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Where is the Crowd?

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Abstract. Crowdfunding has received increasing attention in the financial services space in the past few years. This is because crowdfunding has become a viable alternative to traditional capital investment and thus a threat to investors in that sector. Various platforms exist which allow fundraisers to pitch an idea and spread awareness with the intention of acquiring backers. Most backers of crowdfunding campaigns come to the platform with the fundraiser rather than from the platform itself [25]. Fundraisers must find and engage a crowd and not rely on the platform for provision of the crowd. This paper sets out four action design principles for identifying and engaging a crowd. Using a boundary object theory approach, the crowdfunding campaign is broken down based on backer's social worlds which define the crowd and their interests.

Keywords: Crowdfunding · Boundary Object Theory · Social Worlds · Design Science.

1 Introduction

The literature on crowdfunding has been defined as embryonic [5]. Crowdfunding has been described as an open call to financially support specific parts of a project or idea [20].

Research to date in the crowdfunding space has, for the most part, looked at the donations process and how projects become successful or not. There is a lack of prescriptive literature based around how the fundraiser should identify, engage, and manage potential backers and the campaign in a way that will lead to success.

Platforms such as Kickstarter aim to provide fundraisers with a 'crowd'. This paper takes a different view on backers and where they come from. We argue that crowds are often attracted to a project not through the plat-form itself but through other channels including the relationship with the fundraiser. This suggests that backers often give money to one or more projects and may never back another project on the platform. This is based on evidence that many backers come from the inner circle of a fundraiser

and they are backing the project due to their relationship with the backer [1,12]. The inner circle is made up of those who can be reached personally and have a high rate of donation to crowdfunding campaigns [24]. Thus, the key factor to a successful crowdfunding campaign is not the plat-form, but the crowd that a fundraiser brings to that platform [25]. The phrase 'crowdfunding campaign' in this study encapsulates the planning of and the execution of the fundraising and is not limited to the online aspect or the platform upon which the campaign exists.

To achieve the desired contributions, the remainder of the paper is structured as follows. First, crowds are conceptualized as dispersed groups and the literature that points to this is investigated. Following on from this, a boundary object perspective of crowdfunding is presented. We look at various applications of boundary object theory which are relevant to this study. The research method of action design research (ADR) is discussed next in relation to the needs of this study. The four concepts of boundary object theory are then applied to crowdfunding campaigns. This leads to four design principles which can be applied to crowdfunding campaigns to better understand and identify, engage, and manage backers. The principles aim to aid in the creation of successful crowdfunding campaigns. Finally, we apply these principles to real crowdfunding campaigns to test their reliability.

2 Crowds as Dispersed Groups

Crowdfunding allows entrepreneurs to fund their efforts by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries [18]. Backers are not only motivated to collect rewards, but also to help others, be part of a community, and support specific causes or projects [14,10]. It is intuitive that some backers may stumble across the project simply because they are frequent users of the platform chosen by the fundraiser. However, this research focuses on the other groups of people for whom a project has value, yet will not become participants unless they are proactively and deliberately sought out. Different communities attach themselves to different settings. Understanding these communities is central to ensuring utilization of the right communication channels to reach backers be it social media, forums, email etc. This means fundraisers need to understand who the likely backers are and where they are to come from. Often a project in need of funding will appeal to multiple communities or crowds and this is when a fundraiser must prioritize and find the best strategy to spread awareness and gain backers [4,9]. Each of these communities may exist on different platforms so the fundraiser must try to bring these dispersed groups together to create the crowd which will support the project.

3 Applying Boundary Object Theory to Crowdfunding

This research will apply a boundary object approach to the crowdfunding campaign process. Before doing this the concept of boundary object theory and where it comes

from must be understood. Boundary objects are used to allow different social or socio-otechnical environments to coordinate activities and share information [2,7]. There are four core concepts in boundary object theory: social worlds, translation, boundary objects, and coherence [22]. Boundary objects are described by Star and Griesemer [22] as adaptable to different viewpoints and robust enough to maintain identity across them.

Applying a boundary object approach to an examination of crowdfunding platforms will lead to actionable findings which can be implemented in the creation of a crowdfunding campaign. Boundary objects can be abstract, concrete or a mix of both. The original case study looked at by Worrall [26] looked at the maps of life zones in California which were concrete for the more "professional biologists" but abstract for those from other worlds who were not as familiar with what life zones are. This idea can be seen when looking at crowdfunding platforms as backers see projects differently depending on their backgrounds and other factors influencing decision making. In another example, Albrechtsen [3] looked at classification system in the Electronic Library as boundary objects. Albrechtsen put forward the idea that within an information ecology which consists of multiple agents, users and technologies all interacting together simultaneously, a one-size-fits-all paradigm cannot work. Instead a cooperative interaction must be sought. Take for example an augmented reality (AR) headset as a project on a crowdfunding platform, for experts in technology or the AR industry, the projects, its details and the interest of the backers will be concrete. Some potential backers may not have any understanding of the product but are aware of the focus on AR in the tech industry. To these potential backers, the project will be more abstract. The viewpoints and prior knowledge of backers may differ greatly but people from opposite ends of the spectrum will back the project regardless.

A further example is the use of a boundary object perspective in cross-border disaster management systems [6]. These applications demonstrate the need to bring a diverse crowd of actors together as one, even if only for a small subset of tasks or short periods of time.

When creating a crowdfunding campaign, looking at the different possible backers and what motivates them to back a project, a one-size-fits-all approach will not work. Because of the different social worlds involved a key step in creating a successful crowdfunding campaign is acknowledging this fact.

4 Method

It was decided that the best way in which to derive principles to identify, engage, and manage backers in a crowdfunding campaign was to use action design research (ADR) [21]. ADR is similar to design science in that it focuses on the creation of prescriptive artefact-related knowledge [13,16]. However, it differs in that, while the IT artefact is still at the heart of the study, the design is also likely to include supporting institutional or social structures [15,19]. This often involves iterative improvements of design principles based on observed outcomes [21].

5 Applying 4 Concepts of Boundary Object Theory to Crowdfunding Campaigns

5.1 Social Worlds

The concept of social worlds was developed by Strauss [23] as part of the symbolic interaction school of sociology that originated at the University of Chicago. Since then, other scholars have operationalized this concept of social worlds to the study of groups in a variety of context [26]. One example involves McKnight and Zietsma's [17] study of the forest industry in British Columbia, specifically around Different social worlds were identified and a development partnership was formed that included forest companies, environmental NGOs, governments, and community members. In terms of creating a crowdfunding campaign, social worlds should identify the various groups of potential backers and, consistent with the symbolic interactionist origins of the concept, characterize their communication and interaction norms. Thus,

Design Principle 1: Crowdfunding campaigns need to identify different groups of potential backers and identify dominant norms in those groups

5.2 Translation

Translation is defined by Star and Griesemer [22] as follows:

In order to create scientific authority, entrepreneurs gradually enlist participants from a range of locations, re-interpret their concerns to fit their own programmatic goals and then establish them-selves as gatekeepers.

Thus, it can be concluded that translation is the act of reconciling alternative meanings for objects, methods and concepts across each of the related social worlds.

Translation is likely to be important when creating a crowdfunding campaign as it provides a clear link to all the different social worlds. Backers will not all have the same level of understanding or interest in certain aspects of a project; rather they will often latch onto certain aspects that appeal to their personal interests or values [11]. Innocentive, a crowdsourcing platform for large corporations understands the importance of translation. One of the benefits of using the platform is that they help challenge creators to draft the challenge in such a way that it will be understood by as many people as possible as they know that ideas can come from any background or discipline, not just the one specific to the project. Thus, in a crowdfunding context, translation requires that returns and the manner in which they are communicated match the values and interests of specific social worlds.

Design Principles 2: Crowdfunding campaigns need to design and pre-sent returns in a manner that appeals to the specifically targeted social worlds

5.3 Boundary Objects

The concept of a boundary objects is the most unique contribution from Star and Griesemer [22]. Boundary objects are needed where social worlds intersect, effectively enacting translation processes. Boundary objects can be molded to fit multiple social worlds simultaneously. The case study which led to the development of boundary objects was Star & Griesemer's look at the Berkley Museum of Vertebrate Zoology, in which they noted how similar artefacts took on subtly different meanings for different groups, generally with positive effects.
This view suggests crowdfunding campaigns must be treated as more than a webpage and seen as an ever-evolving sociotechnical artefact balancing participation and translating interactions between different social worlds. The crowdfunding campaign is where all backers come together as one and where there must be a common understanding as to what the project entails and what the funding is being used for. This is one reason why campaigns typically make use of social media, email, face-to-face and many other forms of interaction [18].

Design Principle 3: Crowdfunding campaigns must create an assemblage of artefacts capable of translating content and balancing participation across each of the related social worlds.

5.4 Coherence

The concept of coherence occurs if a boundary object successfully balances participation among social worlds over time [22]. The dynamic and shifting nature of this participation means that any number of coherent sets of translations may be possible at some point in time [26]. A failure to understand this is one reason why one-size-fits-all approaches to classification tools often fail to fulfil their full function [3]. Viewing backers in a crowdfunding context as users (at least of the boundary object) suggests that differing intentions and motives for backing a project means various groups must be managed independently at specific times. There is evidence that communication evolves over time in a way that may create new norms [4,8,10]. There is also evidence that communication tends to be stronger when first creating a crowdfunding campaign but falls away over time, e.g. a lack of regular check-ins with backers can cause unrest and support may waiver [18].

Design Principle 4: Crowdfunding campaigns should create an ongoing communication strategy which is specific to each social world.

6 Preliminary data gathering and anticipated conclusions

Preliminary research was performed by assisting in a small fundraising campaign for a board game café in north west Europe. The principles were applied to increase the reach of the campaign and encourage the use of stretch goals to increase participation. The campaign exceeded its tar-get of €5,000, raising over €6,000 (€4,000 of which in the

final three weeks after the researchers became involved). Feedback from the fund-raiser was positive, though it was clear the principles required substantial interpretive work to operationalize, meaning examples were especially valuable. The fundraiser felt the principles were also useful as a general tool for mindfully considering potential customers in the future and for keeping them engaged as the campaign moves forward.

A larger study is currently underway to fundraise for a charity that focuses on homelessness. The principles have been used to identify several groups, to plan rewards targeting each and events to spread awareness. Champions are also being recruited for tighter social worlds where social media and email access is not feasible. Again, feedback from the fund-raiser has been positive, particularly with regards to increasing strategic clarity and providing a structure to fundraising activities.

7 Contributions

7.1 Contribution to crowdfunding

There has been research to date which has looked at crowdfunding campaigns and their success or failure. However there have been few comprehensive application of boundary theory when looking at crowdfunding campaigns to date. This new way of looking at campaigns brings a new insight to the process of creating a successful crowdfunding campaign. Boundary objects are flexible enough to be understood by individual groups while being rigid enough to be independent of any one group. As a means of understanding communication among heterogeneous groups, viewing a process as a boundary object can help bring together a crowd of diverse people with different knowledge bases, motivations and locations. This is why it fits perfectly into crowdfunding in terms of identifying and engaging backers.

7.2 Understanding Boundary Objects in General

Boundary object theory is well explored in research in general and has been applied to many different contexts. With each application it be-comes easier to understand and opens it up for understanding by experts in a different field. The boundary object approach proved useful in the context of creating a crowdfunding campaign and thus can be used going forward as a successful application of boundary object theory.

7.3 Prescriptive Design Principles

The upshot of this paper is a set of principles which can be followed by fundraisers leading to a better understanding of potential backers and how to engage them. Although the paper is specific to crowdfunding, the principles which come out of the paper can be applied to other scenarios where a large dispersed crowd needs to be sought out and understood.

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