Civic crowdfunding: how do offline communities engage online?

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ABSTRACT

Civic crowdfunding is a sub-type of crowdfunding whereby citizens contribute to funding community-based projects ranging from physical structures to amenities. Though civic crowdfunding has great potential for impact, it remains a developing field in terms of project success and widespread adoption. To explore how technology shapes interactions and outcomes within civic projects, our research addresses two interrelated questions: *how do offline communities engage online across civic crowdfunding projects,* and, *what purpose does this activity serve both projects and communities?* These questions are explored through discussion of types of offline communities and description of online activity across civic crowdfunding projects. We conclude by considering the implications of this knowledge for civic crowdfunding and its continued research.

Categories and Subject Descriptors

• **Human-centered computing~Collaborative and social computing** • **Human-centered computing~Social media** • *Human-centered computing~Empirical studies in collaborative and social computing* • Human-centered computing~Social networks

Keywords

Civic crowdfunding, online community, social media, empirical studies

1. INTRODUCTION

Crowdfunding is an online process through which a project *creator* funds a project through incremental donations from a 'crowd' of *backers*. This process is often achieved by means of an online crowdfunding platform, and supplemented by social media. In addition to crowdfunding's widespread growth over the last few years in terms of geographic reach, funds raised, and number of platforms [17], various 'sub-types' of crowdfunding have also emerged. One of these is civic crowdfunding, a process through which citizens, in collaboration with government, can fund projects providing a community service [23]. Civic crowdfunding projects can be large-scale, such as funding the Glyncoch Community Centre in Wales[1], although the emergent "typical" civic crowdfunding project tends to be smaller scale [5], such as funding an urban community garden.

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[1] http://spacehive.com/glyncochcc (25 May 2015)

The number of civic projects has been on the rise across both crowdfunding platforms explicitly established for civic crowdfunding (e.g., Spacehive) and general crowdfunding platforms that host projects consistent with the parameters of civic crowdfunding (e.g., Kickstarter). However, despite suggestions that civic projects have higher success rates than other types of crowdfunding projects, this claim has not been substantiated empirically [5]. Furthermore, features common to civic projects, such as having a pre-existing offline community, are under addressed in existing research.

Our research explores community activity within civic crowdfunding by considering: ***how offline communities engage online across civic crowdfunding projects,*** and ***what purpose this activity serves both projects and communities.*** We propose that an understanding of offline-online community activity is particularly valuable in the case of civic crowdfunding, as projects tend to be geographically localized [5] with great potential for mobilising proximate groups of support, ensuring project success and community engagement. More generally, we hope to contribute to the evolving field of crowdfunding through this focused consideration of the sites and activities involved: the 'what', the 'where', and the 'who' of the process.

This paper outlines the type of offline communities present across six examples of civic crowdfunding projects. Then, it details the online activity of these communities both on the crowdfunding platform as well as the social media channels affiliated with the project. We have focused on Facebook and Twitter, as these are the online sites of activity most common to all projects considered. The discussion highlights the value of this online activity to both communities and civic projects, and considers the implications of this knowledge to maximise civic crowdfunding project success as well as to sustain community.

2. RELATED WORK

This research draws from three primary areas of influence. First, it considers the concept of community, with attention given to offline, online, and the transition between the two. Second, it refers to civic projects and non-profit activity online. Third, it assesses relevant general research on crowdfunding such as crowdfunding timelines, community involved in crowdfunding, and social media integration and strategy.

2.1 Community: online and offline

Community is a complex concept. For the purpose of this research we do not commit to one definition but, rather, focus on building a sense of shared characteristics of community, identifying what community is *not*, and recognising specifics of its online iteration.

Characteristics of community relevant to civic crowdfunding include shared values [18], membership, influence, emotional

connection [20] and reciprocity [21]. Existing online community research reinforces the centrality of these characteristics; online community is differentiated from groups by emotional attachment [26] and from social networks by shared goals leading to collective, not individual, action [11].

Advantages of offline communities have been cited in terms of richness of verbal and non-verbal communication, and simplified identification of membership and social identities [7]. Online community neither improves nor diminishes offline community; Wellman et al. [25] suggest that it is *transformed* through "life online integrated with offline activities" (p. 151). Using a distinction made by Kavanaugh et al. [14], online communities composed of a "community network" rather than "dispersed populations" are particularly relevant to civic crowdfunding; these feature members already in each other's social networks, or those with the potential to be.

Research suggests that communities linked through geography typically establish offline connections before moving online [14]. One study of a wired neighbourhood confirms the positive role of the Internet in increasing action around offline issues [9]. This link between online and offline activity is also illustrated in a study of a college campus, establishing a positive relationship between intensity of Facebook use and strength of connections [6]. There is increased acknowledgment of the bi-directionality and constant movement between online and offline, behaviour which both accommodates existing relationships and supports new ones [6].

2.2 Crowdfunding

The three areas of crowdfunding research most relevant to our research are: crowdfunding timelines, community within crowdfunding, and the use of social media within crowdfunding.

Much research focuses on the 'live funding' period of crowdfunding as well as the preparatory period immediately preceding it. Large-scale studies have attempted to understand the factors contributing to crowdfunding success (i.e., meeting the funding target) [19], considering static factors at project launch such as stated funding goal and project duration [8]. However, as civic crowdfunding can draw from pre-existing offline communities that also endure beyond crowdfunding, this is a limited characterisation of crowdfunding activity.

Discussions of the origins of funding in crowdfunding relate to civic crowdfunding, as the conclusion that "local investors" [1] tend to have a personal connection to the project and to invest early is consistent with the community of civic projects. Crowdfunding community has also inspired early work on design and support strategy, in recognition of its importance to crowdfunding for activities such as feedback and collaboration [12].

Research on crowdfunding and social media identifies which social media channels are used and for what purpose. Focused research on Facebook, for example, suggests that size of network positively correlates positively to crowdfunding project success [19]. Existing work also illustrates that different sub-types of crowdfunding might use social media differently; in examples of crowdfunding for scientific research, for instance, Twitter is prioritised, as that is a place where scientists are already networking [4].

The existing research engages with many themes of relevance to our work: community, online/offline transitions, online civic and non-profit activity, and crowdfunding dynamics. However, these themes have not been explored sufficiently through the focused lens of civic crowdfunding.

2.3 Civic crowdfunding and non-profits online

Civic crowdfunding addresses two present-day realities. First, there is less access to, and availability of, government funding [10]. Second, there has been a shift in citizens' needs and expectations for civic participation with impact [27].

Civic crowdfunding remains a developing sub-type of crowdfunding [15]. Beyond crowdfunding, our research also looks to online non-profit activity where social media is presented as a powerful tool for both building relationships and meeting funding goals [13]. However, research investigating non-profit organisations' missed opportunities to take advantage of the features and interactivity of Facebook [24] serves as a reminder of the challenges of online activity.

We recognise that there are variable characteristics across civic crowdfunding [23] and, indeed, across civic crowdfunding platforms themselves in terms of type of funding, platform fee and non-profit versus for-profit [5]. However, this paper focuses on similarities across civic projects; for instance, the importance of connections both online and offline [5], and the acknowledgment that, as stated by Hollow [10], in addition to financial advantages, there are also non-financial "emotional and ethical returns" (p. 71).

3. RESEARCH METHODS

This civic crowdfunding research is part of a larger qualitative research project investigating the relationship between community and crowdfunding. Our approach employs two complementary methods: semi-structured interviews and online project observation.

3.1 Semi-structured interviews

We conducted 30 semi-structured interviews with crowdfunding project creators between September 2013 and June 2014. All interviews were recorded, and were an average of 30 to 45 minutes long. 6 of those projects fell within the parameters of civic crowdfunding, and these are the focus of the research presented in this paper (see Table 1).

Interview participants were recruited in two primary ways: first, personal and professional networks were targeted, including online e-lists and forums. Second, selected creators were approached directly for interviews due to their stated willingness to share crowdfunding experiences. We focused on creators with projects in post-funding in order to learn about the full process of crowdfunding. Of the six civic projects included, all were first-time crowdfunders across the following platforms: Ioby (A), Kickstarter (B), Thundafund (C), Spacehive (D) and Citizinvestor (E, F):

A – road safety project; funding improvements for pedestrian crosswalks

B – farm project; funding community food distribution and education

C – farm project; funding the development of a community-based urban farm

D – urban park project; funding the green development of a city square

E – farmer's market project; funding support and establishing match funding for local residents' access to fresh produce

F - technology project; funding digital resources and literacy training

Table 1: Details of six crowdfunding projects included in research

Project	$ asked / raised	Offline communities involved
A	543/543 US Dollars	Local residents
B	32,091/34,515 US Dollars	Neighbourhood adjacent to the farm; supporters of the larger initiative of which the project is part; networks linked to employees; local university
C	10,000/30,950 South African Rand	Immediate neighbours; existing supporters of the farm; city residents supportive of agricultural initiatives
D	39,211/40,000 British Pounds	Immediate neighbours; local business owners; pre-existing supporters of the organisation leading the project
E	3,240/3,240 US Dollars	Local market vendors; local community using the market; the greater metropolitan area around the market; supporters of the larger initiative of which the market is a part
F	6,480/6,480 US Dollars	Supporters of the larger organisation initiating the project; friends and family of those the project targets; residents of the city who support this type of project

As per the parameters of semi-structured interviews [22], all interviews facilitated open-ended responses from interview participants while being guided by a pre-drafted protocol addressing key themes such as crowdfunding process, support and strategies.

Once complete, interviews were transcribed, imported into NVivo, and coded using thematic analysis [2]. Coding was done iteratively over three rounds; per interview, and then subsequent rounds considering all interviews together, and specific sub-groups (e.g., all projects hosted on a particular platform). Coding of transcripts began with broad themes guided by research questions, but was flexible enough to incorporate new themes of interest. Through analysis, these themes were expanded and contracted (e.g., considering all social media references together, and then considering references only to specific channels), uncovering key insights such as the varied sites of activity, the timeline of crowdfunding, and its range of non-financial advantages. These findings were verified and supplemented by further rich detail through project observation.

3.2 Online project observation

Online project observation involved no direct interactions with participants [16], and was facilitated by platforms' practice of keeping project information posted beyond live funding. Further, any project specific channels on Facebook and Twitter remained active post-funding, enabling further monitoring.

Project observation considered on-platform details (numbers of backers, amount funded, comments), social media information (Twitter: followers, tweets, hashtag use; Facebook: followers and comments), and additional relevant information such as media mentions, additional social media channels, project websites or blog posts.

When applied to the projects included in the semi-structured interviews, project observation informed interview protocol, corroborated interview content, and provided specific illustrations of activity. We also undertook a broader review of civic crowdfunding projects and platforms hosting them. This approach developed a sense for types of civic projects, scale of civic projects, and certain mechanisms of activity common to them. Project pages were screen captured, and researcher diaries were kept as logs of activity, as well as to record both consistencies and outliers.

4. FINDINGS

We isolated three areas to investigate for a deeper understanding of civic crowdfunding:

- the offline communities affiliated with civic crowdfunding projects;
- the online activities that complement offline activities; and
- the value of offline communities' online activity

4.1 Offline communities

All civic projects considered have a shared output, a base of local backers, relationships that pre-date the crowdfunding project, and an offline component; these are not only important features, but also differentiators from many other types of crowdfunding project. Shared output – for example, community green space, safety measure for public roads, digital resources and training – suggested in our interviews a collective motivation for the successful realisation of the crowdfunding. Consistent with this shared output is the propensity for civic crowdfunding projects to have pre-existing offline links to community through associations with local institutions, groups and programmes such as schools, social support and community learning initiatives. These findings from our empirical work corroborate existing research on the nature of civic projects and the nature of the parties involved [5].

The types of offline communities associated with civic crowdfunding projects vary in terms of two factors considered below: status of community, and composition of community. Offline community per project is detailed in Table 1.

4.1.1 Status of offline communities

Across our research offline communities were characterised as dormant or active.

Dormant offline communities are those with potential for the core characteristics of community such as shared values [18], membership and emotional connection [20], but which are currently inactive, or have never been active. Across our research, geographic and emotional proximity to a particular project signaled potential for community. Crowdfunding's project focus and specific goals also appear to inspire feelings of urgency and to encourage community action. Present in several of the civic projects studied is the dormant neighbourhood community. In the case of Project C, crowdfunding had the aim of both funding and activating community:

"The goal of the [project] was to build a community…we live in a neighbourhood where…everyone is behind these walls…[you] go home and you close your gate…there was a sense of community, but there wasn't a lot of exchange." – Creator, Project C

Civic crowdfunding presents an opportunity for dormant communities to become active through providing set timelines around which to mobilise. For example, Project A's local neighbourhood community shared the same unsafe crosswalk, and yet had not addressed it as a group. Through the initiative of one citizen, the dormant community activated, with people contributing both financially and non-financially with design recommendations and feedback on the final output. Future research is required to consider the range of factors prompting dormant communities into activity.

Active offline communities are those communities pre-dating the civic crowdfunding projects that have identified members who communicate and coordinate. Our empirical work suggests that many offline communities are active in advance of participating in the civic crowdfunding projects; identifying where can be important to project strategy and progress. We recognise two types of active offline communities across civic crowdfunding projects: communities exclusively active offline, and those active *both* online and offline. We specifically recognise communities active both online and offline, as offline communities with pre-existing online presences seem well poised to contribute to online civic crowdfunding project channels. For example Project D was created by an organisation with an existing offline community that was also active online, and the project fit seamlessly into those existing active online channels for publicity and support (e.g., Facebook, Twitter).

4.1.2 Composition of offline communities

In addition to status, we have identified four primary types of offline community members affiliated with civic crowdfunding projects:

- Local resident communities;
- Supporters of an affiliated group or organisation;
- Previous supporters of the project itself;
- Wider community members sharing a specific interest in the project.

Local resident communities

Physically local community, in the form of those living in the immediate vicinity of the project, is the most commonly occurring type of offline community support within the civic projects considered. These are the communities most likely to benefit from the final output. Local resident communities often have a vested interest in the project's success because they share in the same 'problem' that the project addresses (e.g., Project A's street traffic, Project F's need for better resources and training) and, due to this proximity, can also provide valuable targeted feedback about project implementation. Being local to the project also suggests potential longer-term implications, such as on-going community support for maintenance or upkeep. In addition to local residents, interviews also showcased the participation of local businesses. In Project D for example, local businesses supported the project funding, but also committed to the labour involved with the upkeep of the final project:

"we have a local business…that has signed up to carry out four volunteering events in the year to do work on the green roof"- Creator, Project D

Supporters of an affiliated group or organisation

Many civic projects have affiliations with non-profit organisations and community groups (e.g., a community forest organisation was the creator of Project D; Project E was one initiative within a larger city-wide campaign). These affiliated groups and organisations already have infrastructures for support and activity in place, such as set events, mailing lists, and resources. The pre-existing communities encircling these established groups and organisations become offline community supports for civic projects as well. Recognising the larger 'web' of potential civic crowdfunding support is both an opportunity but also a challenge insofar as it requires managing community expectations and enticing existing active community members to contribute *more.*

Previous supporters of the project itself

Civic crowdfunding projects are not necessarily new projects for the community. In both farm projects, as well as the farmers' market project, crowdfunding was used to fund a specific stage of development, not to kick off 'start-up' funding. As a result, the projects were known and had existing active offline community members. These community members represent a great opportunity, as it might require less work to 'convert' groups of previous supporters to become crowdfunding backers given their existing familiarity with the project and its aims.

Wider community members who share a specific interest in the project

In several projects we observed a second type of offline community member, affiliated with the project through physical proximity on a larger scale. This was particularly present in urban projects, where backer support was based on a looser geographic association (same city, not same neighbourhood) **in addition to** a specific topical interest. This type of offline community member tended not to be direct beneficiaries of the project, but recognised its need and its value for the area at large. For example, communities of support for Project F were composed of citizens not directly benefitting from project output, but who believed in the importance of technology resources and education in their city. Similarly, in the case of Projects B and E, local communities participated even if the project benefits went to their area, generally, and not to them, directly.

4.2 Online activities that complement offline activity

Having detailed the composition of offline communities associated with civic crowdfunding projects, it is valuable to outline sites of online behaviour. There were two principle places for online activity across civic crowdfunding projects – Facebook and Twitter – and use of these social media can both pre-date and extend beyond the project. As all funding occurred through crowdfunding platforms, we also include a brief discussion of these, although activity there was structured around the 'live' (funding) period. Though the nature of social media often precluded confirming the origin of the activity (e.g., it was not possible to identify a poster by username or profile picture), we benefitted from creators' input on where communities were active.

Table 2 Online activity per project

Project	Platform	Facebook	Twitter
A	ioby	Yes (personal FB only)	No
B	Kickstarter	Yes	Yes
C	Thundafund	Yes	Yes (est. mid-funding)
D	Spacehive	Yes	Yes
E	Citizinvestor	Yes	Yes
F	Citizinvestor	Yes	Yes

Platform

The activity of communities on designated crowdfunding platforms is limited to the features of the platforms themselves. It is important to note that in this work there are both specialised civic crowdfunding (Citizinvestor, ioby, Spacehive) as well as general crowdfunding platforms (Kickstarter, Thundafund) represented.

Platforms are a centralised location for funding, although there is no opportunity for activity on them in advance of the 'live' launch when the project begins collecting funds. Generally two principle community activities happen on the crowdfunding platforms: funding, and basic information gathering about the project. However, several notable platform features enhance characteristics of civic crowdfunding: a focus on the offline physical location of the project, and opportunities for comments and conversation.

Addressing the full range of differences between specialised and general civic crowdfunding platforms is beyond the scope of this paper. However, our research does suggest that civic crowdfunding platforms recognise the value of a local, offline component through features that are not present on general platforms. For example, ioby and Citizinvestor both embed maps on project pages to position the offline in relation to backers, and ioby also provides a link to "nearby projects"[2]. Further, ioby presents projects as having local impact, stating a mission "*to strengthen neighbourhoods…engaging their neighbours, one block at a time*"[3]. This implicitly suggests that some support from backers is physically local to the project.

Civic platforms highlight non-financial components of crowdfunding. First, they tend towards less tangible rewards. Civic project B hosted on general rewards-based platform Kickstarter, for instance, provides returns to backers in the form of T-shirts, stationary and buttons. In contrast, the civic platforms within our research featured no reward beyond the public enjoyment of the completed project. Second, civic platforms encourage non-financial contributions, with ioby posting to project pages "volunteers needed!" and Spacehive accepting in-kind donations to projects such as building materials or labour[4]. These features are absent from general rewards-based platforms and ostensibly help encourage a 'longer tail' of civic project engagement, as they facilitate involvement beyond a single point

[2] https://www.ioby.org (21 May 2015)

[3] https://www.ioby.org/about (24 May 2015)

[4] https://www.ioby.org and https://www.spacehive.com (21 May 2015)

of exchange (funding). Typical characteristics of civic projects – public, often ongoing, with shared outputs (e.g., green spaces, pedestrian access, education) –differentiate civic projects from other crowdfunding, and further help to set the tone for sustained interest.

In terms of on-platform communication, the most common location for backer-creator or backer-backer communication is the comments sections (Citizinvestor, Kickstarter, Spacehive). Comments can be questions, but are often also endorsements for the project from those with the previous, often offline, expertise to validate. In this case, comments from community members can serve as 'signposts' of project legitimacy, emphasising why the project is important and encouraging others to participate and contribute. For example:

"*I am happy to support this work. You have to support great projects like this or they'll go away. Let's ensure that our city is a place that provides access to these important nutritious foods for everyone*" - Backer, Project E (20 November 2013 on Citizinvestor)

Our interviews suggest that crowdfunding had unique advantages due to some of its features, such as platforms enforcing a time limit on live funding. This created a sense of urgency, both for donations and for project promotion:

"*...crowdfunding [had an] urgency attached to it. It helped, I think, a lot of people learn about [what] we were doing, that they might not have otherwise have learned about, just because there was an impetus for publicity.*" – Creator, Project F

Furthermore, although project monitoring indicated through on-platform comments that many backers of civic projects were pre-existing supporters, crowdfunding platforms' encouragement to use social media during funding also helped civic projects build new audiences and develop skills across new channels of communication:

"*...we do a lot more now by Twitter and Facebook…because [crowdfunding] helped demonstrate that there is a big audience out there*"- Creator, Project D

Social media

Unlike many crowdfunding projects that have designated Facebook group pages and Twitter accounts for the project itself, civic crowdfunding project social media activity tends to be incorporated into pre-existing channels. Although this makes online observation of these channels more challenging, it does ensure that subscribers to those channels receive information beyond the live funding. For project creators this provides an audience, as well as continuity through one constant channel, which helps with community maintenance.

Facebook

Facebook was the most common place for online communities to congregate in advance of project launch. Each civic crowdfunding project had a Facebook presence, but the specific nature of Facebook activity varied greatly.

Project A was sufficiently small-scale that the creator opted against establishing a designated Facebook page for the project and, instead, used their own Facebook page and networks for project promotion. The advantages of this approach included accountability through direct asks of specific friends, and "call-outs" through tagging people in project calls to action. Although successful for Project A for both funding and containing discussion in one channel, it is not conducive to scaling and

accommodating larger projects or to including people unknown to the creator in the discussion.

The most typical scenario for Facebook use was that civic project promotion and discussion was incorporated into existing Facebook pages of organisations that were also project creators. Using Facebook's terminology for page categorisation, Project B was a "college and university organization", Project C was a "community organization", Projects D and F were "non-profit organizations", and Project E a "government organization". The challenge of this strategy – incorporating a short-term project into an established Facebook page – is that the crowdfunding project can be deprioritised, as other streams of discussion push the crowdfunding content down the page. The great opportunity of this approach, however, is that it immediately gives the crowdfunding project context, an established audience, and the benefit of a Facebook page that already has regular activity and momentum.

The content relating to the civic projects shared to Facebook varied. In many cases it was short, encouraging messages, either expressing an interest in participating or encouraging others to do so. Facebook content also served as a site to share community-generated content (text, photos), to provide feedback, to rally networks together, and to coordinate continued offline activity.

Twitter

Twitter was much less represented across civic crowdfunding activity. Most of the larger organisations associated with civic projects have Twitter accounts, but these do not prioritise news of the crowdfunding project

Twitter did have value in several stated projects; however, this was in the capacity of networking with other organisations rather than communicating with a community. In Project F in particular, project creators shared that Twitter was the preferred channel for professional and inter-organisational networking. Twitter was not the social medium of choice for the beneficiaries of the project themselves, but was important for connections and networks within the non-profit space:

"On Facebook, many of our followers tend to be our participants…But on Twitter, I feel like many of our followers are other organizations or people who are interested in what we do." - Creator, Project F

4.3 Value of offline communities' online activity

Sections 4.1 and 4.2 describe different types of offline community as well as their various sites of online activity. Our interviews propose that creators and civic projects, in addition to communities, benefit from online activity that can yield financial as well as non-financial advantages such as project feedback and participation. We recognise that the line between 'online' and 'offline' community is not fixed, and that online activity can attract new online community. This, however, is beyond the scope of the paper, and our focus instead highlights the ways in which offline communities benefit from online activity through activity such as networking, and boosting morale. Our research has illustrated two core roles of online activity for offline communities: online as a virtual "discussion board" and information aggregator, and online as a place for coordination of offline activity.

4.3.1 Using online sites as a "discussion board"

Our research suggests that communities use online sites of crowdfunding project activity to serve as discussion boards. This implies bi-directional communications; rather than the creator giving information *to* the community, the community also populates the online space with their own content.

This was particularly evident on Facebook, where there was a true exchange – in contrast to 'pushing' of content – between creator and backers (Figure 1).
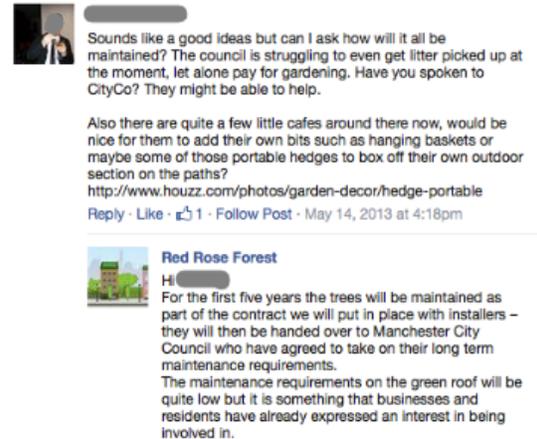

Figure 1: Community-organisation Facebook discussion

The topics of discussion were in some cases fairly specific, suggesting a community with existing context and information rather than entirely new relationships. We cite two illustrations in which the "discussion board" benefits both project creator and backer: providing feedback, and facilitating community-generated content

Feedback on specific project elements

For Project D, the Facebook page was a site for offline community to voice their opinions, to solicit feedback from the project creator (Figure 1) and to see what other community members were proposing (Figure 2). The structure of Facebook enables discussion between community members but also between community, project creators and other affiliated organisations.

Figure 2: Community Facebook commentary

Contributions of community-generated content

For Project C, Facebook was a site where community members could upload photos, tag each other, and comment on offline events. Behaviours such as tagging other Facebook users suggested pre-existing relationships. From a creator perspective, the amount of community-generated content produced helps with creator workload in distributing responsibility for new content. It also publicly signals vibrant community, and an interest in sharing.

In this case online sites were used to access and share information, to discuss the crowdfunding project (e.g., live funding) and to clarify details of project execution and management. This helped community members feel engaged in the project, but also helped the projects progress in specific ways such as by providing feedback to creators.

4.3.2 Using online as a site to coordinate further action offline

Although some online activity focuses on motivating would-be backers to donate financially to the crowdfunding project (an online activity itself), our online project observation indicates a significant portion of online communication across civic projects relates to offline activity. Across our interviews with civic project creators, online channels of communication were considered to be extremely valuable complements to offline activity.

Online activity also stimulates offline interactions:

"For Facebook we used it sortof as a news update, a "why you should come out to the farm physically"...it's not in lieu of [visiting the farm], it's definitely to stimulate interaction, actual physical face-to-face interaction."- Creator, project C

Our interviews suggest that the locality of civic projects, in close proximity to communities of support, encourages backers to transition between online and offline.

Non-financial advantages

Although funding is a core activity of crowdfunding, the online activity by offline community also makes significant non-financial contributions to civic projects. Two examples include using the online space to coordinate offline volunteers, and discussing in-kind gift donation to benefit the project, such as in the case of Project D where donations came in the form of site excavation and maintenance. In both cases, there was an online call to action for activity to happen offline.

Networking and coordination

More generally, the online space was used by offline communities to promote events, such as public strategic meetings or weekly get-togethers at the project site, as was the case with Project C. Offline communities used online channels to discuss and plan offline events, but then also to comment retrospectively and to share event photos to the online group (Project C). Even though the community and the physical project site are offline, online activity had significant value both for the needs of the community and the project.

5. DISCUSSION

The findings suggest four points for discussion to help further maximise the success of civic crowdfunding projects, as well as communities themselves: the contribution of online activity to both non-financial and financial benefits; bi-directionality and complementarity of online and offline activity; the potential to link communities and movements; and different strengths from different funding platforms. Each is discussed in turn.

5.1 Online activity of offline community: the value of non-financial as well as financial factors

Our research suggests that online activity of offline community is associated with positive *non-financial* factors within crowdfunding. Networking, collaboration, feedback, and coordination of both volunteers and in-kind gifts are all outputs

that have been discussed as benefits to projects. The nature of offline community, where some information and context is already known, also suggests the possibility of less work for creators in terms of 'selling' the project or convincing community members to have 'buy in'. For communities, the momentum of crowdfunding projects – both the urgency to fund within a deadline as well as the final output once implemented within the community – can also be advantageous. Facebook comments suggest community pride and ownership from participation in civic crowdfunding. Although our research focused on creators, future research could explore these non-financial benefits and motivations. In addition, once recognised, online spaces could be tailored to encourage non-financial outputs, such as explicit sites for feedback (fields for comments, surveys, video uploads) or pages to capture community member skills and information in order to match individuals with project-related volunteer tasks.

5.2 Bi-directionality of online and offline community activity must be acknowledged and supported

Transitions from offline to online activity are not unidirectional; there is constant movement between online and offline. Additionally, activity can be simultaneous; one is not used in lieu of the other but, rather, online and offline complement one another. Further research should explore the ways in which online and offline strengthen each other, and then make recommendations. For instance, offline community should be made aware of the range of online options available, and provide incentives to participation. However, this should not be at the exclusion of offline project promotion (e.g., flyers, posters, events) and, indeed, civic crowdfunding projects should be careful to coordinate communications and not 'silo' online and offline information. By doing so, transitions between online and offline would be facilitated (e.g., promoting offline volunteering online via Facebook, or posting flyers with the project link to promote activity online).

5.3 Despite strong local association, there is untapped potential to link with larger movements and organisations for longer-term projects

Although our focus is offline community, there is great untapped potential to link these communities and projects with larger movements, organisations, and like-minded civic projects. For instance, the urban farm project drew support from related global groups:

"the slow food group, which is a worldwide group...we have groups like that - national, international - that also believe in organic food." - Creator, Project B

Civic projects do not need to stay *exclusively* local, and online activity can help facilitate connections and widen networks, leading to larger audiences, more financial backers, and possible mentorship from other established organisations and creators. This larger-scale relationship-building could help expand and scale projects. Platforms could help facilitate these connections by use of project tags and categorisations, helping similar initiatives to identify one another.

5.4 Civic crowdfunding platforms and general crowdfunding platforms offer different strengths to civic projects

Specialised civic crowdfunding platforms (Citizinvestor, ioby, Spacehive) host civic projects exclusively. As a result, the platforms are capable of guiding creators through the specifics of civic crowdfunding project set-up, and are familiar with civic project success factors. Also, civic crowdfunding platforms can prioritise features that are particularly beneficial to civic projects, such as online coordination of volunteers. Existing work suggests that those grounded in a sense of community network adopt specific online protocols; for example, less tendency to engage in antagonistic comments threads than those who perceive interacting online with "strangers" [14]. In response, civic crowdfunding platforms might investigate how to accentuate a sense of community network online through specific features.

General crowdfunding platforms hosting civic projects (e.g., Kickstarter, Thundafund) should also consider ways in which civic projects could be maximised for success. For example, Project B cited being profiled on the Kickstarter landing page as a success factor, as the project caught the attention of a new audience of platform "browsers", leading to several international donations and a geographically dispersed support base. How general rewards-based platforms can funnel interest towards local projects is a valuable consideration alongside how civic platforms can widen their networks to maximise project success. Other considerations could include encouraging projects to be classified by various descriptors (e.g., arts *and* civic) and incorporating more non-financial participation options.

Project creators need to be aware of the advantages and possible challenges of different platform choices and which best suits their needs. Though an area of on-going research in crowdfunding, there is an opportunity to continue exploring the range of platform features (e.g., social media integration, payment elements) that can attract or deter different communities, provide creators with needed supports and contribute to positive project outcomes.

6. LIMITATIONS AND FUTURE WORK

This study presented here is part of a larger research project on crowdfunding and community and, as a result, the small sample size of civic projects challenges representativeness. We acknowledge that civic crowdfunding projects are more varied across size of output, size of financial ask, location and other factors than could be considered in this paper. Future work should increase the scale and diversity of the research sample.

This paper focuses on offline community, as it is an underexplored area and also one of particular value to civic crowdfunding projects and stakeholders. However, we note the importance of online communities that are geographically disparate and that are formed and active solely online. Future research could consider a dual examination of offline and online community in civic crowdfunding.

Furthermore, there is an opportunity to expand upon the presence of community at various stages of crowdfunding. Whereas the paper addresses pre-existing offline community as well as offline community behaviour online during live funding, future research could explore longer-term activities, both online and offline, of communities affiliated with civic projects. Understanding community could be expanded to include investigation of *types* of community member within civic projects, in order to assess motivations, project roles, and inter-community relationships.

This should be paired with further research on the use of social media channels not just for different activities, but also for different community audiences.

Finally, future work should explicitly explore the links between offline community, online activity and project success rates. Although our early work suggests a positive relationship between the three factors, this has yet to be confirmed.

7. CONCLUSIONS

Through the lens of six civic crowdfunding examples, this paper has considered various types of offline communities that can be present within civic crowdfunding projects, as well as where and how those communities are active online. Furthermore, we have outlined mechanisms of activity used to financial and non-financial advantage of both civic projects and the communities encircling them.

In civic projects the online and the offline are closely intermingled; our research illustrates that offline communities are often active online, and that online activity often relates to offline project support. Through emphasising the role of offline communities, our paper presents insight into the relationship between online and offline activity within civic projects, and proposes closer investigation of how offline communities might best support civic projects.

Crowdfunding is an emergent field, and civic crowdfunding a developing sub-type within it. Through understanding civic crowdfunding activity, its sites and its purpose, research can work toward tailoring community supports, creator strategies and platform features.

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