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## **What Value do Users Derive from Social Network Applications?**

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### **Abstract**

Research on social networking sites like Facebook is emerging but sparse. This exploratory study investigates the value users derive from self-described 'cool' Facebook applications, and explores the features that either encourage or discourage users to recommend applications to their friends. The concepts of value and cool are explored in a social networking context. Our qualitative data reveals consumers derive a combination of functional value along with either social or emotional value from the applications. Female Facebook users indicate self-expression as important motivators, while males tend to use Facebook applications to socially compete. Three broad categories emerged for application features; symmetrical features can both encourage or discourage recommendation, polar features where different levels of the same feature encourage or discourage, and uni-directional features only encourage or discourage but not both. Recommending or not recommending an application tends to be the result of a combination of features and context, rather than one feature in isolation.

### **Introduction**

Social Networking Sites (SNS) and the number of people using them have grown considerably in the new millennium (Huberman, Romero, and Wu, 2009). This desire to stay connected is what

social scientists call “ambient awareness” (Goldsborough, 2008), and research investigating the behaviour of users on SNS like Facebook and MySpace is now emerging.

However to date, there is no empirical evidence to indicate why some social networking features, such as applications, are passed on and why others are rejected. Applications are small programs allowing users to interact with SNS features and other users. Examples of these applications in Facebook are ‘Scrabble’, ‘Mousehunt’ and ‘Superpoke’. Sufficient time has passed since social networking reached critical mass to now analyse the success and failure of applications (Richmond, 2008).

The challenge for researchers and practitioners alike is that SNS like Facebook and MySpace are unique in terms of their combination of communication features, and therefore research requires exploratory techniques. SNS share some of the characteristics from myriad forms and tools of communication such as email, television, websites, mobile phones, radio, newspapers, mail, blogs, billboards, magazines, search engines, SMS, phone books and viral marketing campaigns.

Another issue for researchers is while SNS are by definition social instruments, used to connect people with other people (Bumgarner, 2007; Subrahmanyam et al., 2008), this connection can be at varying levels of interaction. For example, some people may use social networks in an individual, non-social manner. Users do not have to invite others, they may choose to disable the social features, and they may download only individual applications requiring no people interaction.

Faced with cluttered traditional media, and increasing difficulty reaching Generation Y consumers, advertisers are looking towards social networks to solve their problems. Aligning with them, SNS are looking at ways to generate revenue, and corporations are searching for the best ways to commercialise these networks. However in 2007, US advertisers spent barely three percent of interactive advertising dollars on social media - \$600 million out of \$18 billion, but this is expected to grow quickly. One reason for this low figure may be that advertising on social networking sites is expensive, as much as US \$50,000 per day which excludes most sponsors (Vascellaro and Steel, 2008).

Applications can be used as an alternative to advertising on social networks. Applications are relatively cheap to develop, and are distributed virtually cost-free, making them an attractive substitute. Furthermore, popular applications can attract tens of millions of views and uses per month. The goal for application developers is to get SNS members to pass them on to their friends, operating on similar principles to viral marketing campaigns. For an application to be downloaded and spread it needs to offer value to the user.

What form does this value take? Industry commentators indicate social value is a key success criterion with applications that assist social communication being popular (Richmond, 2008). In particular applications that are 'cool' are likely to be passed on due to the social cache attached to being privy to these applications or the entertainment factor. This exploratory study thus addresses two research questions:

***RQ1:*** what value do users derive from cool Facebook applications

**RQ2:** what features of an application encourage or discourage users to recommend applications to their friends.

## **Customer value**

The traditional view of value as a cost-benefit analysis, stems from the economic origins of marketing and emphasises the point of exchange. Typically the sale is the place where customers receive value. However, this view has been challenged in recent years with marketers adopting an experiential view of value which goes beyond the economic usefulness of a transaction (Holbrook, 2006; Sweeney and Soutar, 2001).

Value is relevant to social networking where the exchange between customer and organisation is not currency, but time and information - where the value is natural in the customer-to-customer interaction and not the customer-organisation interaction. This is consistent with Prahalad and Ramaswamy (2004), who identify value is not created by the organisation and 'delivered' to the customer, rather value occurs both inside and outside the organisation with customers participation in the creation of value.

As Facebook is an experiential product, we adapt the experiential value concepts of Holbrook (1994, 2006) and Sheth et al. (1991) to categorize four types of value generated by Facebook applications; emotional, functional, social and altruistic (humane). Emotional value is the pleasure, fantasy or fun gained by using an application, or by avoiding negative emotions. Functional value is measured by performance and technical features. Social value is generated

by the connections with other people enabled by using the application. Finally, altruistic (humane) value is the value obtained by helping others or society.

## **Cool**

While value has been widely studied, there is little academic research investigating 'cool'. Elusive yet identifiable, cool means different things to different people. Emerging as a means for African-American slaves to "cope with the indignity of slavery", they hid their true emotions with a 'cool' pose (Meacham, 2002). Cool has evolved from this to being adopted by Caucasians in the USA and throughout the western world as a characteristic of youth. Cool is of importance to youth and drives billions of dollars of consumer purchases globally every year. Product adoption and diffusion amongst youth often relies on the 'cool' factor for teens to recommend the product to their friends. Given the reliance of SNS applications on recommendation, it is likely that 'cool' applications will diffuse more rapidly than 'uncool' applications. Thus identifying the factors that make an application 'cool' or not, are an important part of understanding why people pass the application on (or not).

Dutch researcher Carl Rohde describes cool product as "inspiring and attractive...providing empowerment" to the user. Cool products help people "to bring out the best of their capacities and abilities." (Parvaz, 2003). This empowerment links the concept of cool with the value created by social networking applications. Facebook users want to possess and share cool applications that enhance their standing within their network of friends. From a commercial view, organisations are struggling to understand how to develop a cool application and identify the features that will encourage people to recommend cool applications to friends.

## Method

To address the two research questions of this study ‘*what value do users derive from cool applications?*’ and ‘*what features of an application encourage or discourage users to recommend applications to their friends?*’ this study employed exploratory research using open-ended questions in an anonymous online survey. A convenience snowball sampling method was used where university students, who are high users of Facebook, were initially approached to participate and asked to forward the URL link to the survey on to their friends. The responses to three open-ended questions were analysed and coded by two coders. Wherever the coders disagreed, the items were revisited and discussed until the coders reached consensus.

The first question, “what makes [the coolest application you have seen] cool?” was coded using Holbrook’s (1994) and Sheth et al.’s (1991) value types – functional, emotional, social and altruistic. Some responses were allocated to two or more value types. For example, the response “It’s funny, and you can challenge others” was coded as generating both emotional and social value to the user.

The second and third questions, “What would [encourage/discourage] you from recommending an application to a friend?” were coded using an emergent scheme as no prior scale for social networking exists. Again, two coders analysed the responses and designated them into one of three emergent categories:

1. A feature which can encourage and discourage users from recommending

2. A feature where different levels of the feature can encourage or discourage users from recommending
3. A feature that is uni-directional and only encourages or discourages but not both.

## **Sample**

The dataset contained 305 usable responses. Cases with missing data were not deleted because exploratory research does not demand complete data. Sample characteristics revealed the average age of respondents as 22.5 years, two-thirds of the sample were female and four out of five are current university students. Respondents in the sample have been using Facebook for an mean of just over a year, and had 186 'friends' on average listed on their page. Three-fifths of the sample accessed their Facebook page daily, and 30 percent accessed it multiple times a day. Almost 90 percent accessed Facebook at least once per week. On average the sample spent 4.5 hours per week on Facebook with a range from zero to 70 hours.

Only 28 percent of users allowed open access to their Facebook pages. Four out of five women set their page to allow invitation-only access while three out of five men used the same setting.

The vast majority (94.4 percent) access Facebook from home, and 28.5 percent use Facebook while at work. Regarding Facebook applications, respondents listed many applications with no single application being mentioned more than six times. The most mentioned application was *Scrabble* followed by *Sex and the City* and *Superpoke*. Ninety-five percent of the sample had rejected an invitation from a friend to add an application to their page and 57 percent had sent invitations to others, with females (62 percent) inviting more than males (47 percent).



## Results

To address the first research question: *‘what value is created by a ‘cool’ application?’*

researchers extracted the features or benefits of applications from the open ended responses.

There were a variety of features mentioned, however the following themes emerged; the ability of the application to facilitate self-expression of interests, values or personality, the ability to facilitate competition/comparison with others and novelty/rarity. Gender appeared to be relevant with women tending to indicate self-expression as important and men selecting competition.

The responses were then classified using the four value types. Analysis revealed multiple forms of value were present for each person and each application, with no evidence of any explanation being a single type of value. Altruistic was least evident and functional value appears to occur with either social or emotional value i.e. “it allows me to add pictures (functional) to share with others (social) or to make me laugh (emotional)”. Examples of responses indicating each value type are shown in Table 1.

**Table 1: Examples of value in explanations of why an application is cool**

<b>Emotional</b>	<b>Social</b>	<b>Altruistic</b>	<b>Functional</b>
“it is <b>fun</b> and interesting” “ <b>love</b> the show” “Has <b>sentimental</b> value and cute pictures” “It’s <b>hilarious</b> , you get to send ‘insults’ to your friends using very Australian slang and they in turn send insults to you” “it’s very cute, make me <b>feel like a child</b> again”	“its just fun to <b>compare people</b> and see what <b>other people think</b> about you. even if its not really that accurate” “Great to see photos <b>other people</b> have taken at <b>social events</b> etc” “Makes you feel a part of the whole movie phenomenon and creates a <b>talking point</b> ” its Scrabble! “I can play scrabble <b>with my friends</b> who are travelling all over the world”	“using it <b>helps</b> WWF” “it <b>saves</b> land from civilisation destroying it” “I like plants and the <b>environmental message</b> ”	“Because it allows you <b>to list</b> your social club/bar scenes, receive updates on your favourite bar/club scene” “ <b>Easy</b> to post things to it” “The amount of work that has gone into the <b>back end of the application</b> ” “it <b>allows music</b> to be played on my page”

<b>Example applications</b>			
Superpoke, The Bloody Offensive Aussie Insult Generator	Compare people, Which sex and the city character are you? Scrabulous	Green Patch, Fluff Friends	The Bar Book, Funwall, mobwars

The following summarises the features that makes an application cool.

- Applications that allow self-categorisation i.e. ‘which movie star are you?’ This application helped develop social or personal online identity.
- Applications that change daily or regularly.
- Applications with high levels of interactivity rather than being passive i.e. bowling,
- Cool seems to relate to high numbers of people recommending the application which seems to contradict the ‘unique’ aspect of cool i.e. if too many people have it, then it’s not cool
- For some people the level of creativity makes it cool (i.e. designing badges)
- Pets are popular and the virtual ones are well liked (i.e. no mess to clean up)
- Many applications are linked to popular TV shows as people identify with the characters
- Exclusivity and rarity – accessing uncommon items or information
- Ability to waste time when time is available – users are overt in acknowledging they use applications as a time-waster. But this is different to ‘a waste of time’ however, which is interpreted as the application being unworthy of allocating any time.

### **Features that Encourage or Discourage Recommendations**

To answer the second question ‘*what features of an application would encourage or discourage users recommending an application to a friend?*’ the features were coded using an emergent scheme as no previous scheme exists. Some features can both encourage or discourage recommendation, depending on the user. For example, some users like to recommend applications because it reveals a great deal of their personality to their friends. The exact same feature prevents other people from recommending – they believe it exposes them too much. Table 2 lists these symmetrical features.

**Table 2: Symmetrical – the same feature both encourages and discourages**

<b>Encourages</b>	<b>Discourages</b>
<i>Time</i> – time wasting can be a legitimate use of applications	<i>Time</i> - waste of time indicates a pointless activity.
<i>Notification</i> - like to know what friends are using and doing	<i>Notification</i> - too many messages requires too much reading
<i>Competition</i> – knowing where you stand relative to friends	<i>Competition</i> – don’t want to know or think it’s too judgemental
<i>Sharing</i> - application forces sharing to enable it to work “if the application requires me to refer a number of people to use it”	<i>Sharing</i> - applications that require it to be sent to friends can be viewed as spamming
<i>Personality</i> - some like to use applications to express their personality	<i>Personality</i> – others believes it reveals too much

Some features were categorised as polar, meaning that different levels of the same feature either encouraged or discouraged. Interactivity with the application is a good example. Some applications allow or require the user to interact with the application regularly. Highly interactive applications encouraged recommendation, whereas lowly interactive applications discouraged. Table 3 provides the polar features of applications along with respondent quotes.

**Table 3: Polar – different levels of the feature encourage or discourage**

<b>Encourages</b>	<b>Discourages</b>
<i>Social influence</i> - positive WOM if others are saying good things about the application	<i>Social influence</i> - negative WOM if others are saying bad things
<i>Social</i> - “highly interactive that you could enjoy with your friends”	<i>Individual</i> - wouldn’t send it to a friend if it was an “application that I do on my own”
<i>Novelty</i> – application is new or has “quirkyness”	<i>Novelty saturation</i> – might once have been quirky but either everyone has it or too much imitation
<i>Positive emotions</i> – stem from using the application such as fun, enjoyment, excitement	<i>Negative emotions</i> – from using the application such as annoyance, anger, boredom
<i>Other-focused</i> – “I send on if I know my friends would like it”	<i>Self-focused</i> – “I don’t like getting applications so don’t send them on”

<p><b>Knowledge</b> – if application expands knowledge of a topic</p> <p><b>Highly interactive</b> – with the application, not necessarily with other people</p> <p><b>Usability</b> – application that are easy to use are shared</p>	<p><b>Knowledge</b> - applications that are not brain stimulating are not referred to friends</p> <p><b>Low interactivity</b> – with the application</p> <p><b>Usability</b> - Complex, hard to navigate applications that take too long, require maintenance, are big in size, unreliable, or “if it jams up e-mail accounts and Facebook pages” are not referred</p>
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Some features had a uni-directional effect – they either encouraged or discouraged but not both. Cause-related applications, such as supporting cancer research, encouraged recommendation but did not appear as a reason not to recommend. Applications that required users to spend real money discouraged recommendation, but free applications did not appear as a reason to encourage. Table 4 lists the uni-directional features of Facebook applications.

**Table 4: Uni-directional effect**

<b>Encouraged</b>	<b>Discouraged</b>
<p><b>Cause-related</b> - if the application “needs to be supported – such as the cancer foundation”</p> <p><b>Gift</b> - if the application is a ‘gift’ substitute such as a virtual birthday cake</p> <p><b>Utilitarian</b> - if it allows functionality outside Facebook such as “synchronization with my mobile phone”</p> <p><b>Rewards</b> – some applications give rewards/points for usage</p> <p><b>Reminders</b> - applications that remind us of important events (such as friends’ birthdays) or provides information such as weather, traffic, fuel prices</p>	<p><b>Commerciality</b> – applications seen as blatant advertising are not referred</p> <p><b>Intrusive</b> – if users believe their “privacy is being breached”</p> <p><b>Source credibility</b> - “anything that looks dodgy” is not recommended to friends</p> <p><b>Mental effort</b> – applications that “ask too many questions before-hand”</p> <p><b>Immorality</b> – some applications encourage immoral or offensive outcomes</p> <p><b>Costs</b> – if there are real monetary costs involved</p> <p><b>One-timers</b> – applications that are only useful once and don’t need to be repeated.</p> <p><b>No relevance</b> - for Facebook users</p> <p><b>Immature</b> - if the application is seen as too childish or outside the users’ age group.</p> <p><b>Rating</b> – some applications receive a low rating from users</p>

Other dimensions revealed in the analysis included context, risk, and combinations. For context, users describe situations where their recommendation might change. For example, if a user has a lot of free time on their hands, they might actively search for an application to recommend. If they are time poor, the same application stays un-recommended. Risk was also raised by some

respondents. For example, poker playing applications were fun, partly because there was no financial risk involved in playing. Some applications can lower social risk by allowing users to ask others out on a date, without fear of a face-to-face rejection. Finally, recommending or not recommending tends to be the result of a combination of features, rather than one feature in isolation.

### **Managerial Implications**

There are number of considerations for marketing and business managers seeking to identify opportunities in SNS applications. When developing applications developers need to:

- Encourage users to participate in the creation or development of the applications so that value occurs in pre-use phase and commitment and interest is gained
- Ensure that source credibility is achieved. Applications that are not from a source with credibility are likely to be overlooked or deleted. Overtly commercial applications annoy users.
- Develop functionality that makes the application easy to use, is non-intrusive and is technically efficient

### **Conclusion**

Facebook is a social site, its purpose is to facilitate contact with other people, and therefore it is not surprising that social value is prevalent for users. Users also need functionality to be able to operate the applications; so we also expect functional value. It is the combination of different types of value that is the interesting insight emerging from this research. A cool application appears to create functional, and social value or functional, and emotional value, thus

functionality is a critical aspect of the value. However functionality is not enough, it must be combined with either social or emotional value to create enough 'coolness' for the user to recommend the application to a friend and achieve the adoption required by the application creator. The findings for the second research question indicate that there is no 'one cure fixes all' approach to developing an application that will be encouraged. Finding symmetrical features, where the same feature that encourages some to recommend may also discourage others, indicates the need for careful segmenting and profiling of an organisation's target segment to ensure the application most likely to encourage recommendation by that segment is developed.

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