

# One Community Does Not Rule Them All

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## ABSTRACT

Online communities attract many users and have replaced search engines as the primary entry point to the Web. But, while some community platforms show a tremendous growth in terms of registered users, generated content and visitors, others at a certain point in time do not manage to acquire new users or even lose active or inactive members. A typical pattern that can be observed is a major player absorbing the members of another community. This pattern of a *hostile takeover* of a community is frequent but not universal. The examples of Flickr, LinkedIn and Twitter all grow despite Facebook's dominance over other platforms and seem to be able to coexist peacefully. In this paper we present a meta model based on community facets of user requirements and technical platform features, to capture differences and similarities of communities. We analyse a set of publicly known online communities and observe that competitive platforms in fact turn out to have very similar profiles under the presented facet framework, while communities with notably different profiles are more resistant to a hostile takeover from each other.

## Categories and Subject Descriptors

K.4.0 [Computers and Society]: General; H.3.7 [Information System Applications]: Communication Applications

## General Terms

Community, Facet, Meta Model

## Keywords

Online Community, Meta Model, Hostile Takeover, Coexisting Platforms

## 1. INTRODUCTION

Online communities are very successful in terms of impact and attraction on users. Community platforms such as Face-

book<sup>1</sup>, Flickr<sup>2</sup>, LinkedIn<sup>3</sup> or Twitter<sup>4</sup> have shown a tremendous growth in terms of registered users, generated content and visitors. However, not all platforms are equally successful. While some platforms tend to grow constantly, others at a certain point in time do not manage to acquire new users or even lose (active) members. A typical pattern that can be observed is a major player absorbing the members of another community (e.g. Facebook vs. Myspace<sup>5</sup>). This pattern of a *hostile takeover* of a community is frequent but not universal [1]. The examples mentioned above of Flickr, LinkedIn and Twitter all grow despite Facebook's dominance over other platforms. A valid question is therefore: Which needs and requirements of the users do these platforms satisfy that renders their communities different and, thereby, resistant to a hostile takeover?

In order to answer this question we take a differentiated look at both user needs and community platforms. We develop a meta model to classify the types of communities based on facets. Applying the meta model to a selected set of publicly known online communities we can observe that competitive platforms have a very similar profile under the presented facet framework, while peacefully coexisting platforms show notable differences under several aspects. Thus, our facet-based description of communities is a suitable instrument to address the question of which platforms tend to compete for users and which platforms do not pose a threat to each other.

The rest of the paper is organized as follows. In Section 2 we list facets that describe the differences among online communities. In Section 3 we develop a framework based on these facets to lay out the similarities and differences of communities and apply this framework in Section 4 to a selected set of publicly known communities. In Section 5, we conclude the paper with a summary and a discussion of our findings.

## 2. COMMUNITY FACETS

To answer the question of why certain communities tend to compete for users while others seem to coexist peacefully, we look at user needs and technical restrictions of community platforms and describe them in a framework of facets: the

<sup>1</sup><http://www.facebook.com/>

<sup>2</sup><http://www.flickr.com/>

<sup>3</sup><http://linkedin.com/>

<sup>4</sup><http://twitter.com/>

<sup>5</sup><http://www.myspace.com/>

purpose of a community, a particular user culture, technical differences in the communication modalities and media support of a platform and the accession and activity model of a community. We now describe these facets in more detail and give examples of realizations to explain which aspects of a community they cover.

The purpose of an online community is a facet that reflects user needs and interests. The purpose can be social interaction (e.g. Facebook), generating and curating knowledge [6] (e.g. Wikipedia<sup>6</sup>), news propagation [3] (e.g. Twitter), sharing experiences with friends or with the general public [2, 7] (e.g. Flickr), finding romantic partners (e.g. eHarmony<sup>7</sup>) or forming an ad-hoc organization for real-world collaboration in extreme situations such as emergencies [5, 4] (e.g. the WeKnowIt emergency platform<sup>8</sup>).

The user culture is defined by social norms and behavioral patterns inherent to a community. For instance, both Facebook and LinkedIn are platforms for social interaction, but, while for the community of Facebook users it is acceptable and welcome to publish and consume personal information, such a behavior would be inappropriate in a business-oriented network such as the LinkedIn community.

Technical constraints of the platforms do certainly influence directly the purposes of a community by providing key functionalities, such as the availability of several communication channels (one-to-one, one-to-many, responding to or relaying of messages), generating, sharing and curating contents of different media types (text, photo, video, audio, annotations) or the rating and inter-linking of users and contents. Usability, quality of service, access profiles and privacy related issues as well as the integration with other applications furthermore define which functionality is actually used and in which way.

The accession and activity model dictates how users join, participate and leave a community. Communities can be completely open (Wikipedia), require a registration for contributing (LinkedIn), require a registration for contributing and for accessing content (Facebook) or completely closed, e.g. available only to the employees of a company.

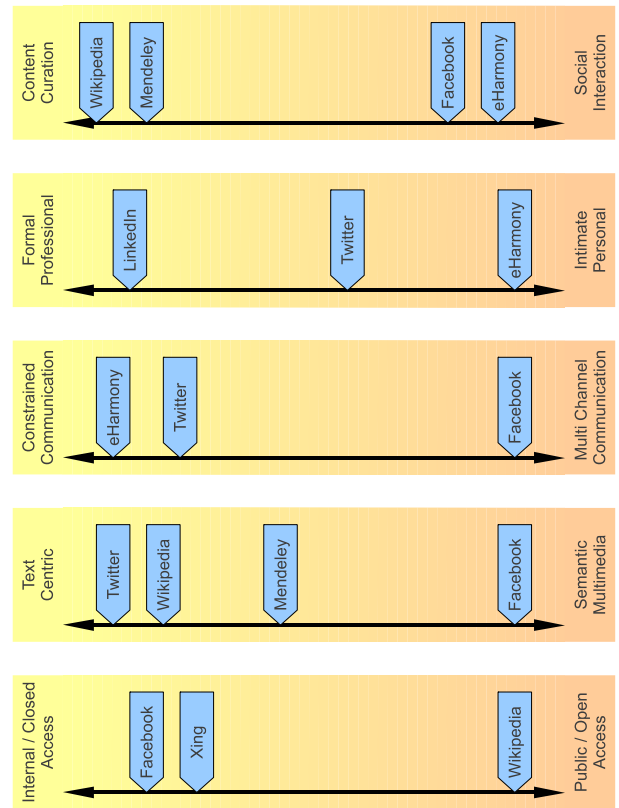
### 3. FACET FRAMEWORK FOR COMMUNITY PROFILING

The social and technical indications ascribed to a community under the facets presented in Section 2 are diametric. It is hardly possible for a community to cover the full range of possible realizations of a facet. Therefore, we propose these facets in this paper to form high level dimensions along which it is possible to differentiate, describe and define the type of a community. The facet values serve to generate a profile for a community. Along these facets, it is possible to draw analogies to the work of Cusumano [1], who attributed the rise and decline of online community platforms mainly to networking effects, models for revenue generation and appeal to certain user groups.

<sup>6</sup><http://en.wikipedia.org/>

<sup>7</sup><http://www.eharmony.com/>

<sup>8</sup><http://nebula.dcs.shef.ac.uk/weknowit/>



**Figure 1: Framework of five facets to describe the profile of a community.**

To generate comparable profiles, we map each facet onto a one-dimensional axis by introducing a notion of order and extreme realizations. Because in most cases it is not perfectly possible to map all facet realizations onto a single dimension, we propose restrictions of the facets which describe to a good extent the observed variations. Figure 1 outlines these facets, which we will now describe in more detail. To further clarify the concepts we have indicated the position of a few online communities in the range of possible realizations in that figure.

*Community Purpose.* In order to lay out the variety of community purposes along a single dimension, we take an approach based on the central items of interest in a community. Some communities focus on users and their social interaction. Another possible approach is to focus on content items, such as news, pictures or videos. Obviously, many platforms manage both, user profiles and content items. However, they do make a choice of which items to focus on in their primary presentation. Thus, we can position a community between the extreme points of *Content Curation* and *Social Interaction*. Effectively this facet describes the user group of a community along the primary focus of their interest.

*User Culture.* While the culture of community users has a variety of facets itself, we can make a general and wide

distinction of whether a community is typically and primarily interacting on a *Formal and Professional* or on a *Intimate and Personal* level. Business communities where users present online CVs and make business contacts will be located on one end while dating websites will be located closer to the other extreme. The facet of user culture describes the user group on the level of whether a community addresses rather the private or a business sphere.

**Communication Model.** The technical constraint of the communication model influences the specificity and precision with which users can interact with each other. A *Constrained Communication* model restricts the users to a single channel for interacting with each other while *Multi Channel Communication* platforms provide a variety of channels with different levels of specificity, reach and privacy implications. Classical social network platforms for instance typically allow their users to communicate via private messages, web forums, sharing of and commenting on media contents, status updates or even platform apps, while social media narrow communication down to a few or even a single media type and channel of exchange. The communication model contributes to a networking effect within the community, which is considered an important key success factor.

**Media Support.** A second technical constraint regards the supported media types which a community platform can handle. This affects both communication methods and content generation and curation capabilities. The range from simple *Text Centric Media* messages over single type media and multimedia to rich *Semantic Multimedia* interlinked with other data covers the data model for interaction and content management. Content items are central to community platforms, as they reflect common interests of the users and form the a basis to generate revenue via the introduction of context related advertisements.

**Accession and Activity Model.** With respect to the accession and activity model, laying out the realizations of this facet along a single dimension is simpler. One extreme are *Public and Open* access and contribution models, where every user can directly access and contribute without any need of registration or login. The other extreme are *Internal and Closed* communities which do not allow contribution or even access unless the user has signed in to the community. A closed accession model allows a platform to hedge its services and force users to join in order to participate. An open accession model strengthens network effects by integrating with other communities or external users.

#### 4. ANALYSIS OF COMMUNITIES

We manually analyzed a selection of publicly known and perceived communities and mapped them onto relative locations on our five facet dimensions. To visualize the results we use spider plots that elucidate well the differences and common characteristics of communities in this space of higher dimension without giving a preference to any of the coordinates.

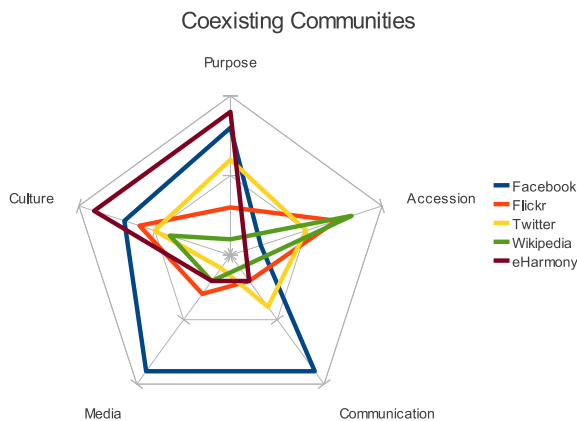


Figure 2: Coexisting communities.

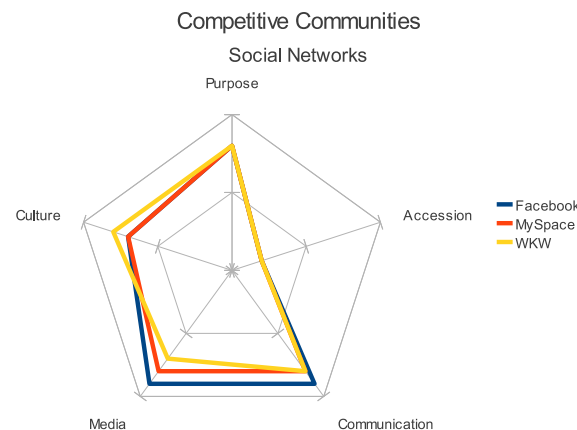


Figure 3: Social network competing for users.

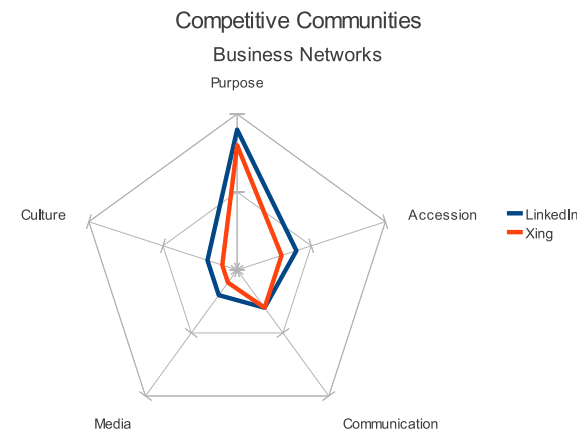


Figure 4: Business network communities competing for users.

Figure 2 shows a selection of communities which seem to be able to peacefully coexist in the market. Already in the introduction we mentioned Facebook, Flickr and Twitter to grow constantly and independent of each other. To this list we can add Wikipedia and eHarmony. The spider plot demonstrates that each pair of two platforms diverges to a larger extent w.r.t. at least two facet dimensions.

Competing communities do not show this diversification effect. Figures 3 and 4 shows examples of platforms in the fields of social networks and business networks, that represent competitors. While smaller variations in the facets can be detected, the general outline of the platforms is very similar. This little diversification can be seen as an indicator for the platforms using the same technological means to compete for users with very similar requirements and culture.

Based on this observation we can find an explanation for the observed phenomena of platform cannibalism on the one hand and peaceful platform coexistence on the other hand. The hostile takeover pattern described in the introduction tends to occur whenever two platforms serve the same community type. In this case it is typically the better established, globally acting or more user friendly community that absorbs the members of the other platform according to a rich-get-richer principle. Orthogonal platforms, instead, serve different communities. They are rather complementary than competitive and populate different ecological niches in the world of online communities.

Given the diametric character of the facets any platform has to make a choice of where to position itself. This choice of position excludes certain market segments, which can then be served by competitors. For this reason it is very unlikely if not impossible that one community platform can serve all the user needs and requirements at the same time.

## 5. CONCLUSIONS

We presented a meta model to describe online communities by the means of five facets which capture platform constraints and user needs. The values of the facets have been mapped into a five dimensional space in order to represent and compare communities via a faceted profile.

In conclusion we found patterns which can explain the observed phenomena of competition and hostile takeovers among community platforms on the one hand and peaceful platform coexistence on the other hand. Competing platforms are very similar when analyzed under the five presented facets, while coexisting platforms diversify more clearly. Further, as under this faceted view it is hardly possible for a community platform to serve all the user needs and requirements at the same time, we consider it very unlikely that one platform will dominate and rule over all online communities.

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