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CURATING THE CROWD – TOWARDS A TYPOLOGY OF VALUE-CREATING ONLINE COMMUNITY INTERACTIONS

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ABSTRACT

This paper proposes a conceptual model of online community management and development in the context of organisational value creation. It investigates the drivers and limiting factors that contribute to the development of online communities and the appropriation of value from them. A multiple-methods approach to the study of online communities has been used. Qualitative data from semi-structured interviews with subjects actively participating in crowdsourcing activities was obtained over a two-year period. Quantitative methodology included a review of online communities associated with the 2015 Fortune 500 companies, and an additional 167 measurements of eight online communities provided cross-sectional and time-series data. This paper contributes an empirical model that considers two categories of factors: organisational factors – which are controllable by decision-makers within the organisation; and community factors – which shape and limit the nature of the resultant community, and reflect variables relating to the nature of participation.

Key words: Online community, crowdsourcing, community participation, crowd, value creation

INTRODUCTION

Social media has created a new paradigm where thoughts, attitudes and beliefs can be instantly captured and shared across networks of other participants around the world (Kietzmann, Hermkens, McCarthy and Silvestre, 2011). While the movement of content in the social media universe may be perceived simply as a form of diversion or entertainment, the underlying technology provides users with the opportunity of forming cohesive online communities (OCs), a fact increasingly being taken into account by business and government (Turban, Strauss and Lai, 2016). OCs have been defined as “social networks in which people with common interests, goals, or practices interact to share information and knowledge, and engage in social interactions” (Chiu, Hsu and Wang, 2006). The potential associated with the leverage of OCs can be seen not simply as a by-product of an organisation’s social interactions, but potentially a characteristic central to its use as a creator of value (Sridhar Balasubramanian, 2001).

Understanding the factors that drive formation and development of OCs and which mediate the participation of their membership is an important precondition of recognising how these communities may create value. Specific questions addressed by this research are: what are the drivers and limiting factors that contribute to the development of OCs and the appropriation of value from them, and how might the variables associated with OCs and the interactions between them be modelled?

LITERATURE REVIEW

While the study of community dates back to Aristotle, contemporary studies find that the range of characteristics that need to be satisfied for community membership to occur include

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a sense of belonging, emotional safety and the integration of needs fulfilment for participants (McMillan and Chavis, 1986). Community is seen as a resource utilised by people “for meeting key physiological and psychological needs such as the need for affiliation, power and affection” (Nowell and Boyd, 2010).

Translated into an online context, any definition of community must transcend physical place and instead describe a set of social relationships (Andrews, Preece and Turoff, 2001). Many properties of OCs are consistent with those of their more traditional counterparts (Silva, Mousavidin and Goel, 2006). The interest of each individual within a community is generally better served by individuals acting in concert rather than by each acting in isolation. In translating the exchanges of such a community from a sociological to an organisational context, the best interests of an enterprise may be served through the appropriate harnessing of the interactions of whatever community the organisation may be able to harness. From these roots, the notion of community in relation to organisational performance arises.

Forms of community

If the ultimate objective of enterprise is to satisfy the needs of customers more effectively than alternatives (Webster, 2017), then competitive advantage is the reward that comes with the achievement of that aim (Treacy and Wiersema, 1993). But online customer communities are rarely completely homogenous, and each individual customer is likely to have perspectives and preferences that differ from others in his or her cohort. This has implications for organisations and the approach they take to customer communities – how well a company understands its prime stakeholders (customers among them), and how capable it is in not just addressing the variation in needs, but also in operationally integrating the views of its customers into the attributes of the goods and services it produces (Treacy and Wiersema, 1993).

Within this context, the role of the brand community can be considered. In his paper introducing the concept, Muniz defined brand community as “a specialised, non-geographically bound community based on a structured set of social relationships among admirers of a brand” (Muniz, Jr. and O’Guinn, 2001). He noted that brands with a strong sense of community are of more value to a marketer than brands with a lesser focus or understanding of their community.

An additional category of OC might be called “communities of interest” (Armstrong and Hagel, 2009). Internet technologies enable the members of a community of shared interests to associate with relative ease. Geographic, language, cultural and status barriers are significantly reduced in an online context, and this enables the formation of communities that are potentially both demographically truly diverse, and also quite narrow in their focus.

Nexus with crowdsourcing

Crowdsourcing is defined as a “type of participative online activity in which an individual, an institution, a non-profit organization ... proposes to a group of individuals ... via a flexible open call, the voluntary undertaking of a task” (Estelles-Arolas and Gonzalez-Ladron-de-Guevara, 2012). For value to be created through crowdsourcing, three criteria must be met. First, the subject of the task being crowdsourced must be modular in nature, i.e. elements of the subject must be able to be changed without compromising the integrity of the whole. Second, there must be structural capability within the organisation to be able to both engage the crowd and utilise the output from the crowd in a manner that creates value. Finally, an authentic community must be engaged (Rowe, Poblet and Thomson, 2015). The manner in which these communities may be engaged, and the variables associated with mediating that involvement, are critical determinants of successful leverage of OCs by organisations.

The study of crowdsourcing must therefore take into account the dynamics of the crowd. Here arises a definitional constraint, as many of the crowds engaged in crowdsourcing do not satisfy the accepted preconditions of community. In other words, while all communities are comprised of crowds, not all crowds are communities. Participation in crowdsourcing may be by individuals unmotivated by commonality of interest with like-minded others. Consider the individual that voluntarily submits information about the location of potholes to their local council using an app similar to “Street Bump”. This individual is enabling the local government to crowdsource data in relation to the condition of roads in surrounding neighbourhoods, but the individual is not by any practical means a member of a community for the purposes of this activity.

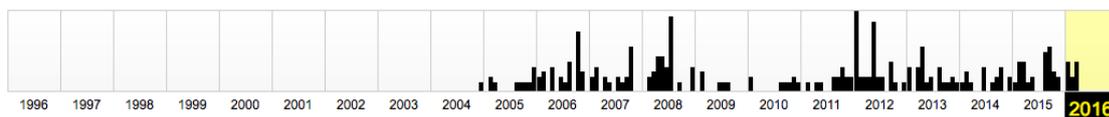
This paper therefore does not use “community” and “crowd” interchangeably. Rather, it assumes that the characteristics of the OC drive value creation, not the mere access to a crowd.

METHODOLOGY

This research applies a multiple-method approach to the study of OCs. Qualitative data was obtained through semi-structured interviews over a two-year period with subjects actively participating in crowdsourcing activities. In addition, a “digital ethnographic” investigation (including naturalistic involvement in, and observations of, functioning OCs and associated artefacts) was undertaken. Digital Ethnography is a qualitative research methodology which adapts ethnographic research techniques to the study of OCs (Underberg and Zorn, 2013). Quantitative methodology included a review of OCs associated with the 2015 Fortune 500 companies, and an additional 167 measurements of a convenience sample of eight OCs providing cross-sectional and time-series data encompassing 1.1 billion individual posts and contributions.

Many OC forums have been captured in Internet archives, along with metrics that enable the development of these communities over time to be mapped. As an investigation into the nature of the communities these forums attract formed a significant part of this research, taking data from these archives provided a rich source of quantitative data. A selection of candidate sites was obtained, and these were then entered into the Internet Archive site (www.archive.org) to establish the quality of historical data available. Quality of data in this sense refers to the start date of entries into the archive, and the frequency and distribution of updates. Figure 1 shows an example of the reporting available on the site and provides an overview of the data density. Where the data relating to a particular forum was insufficient to provide samples of sufficient frequency and regularity, the site was discarded and the next on the list was submitted.

Figure 1: Internet Archive entries for www.rolexforums.com showing commencement of inclusion in the archives, and frequency and distribution of updates (Source: http://web.archive.org/web/*/www.rolexforums.com)



Conceptual modelling has been described as “the activity of formally describing some aspects of the physical and social world around us for the purposes of understanding and communication” (Mylopoulos, 1992). Identifying variables and interactions based around defined categories will enable the development of a model that identifies and explains the actors and structural characteristics associated with value creation from OCs.

TOWARDS A COMPREHENSIVE MODEL

OCs may exist in many forms. They may be directly associated with an organisation, or they may be entirely independent of the organisation and exist only as a result of the individual members' shared approach to a contingency.

The proposed empirical model considers two dimensions:

1. Organisational dimensions – which are controllable by decision-makers within the organisation; and
2. Community dimensions – which shape and limit the nature of the resultant community, and reflect variables relating to the nature of participation.

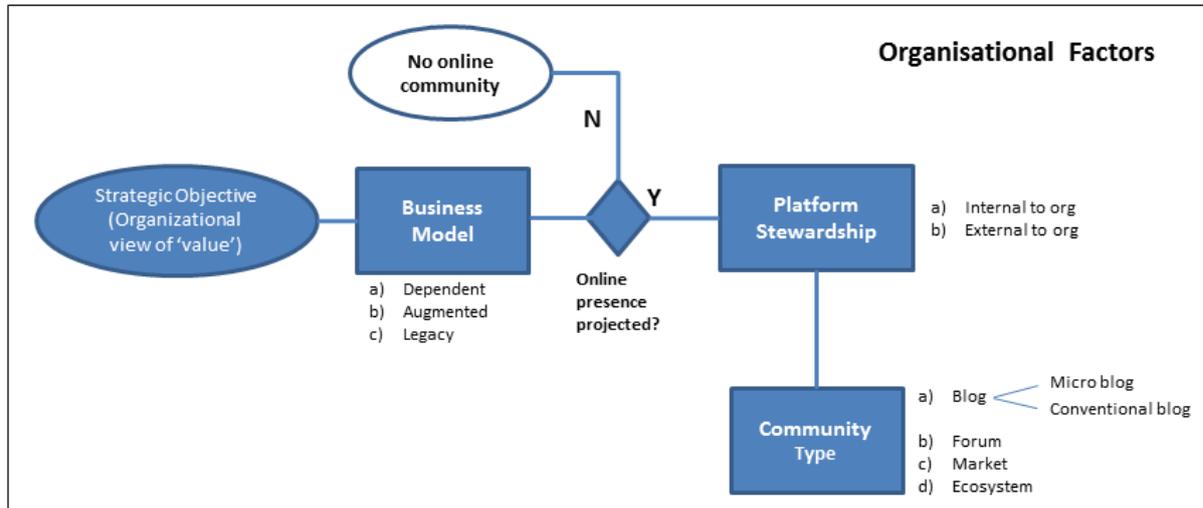
Taken together, the proposed model provides both an explanation for observed community interactions, and a diagnostic tool showing alternative configurations that may potentially drive better value creation from an existing community engagement approach.

Organisational dimensions

Organisational dimensions are those that are specifically related to, and under the control of, the seeker organisation. They are distinct from of any particular crowdsourcing process and can be considered independent variables.

1. Strategic Objective: The starting point for development of this model is the assumption that an organisation's involvement with OCs is intended to contribute to the achievement of the seeker organisation's strategic goals. "Value" in this context may well be an end-product, but it may also represent the unlocking of insights or a capability (for example) hitherto unavailable to the organisation. Curating or engaging solver OCs in the absence of a clear strategic vision is problematic and will undermine the ability for the benefits of that community to be leveraged.

Figure 2: Organisational dimensions of OCs



2. Business Model – The second organisational factor for consideration is the degree to which the community is integrated into the business model used by the seeker organisation. This factor can assume one of three states. The first is where the capability of engaging the community is a central and essential part of the operational model of the organisation. This is called the “dependent” model, and organisations pursuing this model are incapable of surviving in the absence of community interactions. The second state is where the organisation uses a more traditional business model but captures community inputs as an added-on capability. This is the “augmented” model. Examples of this model

are governments that use crowd-based techniques to assist in policy formation and problem solving. The third state is where the organisation disregards, either through design or neglect, the presence of whatever OC of interest exists around it. This can occur for a number of reasons and is relatively prevalent at the time of writing. This is referred to as the “legacy” model.

Organisations that are “dependent” (such as Amazon, Facebook and eBay) maintain customer communities that are the value creation engine and effectively inseparable from the organisation itself. Other companies (such as AT&T, Hewlett Packard and Nike) maintain active communities that have been developed alongside their primary operations, enabling input to be obtained while the organisation remains operationally independent from its associated communities. Many more organisations – usually ones of significant scale – are too bound by fixed organisational structures, industry regulatory pressures or stock market expectations to engage OCs in any meaningful way. Banks and mining companies are typical examples. As the impact of social media and OCs becomes more apparent, some business-to-consumer enterprises appear to be decreasing their reliance on legacy systems and are starting to provide opportunities within their operating or business models for more significant stakeholder interactions.

3. Online Presence Projected – at this point the model seeks to establish whether the organisation projects an online presence beyond a simple website. The null case here is the organisation whose presence provides no way for interested parties to respond. In these cases, the organisation eschews even the most basic social media presence. American Tower (<http://www.americantower.com>) is a large transnational enterprise based in the United States. Its website is purely descriptive with no social media presence or any other way for interested parties to interact with the firm beyond a “contact us” page.

Social media is simple and inexpensive to access, and many organisations use social media platforms such as Twitter, Facebook, Pinterest and Instagram as an extension of their website. This may satisfy a technical definition of creating and engaging with an OC, but in reality simply posting content to Twitter and Instagram does not mean an impact is being felt either in respect of forming or contributing to a community discussion. It should be recognised that almost all organisations of scale now project some form of online presence through social media channels. This is a necessary but not sufficient precondition to the formation of a community. The test of whether a community has been formed relates to the extent of response that results from this activity. This kind of irregular and ad hoc activity is a separate category of interaction that (while capable of influencing decision-making within organisations) does not represent a coherent response to community building and is, one might surmise, often unwelcome in relation to the pressure it puts on management. It is, however, an important community interaction, and one with the potential to create value for the organisation.

4. Platform Stewardship – This factor reflects the relationship between the organisation and its community. This is an important decision for an organisation – it can foster the creation of its own OC (management of the community is a function *internal* to the organisation), or it can monitor but otherwise have a hands-off relationship with a community that has been created outside the auspices of the organisation (management is *external* to the organisation). Some organisations may be unaware of both the existence of an associated community, or of the potential to leverage this community for advantage (*not considered* by the organisation).

Web 2.0 technologies that enable interaction are ubiquitous and accessible to all. The degree of perceived authenticity of these interactions is likely to have the effect of mediating the quality of the contribution by the stakeholder. For example, independently

moderated, spontaneously evolving communities are likely to elicit a more open, honest and unfiltered set of responses than those from sites established, curated and overseen by the organisation being commented upon. In this case the obvious presence of the observer is likely to influence the contribution of the community (Vaezi, Torkzadeh and Chang, 2011).

This review of companies comprising the 2015 Fortune 500 list in the United States found that, of those that could be considered B2C (i.e., operating in consumer markets) (n=226), only 44 or 19.5% hosted their own easily accessible OC. Of those with a primarily B2B focus (n=274), 31 or 11.3% maintained online stakeholder communities. In contrast, every one of the Fortune 500 companies was the subject of discussion and comment among online forums external to the company. Many of these interactions centred on the investment potential of the companies under discussion. Others consisted of contributors seeking information about employment opportunities and experiences from other community members who had had dealings with the company. Independent and spontaneous communities discussing products, strategies and topical concerns related to the companies were also prevalent.

5. Community Type: Categorisation of type of community utilises two dimensions: the scope of interests covered in the interactions of community members, and the extent of diversity of interaction enabled by the platform.

Some communities form around very specific topics – they are single-interest driven and often quite specialist in nature. A community dedicated to the restoration of a particular model of automobile is unlikely to sustain discussions about politics. Other communities arise in response to a broader range of interests. These might be aligned to a particular brand or cause, or be more general in nature. Members of these communities, such as *Quora* and *Straight Dope Message Board*, typically start and propagate discussions and encourage the contribution of different perspectives and viewpoints from their community across a range of topics.

“Diversity of interaction” in this model reflects the degrees of freedom of participation afforded to the community. Interactions can range from one-sided to many-sided. A one-sided community will have a flow of information that moves from a source to an audience. In a typical one-sided system, the audience is either unable to contribute back to the source, or can do so only in a piecemeal fashion without the formation of conversational threads and free-ranging interactions with other audience members being feasible. Some organisations may seek to limit the diversity of interaction to minimise the potential risks associated with open and unconstrained communication. Moving beyond this token activity can be challenging for the organisation. It requires it to develop capabilities of managing a more plentiful and diverse range of interactions. However, there are numerous examples where organisations have benefitted from a broad and diverse range of interaction. This can be achieved by allowing stakeholders to independently and autonomously create new topics and opportunities for interaction between each other and the organisation itself.

Four community types arise from the scope/diversity interaction. Where the scope of interest is low and the diversity of interaction is also low, the community form is a blog (originally called a “weblog”). The blog’s author (blogger) is typically an individual or representative with some professed interest or expertise in a particular area, communicating to a community that shares that interest. The number and extent of responses is insignificant compared to the number of viewers of the content. Contrast this to a situation with low diversity of interaction but high scope of interest. This form may be found in online **markets** such as eBay, or Alibaba where the range of topics (i.e.,

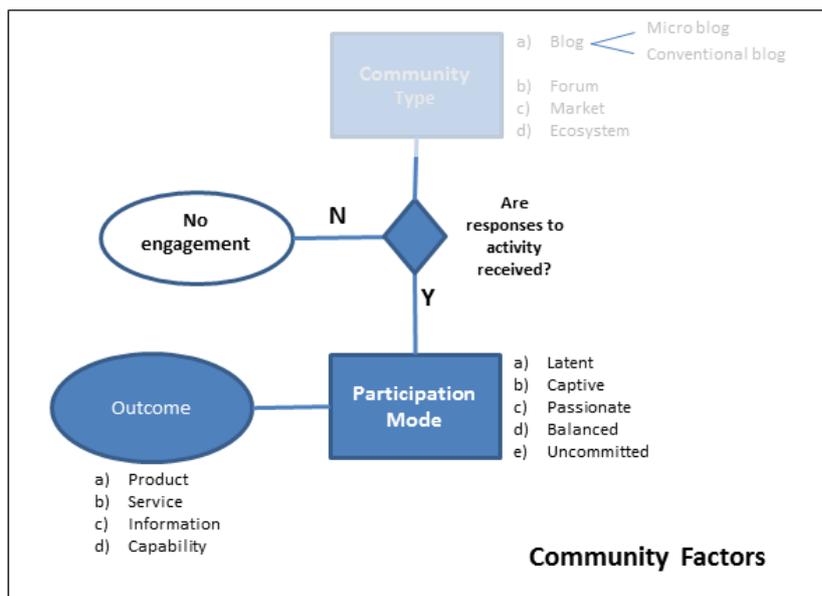
categories of items for sale) is potentially unlimited, but participants generally relate only within the context of the individual vendors in the market.

The third form is found where the scope of interest tends to be focused while the diversity of interaction is much greater. Online forums – sites enabling users to participate in topic-driven discussions – are perhaps the most visible and therefore accessible example of this and lie at the basis of the formation and development of many OCs. The final categorisation occurs when the scope of interest is large and the diversity of interaction is similarly large. Under these circumstances, a number of separate communities (based on a common theme) form an **ecosystem** around a particular organisation or cause. The subsequent interaction is complex. An example of an ecosystem topology is Lego, which engages with a diverse range of communities around the world.

Community dimensions

Community dimensions flow as a direct consequence of the type of community that mediates the interaction between seeker and solver. As noted previously in this paper, the mere fact an organisation participates on a platform does not mean the activity generates responses, and so the engagement or otherwise of potential communities needs to be established in advance of categorising the participation mode. In those cases where an organisation for example hosts a forum but there are few if any responses to the content it posts, no engagement has taken place and there is effectively no community.

Figure 3: Community dimensions of OCs



6. **Participation Mode:** While the configuration of the platform is an important enabler of various scopes and diversities of interactions, the actual performance of the community will be significantly impacted by the style of interaction or participation mode demonstrated by the users. When assessed on an empirical basis, the following five states are observed:

Latent: where the individual in a crowd has not yet become part of a community. The condition precedent necessary for the individual to be motivated to connect has not yet occurred. An example of this is residents in earthquake zones. Their participation in social media may be entirely recreational until a quake hits. The exogenous shock caused by the quake coalesces the latent actors into a cohesive community – the resources of which can then be used by authorities in rescue and remediation efforts.

Captive: where interactions between platform and community are a result of there being no practical option. Participation is not through choice but through necessity (for example, Telstra, Commonwealth Bank of Australia);

Passionate: where participation is the result of a free choice to engage on behalf of the members of the community, and contributions come from the participants' desire to be heard and to make a positive contribution to the community (Straight Dope Message Boards, Rolex Forums);

Balanced: where participation becomes a way of life, not driven by compelling external stimuli but by the incorporation of the platform into the participant's daily routine. Need to participate is often justified as functional rather than driven from a particular need to address issues. An example of this is recreational participation on platforms such as Facebook and Twitter; and

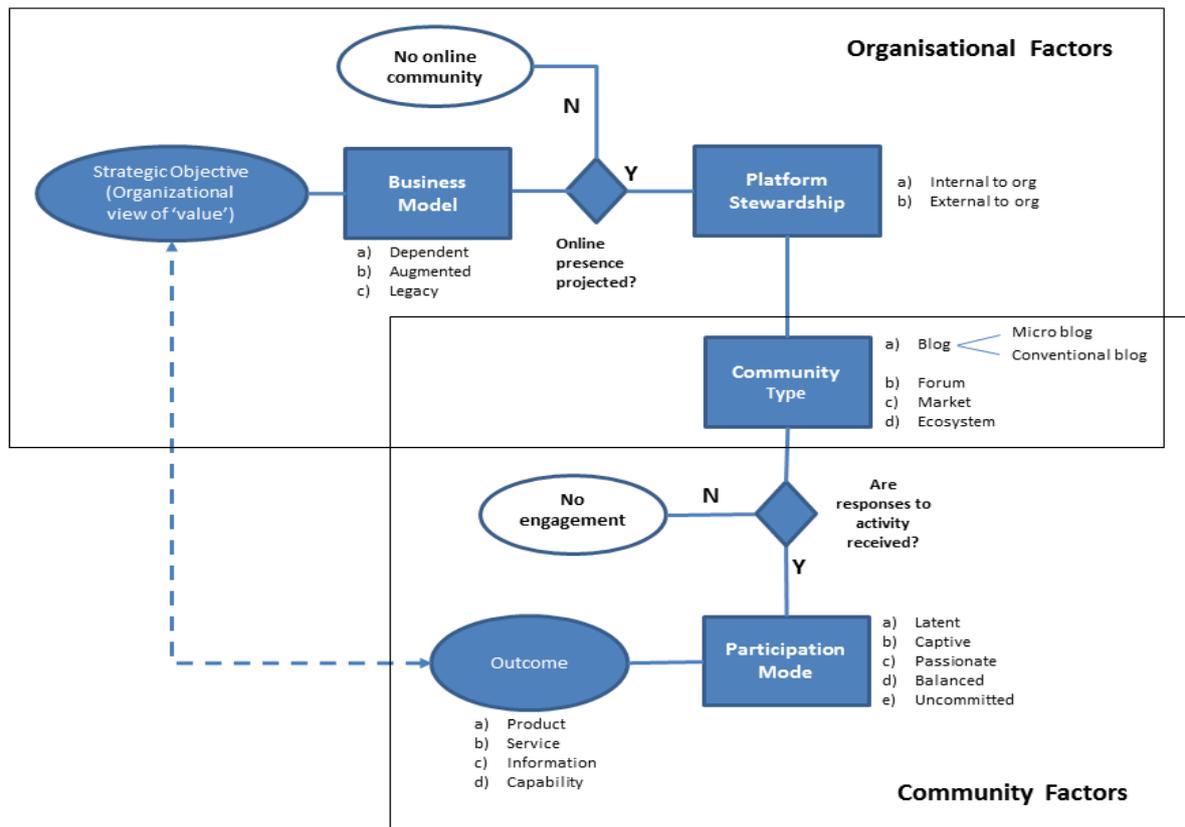
Uncommitted: where the bond between platform and community member is weak and irregular – if it exists at all. The platform owner is offering access to the platform through a sense of obligation or to be seen to be contemporary. The potential user may perceive the pages to be a contrivance with little substance and limited ability to actually provide influence (for example The Clorox Company, and their “Heritage Community”).

The style of interaction is an important consideration because it contributes to the degree of authenticity and engagement present in the interaction. The standard of contribution arising from authentic and engaged participants is more useful than that of individuals participating on a platform through obligation or lack of choice. An organisation seeking to leverage the insights of its community may be disappointed by responses when that community is delivered to the organisation through overly moderated or controlled platforms.

7. Anticipated Outcome – A final element of the comprehensive model relates to the nature of outcome sought. The classical dichotomy of goods and service (tangible/intangible) can be extended here to include two additional classifications of outcome; *information* and *capability*. Turning to a community for information is self-explanatory – the information may relate to guidance on potential new products and services, to better understanding the priorities of consumers, or to establishing a clearer picture of the organisation's reputation and brand in the eyes of the market. When an organisation turns to a community to either get it to perform tasks on its behalf or to solve problems, the community is effectively providing that firm with a capability it did not have previously. Community-based capability building extends the resource-based view of the firm (Barney, 1991) to include the valuable, rare and imperfectly imitable contributions of a community of individuals, each with a perspective and some degree of willingness to contribute.

EMPIRICAL END-TO-END MODEL

Figure 4: End-to-end model of OC interaction



By combining these organisational factors and community factors, an empirical end-to-end model can be constructed that accounts for the range of modalities in which community interaction may be accessed by an organisation.

This model serves two purposes. It accounts for the range of management decisions contributing to the formation of an interactive online presence, and it provides a framework for troubleshooting when performance of online presence has not matched management expectations. By identifying how each of the model's categories are configured by an organisation, opportunities for modifying or enhancing the constituent elements to achieve outcomes more consistent with the strategic objectives of the organisation can be undertaken. Attempting to obtain crowdsourced ideas through an *augmented* model using *internal* ownership in *blog* form is unlikely to be successful. Migrating communities from *captive* to *passionate* through relinquishing ownership of a platform may seem like a lessening of commitment, but will likely lead to more authentically engaged communities and better outcomes. Understanding that the elements in this framework have a variety of settings, and that each of those settings is a management controllable has the potential to provide greater access to enriched outcomes as a result of community interactions.

CONCLUSION

The purpose of this research is to propose a conceptual model of OC development and management in the context of organisational value creation. OCs demonstrate distinct characteristics, and a deterministic and predictive model can be developed through integrating these typologies with other critical decision points in relation to choice of business model, platform stewardship, community type, participation mode and desired outcome.

FUTURE RESEARCH

The model developed by this research is conceptual in nature. Future research directions may include a more formal investigation of the nature and characteristics of the linkages between agents, and their impact on performance of the organisation seeking to utilise communities in value creation. There is now an abundance of data accessible with relative ease through new data mining techniques. Artificial Intelligence (AI) algorithms are already enabling meaning to be extracted from large and diverse datasets with relative ease (Kozinets, 2010). As new forms of community evolve, investigations may reveal a metacategorisation of sociological importance across a range of disciplines.

At the heart of these investigations lies the basic human drive for connectedness. Perhaps the most important dimension of this is the authenticity with which relationships form and are carried forward. Just as the notion of community is losing its geographic dependence and becoming more abstracted over time, so the challenge of keeping the trust and the humanity in the relationships becomes a more important factor. Future research directions accounting for aspects of authenticity in distributed relationships may provide a stepping off point for a means of further leveraging the potential that exists wherever communities operate.

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