
Like this: How game elements in social media and collaboration are changing the flow of information.

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Abstract

Game systems have been implementing a range of features as part of their design to encourage engagement and interaction from users. With the growth of online social networking services (OSNS), it has been observed through indirectly studying behaviors that users have repurposed features of OSN—such as statistics and user profiles—in a game-like fashion to drive the flow of information. This paper brings to discussion (a) how the utilization of these elements and (b) how the types of elements in relation to the type of OSNS influence the flow of information, and (c) what that potentially means for the future development of OSNS.

Author Keywords

Flow of information, game systems, cultures of exchange, gamification, gamefulness

ACM Classification Keywords

H.3.5 [Online Information Services]: Web-based services; H.4.m [Communications Applications]: Miscellaneous; H.5.3 [Group and Organization Interfaces] Web-based interaction

General Terms

Design

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1. Introduction

"Data is the new soil" [11] of the social ecosystem that influences the creation, exchange and distribution of content – what we define as the *flow of information*. With everyone vying for interest in their social capital [2] [12], users are finding ways to utilize features of online social networking systems (OSNS) in gameful ways to influence the flow of information. OSNS such as Twitter, Google+ and Facebook are transforming how we contribute to it, through various design features appealing to different types of users. These user types are not only engaging with these features in different ways, they are also repurposing them in what could be considered a type of "excorporation" [9] that is influencing the flow and distribution of information. This often elicits an emotional reaction [10], encouraging user engagement and thus, the flow of information restarts.

So far there is miniscule research on aspects of this phenomenon with OSNS introducing these game like elements in various ways to their services, users' interaction varies between networks as discussed by boyd, Cha and Medler (see [3], [5] and [12]).

With this paper, we want to activate a discussion about the role of game elements in two OSNS–Twitter and Facebook–and how these game elements have changed the flow of information within an exemplary service. We are also interested in how participants of these OSNS are turning the service into a gameful activity for themselves. We will achieve this by comparing two game elements, user profiles and statistics, briefly investigating the way users' utilize these elements and how this affects the flow of information.

2. Game Elements

Game elements can be drawn from a range of different levels [8] such as game interface design patterns, mechanics, principles and models. Elements from these dimensions include badges, leader boards, goals, play testing, avatars and profiles encouraging competition and self expression between players. One aspect that both online gaming and OSNS have in common is the sheer mass of participants. Just like there are different types of players in games, there are different types of OSNS users.

We hypothesize that Bartle's research [1] in classifying the characteristics of players of multiplayer online games and Yee's empirical study of Massively Multiplayer Online Role Playing Games (MMORPGs) [15] can be applied to users of OSNS. We believe this mainly because both online games and social networks seem to exhibit similar types of user interaction models both amongst each other, but also when interacting with the OSNS rule system. It should be cautioned that while Bartle's player types–consisting of four characters, killers, achievers, socializers, and explorers–were devised on the basis of gamers, they are not fully transferrable to users of OSNS, as socio-technical contexts differ. That being said, the fundamentals of Bartle's four player types can be extrapolated, and be applied to the context of social networking (Table 1) and have been applied to other online media constructs, for example gameful website navigation [14]. There are clear parallels between game-based and gameful characterizations; minimally, such a mapping can become a potential starting point of a discussion seeking to understand why and how users' utilize features of OSNS in a gameful way, and how this affects the flow of information therein.

Table 1		
Player Type	Definition	Assumed influence on the flow of information in OSNS
Killers	Focused on competition, winning and rank.	Killers types care most about competing with others striving to impact the OSNS and its ecology—not only destructively, though. Do I have more followers and retweets than my friend, or this competing colleague? (How) can I influence the information culture of a certain OSNS? These types of question drive our assumed OSNS killer character to push out information and attract like-minded users creating a self-fulfilling prophecy [13] rather than delegating the flow of information into select niches.
Socializers	Focused on socializing and developing networks	Members of this characterization are possibly the most influential in driving and increasing the flow of information to wider networks. Their focus is on interacting [14] with many people as possible rather than personal goals. Socializers can also act as a point of cultural exchange, directing the flow of information towards particular areas of interest based on their own social networks and topics discussed therein, thereby delivering targeted, "filtered", information to users.
Achievers	Focused on status, goals and completion.	Achievers seek to collect points, level up, or other types of quantifiable measurements of "succeeding" in a OSNS. While they are self-motivated, aiming to achieve status, these users potentially push information towards more defined areas of interest to gain something more intrinsic from it such an increased rank within the community via posting, retweets, followers and so forth.
Explorers	Focused on exploring and discovering	Explorers want to discover and understand [14] an OSNS. Users in this category may not have as much influence on the flow of information as the other player types, however they possess the most rich and concentrated of the information available having taken a backseat and exploring what a flow such as the Twitter stream offers, rather than contributing to it.

317 TWEETS | 516 FOLLOWING | 203 FOLLOWERS

Figure 1. Twitter statistics

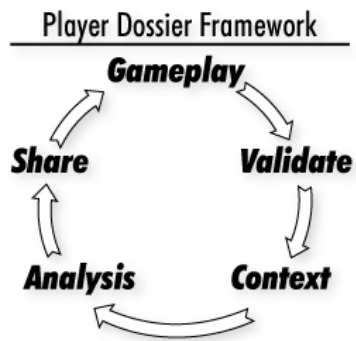


Figure 2. Player dossier framework taken from Medler [12]

Table 1. Bartle's player types in mapped to social networking user types

Given the diversity of user types, different types of features appeal to different users' and affect the flow of information in different ways with some elements such as statistics appealing to one user type and profiles and avatars to the next. The variety of users may provide a diverse range of implicit or explicit gameful design options for developers of OSNS to consider when creating services to target a particular user type(s) to drive the flow of information in a certain way.

For example, statistics within games work as an indicator of a number of gameplay aspects - progress, experience, achievements and rewards. They belong into the game design and interface category, i.e. the concrete notion of game elements [8], and will likely appeal to more of the "achiever" playing type, but also

will attract "killers", because these aspects invite competition. Twitter is an OSNS that utilizes statistics via a user's tweets, followers and followees (Figure 1) operating as part of what Medler describes as a "player dossier framework" - "identifying how gameplay is transformed into data that can be analyzed and shared" [12] (Figure 2). Due to the simplicity of Twitter's features, users' can min-max their participation quite easily; they may maximize what they desire, character-wise, by increasing their tweets, utilizing hashtags and receiving mentions and retweets. Since 2009, social media analytics company Klout has been offering to measure this kind of influence using the Klout score (Figure 3). A user's score is indicative of the user's network size, her degree of participation in an OSNS and her impact upon the greater community. This score

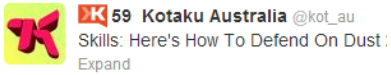


Figure 3. Example of a Klout score as indicated by the number "59"

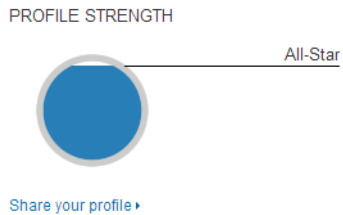


Figure 4. LinkedIn user profile completion indicator

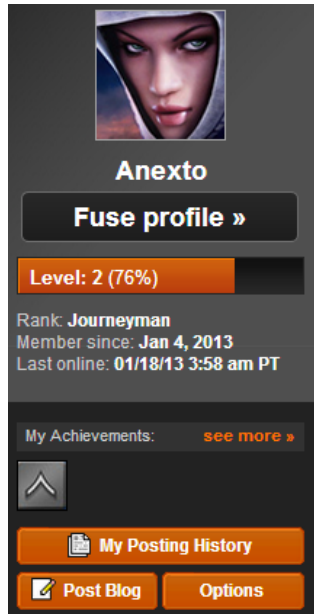


Figure 5. GameSpot users' profile

may encourage an OSNS achiever to participate more in order to gain a better Klout rank, and this way, influences the flow of information.

Unlike to statistics, OSNS profiles are potentially more appealing to our assumed OSNS explorer and socializer mappings. We define a OSNS profile as follows: *a users identity featuring personalized information about themselves.* Whether a user "plays" or "uses" [8] an OSNS, profiles are a core element to building a social networking site [6]. OSNS operators typically require users to create an online identity, filling it with facts and figures as a means to display their self-perception, or an alternate version [3] of themselves as part of their an online identity. Designers of OSNS' such as LinkedIn and GameSpot have implemented reward systems to encourage users to contribute more information to their profiles (Figures 4 and 5) and as a result of this "gamified design", LinkedIn saw a rise in profile completions [7].

Let us look at another aspect: the profile of a Facebook user reveals as much or as little of what a user likes/do not like, where they have been and what they have been up too - much like character biographies in games. Profiles can be thought of as a hub that initiates a flow of information from various resource nodes such as page "likes", friends, places of employment and so forth, to allow users' to "traverse the network graph" [3]. When a user "likes" a page, this action is represented with a type of "badge" on a user's profile, indicating to their network that they find something positive, interesting, worthy of support, and, generally speaking, mentionable. Groups are utilizing this to request those who have "liked" their page to suggest it to friends or to "share" it as part of a "gamified

challenge" [16]. These types of challenges result in a sociographical reward to further the flow of information about a product or service, and becomes subject to raising and sustaining social capital, whereas the initiating Facebook group (or brand, or band) manages that the user helps market it.

3. Discussion and Conclusion

In this contribution, we have maintained the angle that "gamifying" or "gamification" does not have to be about making an ordinary task such as collaboration an explicit "game" and rewarding the user with badges and achievements. Rather, incorporating game elements as part of a OSNS to facilitate the flow of information than to drive it. If empirically studied, we believe that a lot can be learned from how game-like elements are used in OSNS', and how this influences the flow of information. The ways users excorporate features may activate discussion and could offer insights into designing and developing engaging services to encourage productivity and product interest for not only for personal accounts but also in business and commercial settings driving the flow of information.

A gameful approach to the flow of information can be important to all users of an OSNS because it has the potential to change the way information is created, exchanged and distributed. Businesses could adopt a similar approach to drive information to a product and help spike interest with their company, using gameful principles. Whilst these examples have been of an outward influence - on the internet, there is potential for this kind of adaptation to be used as part of an intranet to encourage collaboration within organizations and educational institutions - rewarding users' for "competence rather than compliance" [4].

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