding supporters are more interested in supporting the product and the process. For example, creators believe that supporters will only be interested in supporting their project if they get a reward at the end. Supporting startup processes, such as paying for office space and prototyping materials seem less appealing. One creator of a mobile app project explained how it is difficult to keep up supporter interest once the project is over:

"I think [crowdfunding] is really good for a one-off product or like, a product that you aren't necessarily thinking about expanding into a line, but if you if you do want to create that brand equity, it's very difficult to do that out of a crowdfunding campaign."

Another creator of a product design project, who chose angel investing over crowdfunding, explained that she did not want to "debut" her product in a crowdfunding campaign when the final product was not yet finished. Like the previous creator, she saw launching a crowdfunding campaign as more of a final public presentation than intermediate funding step:

"We didn't want to put an expectation to launch this initial idea when our product is evolving all the time."

This creator decided to pursue angel investing instead as she felt that angel investors were more likely to fund the process rather than the final product. Believing that only projects with good rewards do well, many creators choose not to crowdfund because they do not have compelling rewards to give to supporters. One creator of a mobile application explained his dilemma:

"In order to get the word out, you have to have good rewards… People give money because they want to preorder these products…So for the particular products that I've worked on, there isn't really much value...for the people to preorder the product because the product is more intangible."

Another creator who wanted to make a note sharing application for college students explained his concerns for not being able to entice supporters through incentives.

"At the stage that we are at, it would be hard to you know come up with a set of incentives that would be compelling enough to have a really blowout successful crowdfunding campaign."

Instead, this creator chose to pursue funding from a start-up competition in a major metropolitan area where providing rewards was not required.

Many creators were deterred from crowdfunding if they felt they were unable to attract their target audience or develop adequate rewards – features that crowdfunding platforms emphasize as keys to success. Together these findings reinforce the perception of crowdfunding as online platforms for consumer purchases.

6.3.2 Creator Deterrent: Fear of Public Failure and Exposure

Creators also choose not to crowdfund because they fear public failure and exposure. Potential creators were concerned about ruining chances of future investing, personal embarrassment, and others stealing their ideas. A toy designer explained how other investors, such as angel investors and venture capitalists, may be less likely to fund if the creator had failed in crowdfunding.

"If we did [crowdfund] and we weren't successful…we felt like we'd be shooting ourselves in the foot for getting money from other sources. So, the other venture funds and angels [would] look at us and then if we couldn't pass that crowdfunding test, they might be more reluctant to invest."

A technologist expressed a similar concern, describing his perception that crowdfunding success as more indicative of good marketing skills rather than a good product.

"When [crowdfunding] doesn't work, which is more often than not, the reasons can just be attributed to 'your product sucks… and it will never be successful' whereas your product might be just fine and you just didn't do the campaign right."

Another creator who is creating a tech startup described the crowdfunding failure as "bad data" that could haunt her funding endeavors in the future.

"If you don't do well [in crowdfunding], the data is public and doesn't go away, so that when you are trying to fundraise, people will be like, you just failed a Kickstarter campaign, why are people going to use it. And it's really hard to back that because it's pretty harsh data to know whether your product is going to work or not."

In addition to worrying about what future investors might think, creators are also worried about the impressions from their friends and family. One creator described how she did not want her failure to be on public display.

"I think a lot of the fear comes from the fact that if you don't meet your goal, you don't get any money…The risk is if you publicize to all your friends, all your family, all your colleagues, everyone will know if you fail."

In order to avoid public failure, one creator privately sold his car and put the funds towards his campaign to help him reach his goal. While this case may be extreme, creators report anxiety about having overestimated the size and commitment of their supporter community. Supporters indicate that they vicariously experience the success and failure of the campaigns they fund, suggesting that the fear of failing to meet a goal is shared among creators and supporters.

Whether they ultimately launched campaigns on crowdfunding platforms or not, most creators were hesitant to ask their social network for money. One creator of a publishing project described how crowdfunding felt like begging.

"When I get into this whole scheme that the work is also trying to float on money from my friends...it's all kind of dirty."

While the rise of crowdfunding has normalized the idea of asking for small donations from one's social network, most creators still report discomfort with asking for funds. Potential creators report feeling even more guilty about asking for money from friends who earn less money in their day job than they do. One supporter explained why his job status prevents him from wanting to become a creator:

"It looks kind of weird for me with a full time engineering job to be asking some of my friends for money who are less financially secure."

Crowdfunding not only exposes financial vulnerabilities, but also ideas. Creators report being deterred by the possibility of idea theft. One creator of a mobile travel application explained his worries about sharing his ideas:

"In some cases, your intellectual property, which is a big part of your business, is a trade secret. And if you put stuff out…people can steal your idea. And in many cases its more of a, who can execute the idea quicker or first, and they do it and make the money and then move on…You may not be ready to move so quickly."

Some creators try to protect against idea theft by getting a patent prior to their campaign. However, getting a patent is not an easy process, and applying for it and defending it may not be worth the effort in order to crowdfund. One creator of a bike product explained:

"Just because you've filed a provisional patent on something doesn't mean someone can't take that idea and run with it."

Crowdfunding requires massive public exposure and for many potential creators, such exposure at an early stage of their work threatens chances of future investing, reputation in one's social network, and idea theft.

6.3.3   Creator Deterrent: Time and Resource Commitment

While crowdfunding may be seen as more efficient for certain creators, such as musicians or novelists, with experience managing a large number of supporters, it can seem overwhelming to others with limited experience. Because crowdfunding can involve answering to hundreds and thousands of supporters, creators report being deterred by the amount of work it would take to deal with such a large audience. One student creator of a research project, who had previously tried crowdfunding, described how she chose to apply for grants rather than crowdfund again because the grant application process took less time.

"So, the grant process seems to be just like shorter and quicker. It's easier to do when you're just at a university, and there's a ton of grants at your disposal. You can just apply and people are very receptive when your project is academic...So, that seems to be easier than a crowdfunding campaign that lasts like, a month, or several months, and involves a lot of planning and a lot of work throughout the process."

Another creator, who is PhD student, further compared the benefits and disadvantages of crowdfunding to the experience of writing research grants:

"[For] typical science grants, you put a lot of work into them up front. [For crowdfunding], I felt like, it was much more time…Constantly advertising, networking, encouraging people to go on and donate, and then responding to a lot of the replies that I was getting. It ate up a lot of time. And then after all that fun was over, you have all these different gifts that you promised people...In some ways, bang for the buck financially, it was not as lucrative as getting a grant."

Creators report spending between 30 minutes to eleven hours a day on their live campaign, which is a highly varying time commitment. Although some crowdfunding campaigns may be less time consuming than some traditional funding methods, such as hosting a fundraising event, it may be more time consuming than others, such as writing a grant. Despite the time commitment of running a campaign, creators report receiving the actual funds more quickly through crowdfunding platforms than with grant funding.

Creators also explain the effort required to manage many supporters. One creator of a travel product, who chose a start-up competition to raise funds over crowdfunding, explained how the crowd wants to always see progress, which can be overwhelming for a project creator. One creator of a mobile app project explained:

"So you want to delight your customers, your supporters, and if you're not ready to go out there, you can fizzle. People love to see progress and rapid progress, and you've got to maintain some momentum."

Another entrepreneur described how communicating with many supporters can take up valuable time, especially when he was busy attending to the other needs of launching a start-up.

"I mean you are busy enough as an entrepreneur. To spend, you know half your day fielding questions or calls from investors to see if you're gonna get your product out…Having a lot of investors could be a real challenge."

Another creator who had previously unsuccessfully tried crowdfunding described how he chose not to crowdfund again because he did not want to manage an audience that was larger than what he and his team could handle:

"We didn't really have the capability to scale that quickly…So we chose not to do [crowdfunding], just cause we felt it would have been a big burden on us if we had reached a larger market than we already had."

In addition to time commitment, crowdfunding can also require an initial financial commitment. One creator of a web application who chose a funding competition over crowdfunding, described how he did not have the funds to produce a well-made publicity video:

"I've watched a lot of videos that have been posted on sites like Kickstarter…I noticed that projects…that had really good videos, they did a lot better than those that didn't…The time and

financial resources required to put into a video of production value is a little bit beyond our means at the moment.”

Knowing how much time and work goes into crowdfunding, another creator of a theater project described how she needed a bigger team to run an effective campaign:

“The starting point should be trying to pull your team together, because you are in so much better of a position when it comes to fundraising”

Some novice creators who have access to university funds and student-focused competitions have described how these alternative funding sources are more straightforward and provide more mentorship than crowdfunding. One creator of an online application, who chose to do a funding competition instead of crowdfunding, described how funding competitions are better options for people who are novice project creators:

“There's mentors that are assigned throughout the competition. People are dedicated to kind of check in on you and see how you're doing, whether or not you have questions…I think with crowdfunding, I set my own deadline, I set my own goals, and so I guess it's targeting different audiences. I think if you're just starting, the prior (competitions) would be really good. If you're like a distinguished artist, or you already know what you want, then crowdfunding would be a good way to go about it...With crowdfunding, it's a little more ambiguous in terms of what your responsibilities are.”

As this creator described, crowdfunding platforms provide little personal mentorship during the crowdfunding campaign. Often platforms only provide a question answering service, which may take weeks if not longer for them to respond. By that time, the creator’s campaign may be over.

Another creator explained that a lack of guidance after the end of the campaign is even more of a deterrent. Once the campaign ends, crowdfunding platforms provide little opportunity to continue publicizing your project.

“Once you get all your preorders through crowdfunding, you’ve used up your entire base of people who would be willing to buy your product at the level of fidelity that it’s at. So either you need to jump to a higher level of fidelity or somehow you need to recruit a whole new batch of people who are interested in your product, which is very difficult to do because you’ve just sort of done this national opening for your product. There are a lot of traps involved for crowdfunding that I don’t think a lot of people see, because it’s not something that people are aware of - that people have made an effort to inform the public about.”

Crowdfunding is described as a public “debut” or “national opening.” Consequently, creators want to present their best work and many are deterred from participating if they feel they need more time, resources, and institutional support than what is currently provided by the crowdfunding platforms.

6.4 Deterrents to Becoming A Supporter

6.4.1   Supporter Deterrents: Distrust of Creators’ Use of Funds

Some crowdfunding platforms allow creators to keep what they raise even if they do not reach the funding goal. Even though this is beneficial for the creator, some supporters worry that their money will not be used effectively. One supporter of a community design project described how she prefers the All-or-Nothing funding model to others:

“There’s kind of a sense of security knowing that… I’ll only be paying if she meets her goal.”

The All-or-Nothing funding model may be one of the reasons that Kickstarter has enjoyed more success than other crowdfunding platforms that use the All & More model.

Another potential supporter reported her concern about creators' inability to use the funds wisely based on an online article she read.

"I read an article recently about Kickstarter and how too much funding has become like a problem because they get money and they don't necessarily have the assets to use it. So I think that can be an issue as well."

Because many creators on crowdfunding platforms have limited business experience, they often underestimate the amount of planning and time it takes to finish a project and deliver on rewards. One supporter of technology projects noted:

"Part of the process that's bad about [crowdfunding] is that it's new people, and they really don't have any idea how long a product is going to take [to make]. So, they often underestimate the amount of time it takes to get something out."

A creator of an education project validated this supporter's complaint when he described how he failed to deliver his rewards due to time constraints:

"The time spent to do [shipping] was…like a huge, I don't know, wake up call. So, at that point, what we did was we reached out to all our donors and asked them personally, would you mind if we didn't send you a prize?"

Since receiving a reward is considered a main motivation for supporters, not receiving the reward can act as a deterrent for future funding activity. Unlike many peer-to-peer marketplaces such as eBay, crowdfunding platforms currently do not have "resolution centers" if a conflict arises.

6.4.2   Summary of Findings

While many creators and supporters are motivated to participate in crowdfunding, many indicate factors that demotivate. For creators, crowdfunding can be both an efficient and inefficient way to solicit resources; it can be a way to raise awareness, but at times at the annoyance of supporters; it can lead to public success or failure. For supporters, crowdfunding can be a way to support causes and creators with limited access to traditional funding mechanisms. The downside is that supporters must potentially accept delays, ineffective use of funds, and poor communication.

7. DISCUSSION

With our research we sought to shed light on a critical question regarding a new online social phenomenon [Kraut and Resnick 2012]: **Why are people motivated to participate or deterred from participating in online platforms?** We offer the first in-depth qualitative investigation of crowdfunding communities across several crowd platforms. By interviewing creators, supporters, and those who considered engagement, we present nuanced qualitative evidence that extends previous exploratory research on crowdfunding and reveals new findings that fundamentally influence how we think about motivations and deterrents to participation in crowdfunding.

We validate previous findings [Lambert and Schwienbacher 2010; Schwienbacher and Larralde Forthcoming] that creators are motivated to participate in crowdfunding to raise funds, expand awareness of work, connect with others, and gain approval. Our qualitative research substantially

refines our understanding of what motivates creators to participate in crowdfunding, including the prospective benefits of long-term interaction with supporters and the informational and financial feedback they need to build confidence in the uncertain environment of creative work [Gerber 2011]. We discover two additional creator motivations—the desire to maintain control and learn—that have received less attention to date.

Our research also confirms prior work suggesting supporters are motivated to participate in crowdfunding to expand their social networks—supporters who provide monetary, informational, and social support to creators can feel they are a part of a special community, an outcome that satisfies deep human needs for belonging. We also explore additional supporter motivations, such as the desire to support causes, support people, collect rewards, and be recognized.

Crowdfunding platforms depend on the active and engaged participation of both creators and supporters. It is therefore critical to understand both creator and supporter motivations and deterrents. Our paper makes significant strides towards a more complete understanding of the key motivational ingredients affecting the vibrancy and success of crowdfunding communities.

Furthermore, while crowdfunding is frequently defined as the request for financial resources on and offline in exchange for a reward offered by the creator [Belleflamme et al. 2011], our research suggests that the title, "crowdfunding," and definition are too focused on the exchange of funds. While resource exchange is indeed crucial to crowdfunding, our research demonstrates that crowdfunding involves the exchange of a broader variety of resources which are exchanged both on and offline [Greenberg et al. 2013]. The exchange of money alone cannot fully explain participation. We present evidence strongly suggesting that participants exchange resources with the goal of wanting to learn from and connect with others.

We argue that the rapid rise of particular crowdfunding platforms may be attributed in part to the way these platforms satisfy people's social and cognitive needs rather than in their desire for financial resources alone. Both creators and supporters describe being strongly motivated to learn how to carry out the project themselves, on their own terms. Traditional sources of financial capital, which might otherwise be used to procure necessary physical and human resources, also come with constraints. While traditional financial institutions intend their investment and lending constraints to reduce risk and increase the chance of project success, many creators prefer the relative autonomy of crowdfunding financing: Maintaining control lets creators determine project direction. In addition, our interviews confirm that creators' experience of autonomy further amplifies their motivation to learn [Deci et al. 1981].

For supporters, too, autonomy matters, though in the supporters' case, it is the freedom to choose among creators' projects that is the source of some of the motivation to support crowdfunding. Opportunities for choice and self-direction are found to enhance intrinsic motivation, learning, and greater feelings of autonomy [Deci and Ryan 1985]. In this regard, then, crowdfunding supporters resemble consumers in the traditional marketplace [Iyengar and Lepper 2000]: they are motivated in part by perceptions of control and choice. However, crowdfunding supporters also share similarities with participants in online peer production [Kraut and Resnick 2012], as they frequently seek to maximize benefit for the community members rather than formal institutions. The awareness of community that both supporters and creators share is crucial and distinctive.

Our study finds that creators and supporters engage in crowdfunding to connect with others. Creators seek both to expand awareness of their work and to make connections that benefit them professionally and socially: Crowdfunding communities provide a receptive network for creators' aims. Supporters find that supporting causes and helping others through crowdfunding gives a powerful sense of community, satisfying a powerful human need for social affiliation. Supporting a cause financially can be a clear way to signal affiliation with a certain group of people.

Marketing scholars find that people sometimes spend money strategically in the service of affiliation [Mead et al. 2011]. Helping others allows supporters to make stronger inter-personal connections through altruistic behavior. Furthermore, participating on crowdfunding platforms further allows supporters to identify with a group of people with similar interests. In our study, both creators and supporters reported feeling a powerful and unspoken tie with other creators and supporters, which enhanced their desire to connect and their sense of mutual obligation. Overall, addressing these desires satisfy basic psychological needs for social contact [Reiss 2004]. Like online peer production communities [Kraut and Resnick 2012], creators and supporters seek a trusting community of likeminded others. They are motivated to learn from each other, receive feedback, and expand awareness of their work in a social setting.

7.1 Crowdfunding as a type of Crowdsourcing

This work contributes to our larger research agenda to examine the role of crowdsourcing in innovation. Such a perspective is critical given the growing research on online crowd behavior, which will likely change the work flow of creative and routine work [Dontcheva and Lewis 2011]. Online crowds can influence how distributed groups of people can collaborate to get work done on a scale that exceeds individual capabilities. Platforms that satisfy motivational needs may ultimately encourage a more diverse group of people to launch their ideas compared to platforms that do not satisfy these motivational needs. New models of sorting and prioritizing opportunities for supporters may help to direct individuals with particular motivations. We suspect that platforms are already being designed to enhance motivation which has been found to be malleable and context dependent [Ryan and Deci 2000].

8. DESIGN PRINCIPLES FOR CROWDFUNDING

Practically, our investigation offers insight in to how to effectively recruit and retain creators and supporters in crowdfunding activity. Based on research and related literature, we offer preliminary design principles for crowdfunding.

	Design Principle	Motivation	Example
1	Support resource exchange	Raise Funds (Creators) Gain Approval (Creators) Learn New Skills (Creators) Collect Rewards (Supporters) Support Causes (Supporters) Help others (Supporters)	Open forums to post and seek production needs
2	Support community before, during, and after	Form Connections (Creators) Gain Approval (Creators) Learn New Skills (Creators) Expand Awareness (Creators) Be Part of a Community (Supporters)	Platform to support creator and supporter meet-ups
3	Provide transparency	Maintain Control (Creators)	Presentation of risks in an easy-to-understand and non-threatening format

Table 2. Design principles for motivating participation in crowdfunding.

These three design principles are specifically intended to motivate potential creators and supporters to individually begin and sustain their involvement in crowdfunding. Table 1 summarizes the design principles. For each principle, we briefly present the underlying motivational mechanism and ground these principles in examples from existing crowdfunding platforms and online communities.
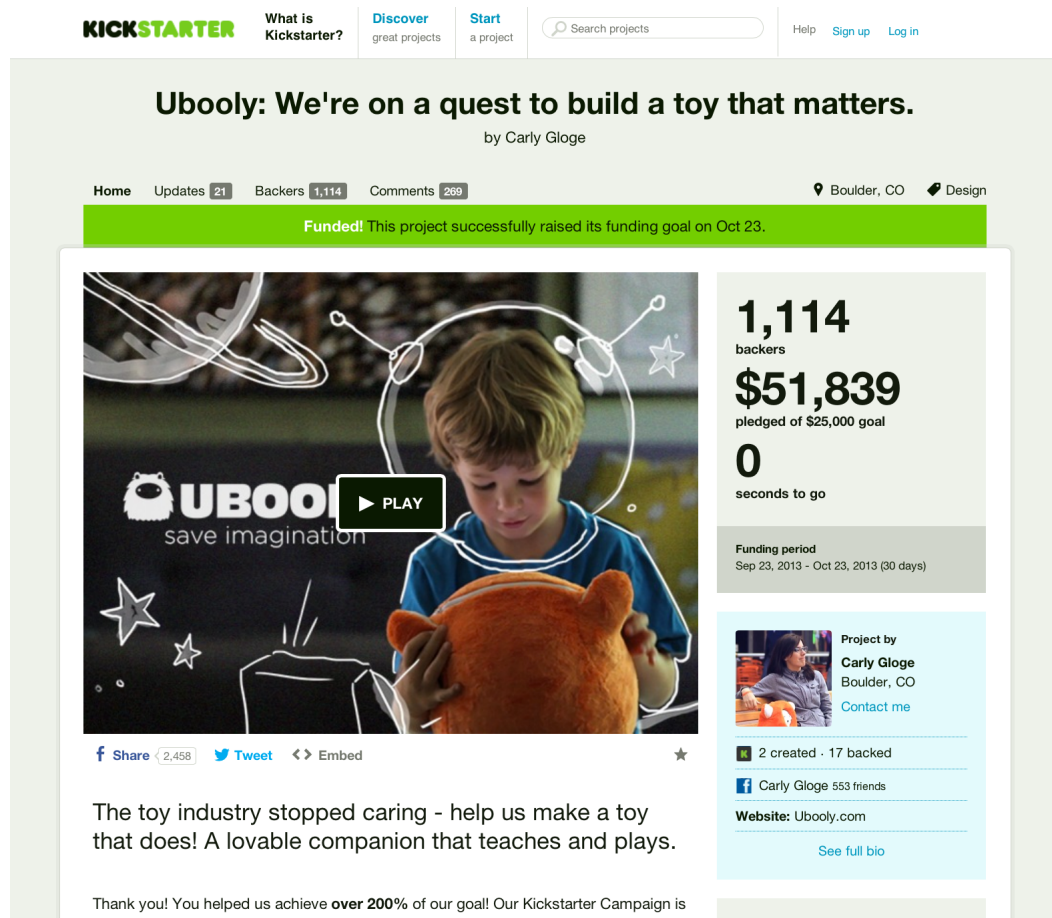
8.1 Support resource exchange

Figure 3: Currently, Kickstarter only formally supports the financial exchange of resources online despite interest by creators and supporters to share human and informational resources before, during, and after the campaign. Screenshot with permission of Ubooly.

Creators, supporters, and platforms should be able to exchange human, information, and financial resources before, during, and after the crowdfunding campaign. Currently, much of these exchanges are informal. While the platform is built around the safe and easy exchange of financial resources between creators and supporters, the exchange of human and information resources could potentially enhance a project's success. VolunteerMatch is an example of an online site that supports the exchange of human resources for organizations and individuals in need (See Figure. 4). Further, resources should be available at any time throughout the crowdfunding process—not just during a live campaign.

Figure 4: VolunteerMatch supports the exchange of human resources for organizations when and where they need help. Screenshot with permission of VolunteerMatch.

The human resources should be available to fulfill tasks associated with creative production, such as creation, manufacturing, implementation, marketing, planning, and fulfilling. Information resources should be available to transfer knowledge and advance explanations. Access to informational and human resources has been found to have a direct positive impact on persistence in ambiguous tasks [Cohen and Levinthal 1990; Tushman and Nelson 1990]. A person's perception of adequate resources may affect their belief about the intrinsic value of the projects they have undertaken [Amabile et al. 1996]. Similarly, researchers of creativity support tools advocate for including multiple avenues for gathering new resources [Schneiderman 2002].

Example: Open forums to post and seek production needs.

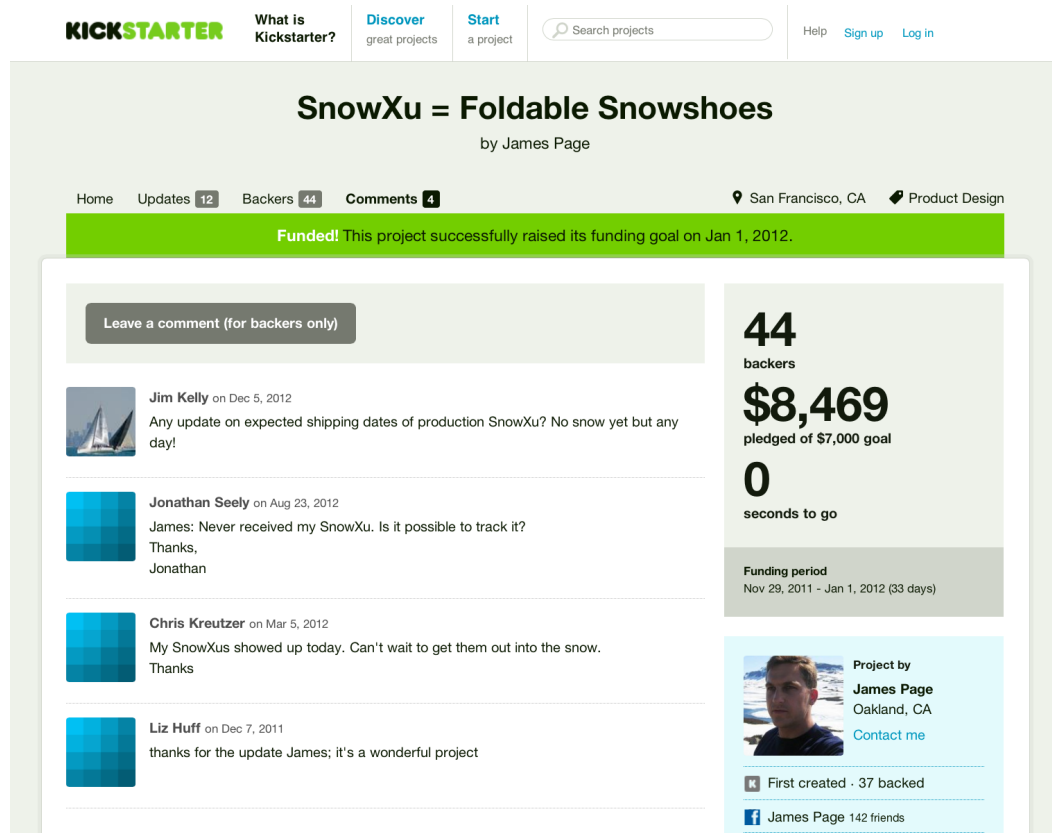## 8.2 Support community before, during, and after

Figure 5: Online creator/supporter discussion on Kickstarter <u>during</u> the SnowXu project campaign. Screenshot with permission of SnowXu.

Crowdfunding platforms could support opportunities to share their work prior to, during, and after the crowdfunding campaign. Prior to the campaign, there should be opportunities to meet up with potential supporters to increase awareness of the upcoming project. Throughout the project, there should be a variety of easily accessible channels to raise awareness online and offline. Following the campaign, additional resources are often needed to keep supporters up to date on subsequent progress. Informal meet-ups are occurring cities such as Austin, TX (See Figure 6), while creators have turned to other social media forums, such as Reddit, to continue conversations about a project post campaign.
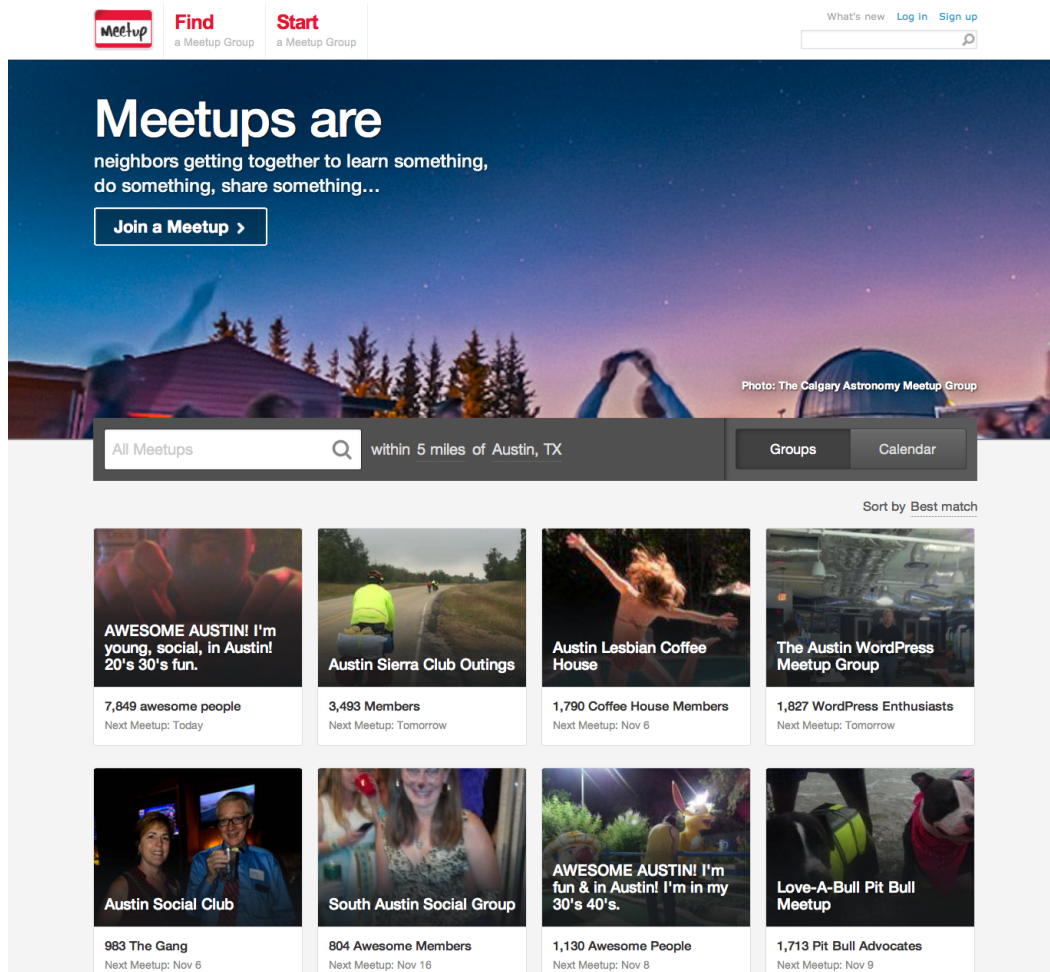
Figure 6. Crowdfunders in Austin, TX have formed a group via "Meet up" to support each other's efforts. Screenshot with permission of Meetup.

People are more likely to persist when they publically commit before hand and then share small wins with their others throughout the effort [Weick 1984]. Through the sharing process, they receive positive validation and are more likely to believe they can accomplish a task, are willing to take on more challenging work, have greater intrinsic motivation to complete a task, persist in the face of challenges, and expend more effort in the task [Bandura 1997; Deci and Ryan 1985; Schunk 1985]. Prior HCI research recommends online communities encourage new members to observe and learn, and experts to share and grow, allowing everyone to contribute when and how they feel most comfortable [Jenkins 2009]. Peer production communities encourage recruiting and clustering similar others to increase identity based commitment over time and coordinating contributions to maximize benefits for the community [Kraut and Resnick 2012]. Community can provide encouragement, feedback, and inspiration [Amabile et al. 1996; Parnes and Noller 1972]. While consistent with HCI research, this principle emphasizes ongoing community creation.

Example: Platform to support creator and supporter meet-ups.

8.3 Provide transparency

Figure 7: Screen Shot from RocketHub's online tutorial. Screenshot with permission of Rockethub.

Crowdfunding supports new behaviors. We must be concerned with how creators and supporters understand the implications of their new behaviors on crowdfunding platforms. Copyright, or permission granted to the creator of an original work, is a particular area for concern. Creators upload unique content when pitching their work. We suggest including the legalities in the sign up process in a way that is enjoyable and non-threatening for the creator and supporter. Further, platforms may collect detailed data on supporters' personal preferences and funding amounts. Like the copyright issue, this issue is not always apparent to the supporter, and educating supporters about this process is needed. We suspect expectations for transparency will increase as crowdfunding continues to gain popularity. Companies may change policies due to creator and supporter demand. This principle stems from the research in psychology and HCI, which suggests that transparency, creates trust, and trust supports future participation [Gefen 2000].

Example: Presentation of risks to participation in an easy-to-understand, nonthreatening format.

These principles are a call to human computer interaction designers to rethink these existing approaches to crowdfunding platforms with an eye toward motivating participation and overcoming deterrents. While we offer these broad principles, we also encourage testing and evaluation in the specific context. During, the 2008 Obama campaign, campaign staffers hypothesized that video requests for funds online would appeal to voters. However, Siroker and colleagues discovered through A/B testing that people were more likely to donate to President Obama's campaign when the campaign's home page showed a picture of the president with his

family and a button labeled "learn more" [Siroker 2009]. Crowdfunding platforms afford such testing.

9. LIMITATIONS

We relied on random and snowball sampling to recruit study participants. Initially, we found it easier to recruit project creators and supporters who had reached their funded goal, rather than those who had not reached a goal or decided not to crowdfund at all. After developing relationships with these informants, we asked them to personally introduce us to people who had not reached their goal or chosen not to use crowdfunding. As word spread about our research, informants voluntarily reached out to us talk about their experience.

Our informants were restricted to participating in one of three crowdfunding platforms. We chose these platforms because they are the three most popular platforms for "creative work". However, there are additional crowdfunding platforms. It is possible that participants on other platforms are motivated to participate for different reasons. It is also possible that platforms motivate participants differently [Kraut and Resnick 2012]. Further, we collected data during 2011-2013, and suspect that motivations for participation may vary slightly as platforms are redesigned, more people are aware of the phenomenon, and expectations for participation are altered.

10. FUTURE RESEARCH

Our initial findings suggest a number of areas for future research and design. First, we plan to examine personal factors that may influence motivations, such as domain and professional expertise, network [McClure 1994] and web-oriented digital literacy [Hargittai n.d.]. An accomplished musician, for example, who has experience producing albums funded by his fans, may have different motivations than a novice product designer, whose idea was initially rejected by venture capitalist funding. The actual and perceived size of the creator's social network, his online presence, and funding level may influence motivation to participate. For example, a creator who requests $5,000 from his small social network which he perceives as large may have different motivations than a creator who requests $100,000 and tweets regularly with her large social network before, during, and after the campaign. Additionally, we will examine how expertise of the creator, supporter, project type, crowdfunding experience, management skills, social network, and online presence influence motivations in order to design support tools that sustain engagement.

Second, we plan to investigate how the same individual can participate in three distinct roles including observer, supporter, and creator. While individuals initiate participation in crowdfunding in one role, early evidence suggests that they transition between roles. For example, an individual may start as an observer, checking on a crowdfunding website regularly to learn about new projects and gain inspiration. After weeks of observing, she may decide to launch her project. After a successful launch, she may see a project launched by a person who funded her and may choose to reciprocate support. We see initial evidence supporting this hypothesis. For example, one creator reported:

"There's a kind of etiquette in [my film program]. If someone funded me, then I'm supposed to fund them back. Otherwise, it would be a little awkward."

Future work will show how individuals engage in different roles and how the extent of participation in each role informs future choices.

Third, we will consider the individual strategies people use to engage in crowdfunding and subsequent entrepreneurial behavior. Initial evidence suggests that creators and supporters

extensively rely on social media to spread awareness of activity and promote engagement. As one creator noted:

"I've been communicating with people through Twitter, I've gained a bunch of new Twitter followers, a bunch of new G+ followers…I put up a website with a blog, and people can comment on the blog…I wanted to engage the public in a little more of a dialogue."

While creators primarily want to engage with the crowd, one informant described designing his page on Kickstarter to minimize the number of comments when he failed to meet his deadline and felt overwhelmed by the responsibility. He described his work as "hacking" the interface so that only a few comments could appear at a time. With fewer comments, he felt there would be less negative emotional contagion and ultimate dissatisfaction with his work. Creators also describe strategies for fulfilling orders on time, such as hiring people to work for little to no money as one creator did who hired teenagers to wrap and send packages of his books to supporters because he had underestimated the time it would take to fulfill the orders. This future work will examine how individuals choose strategies depending on personal or project specific goals. The design of new support tools can augment these goals and strategies based on technical competency.

11. CONCLUSION

Crowdfunding is fundamentally changing the way people solicit resources from the crowd to realize new ideas. The crowd contributes millions of dollars each month to entrepreneurial creators throughout the world. Continued participation can have a profound influence on the creative economy by influencing how, why, and which ideas are introduced into the world [Landler 2012][Obama 2011]. However, human computer interaction designers have a large unrealized opportunity to design the interactions between the creators, supporters, and the technology that connects them, to insure alignment of motivation among the diverse participants.

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