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# PATTERNS OF SOCIAL INFLUENCE IN SOCIAL NETWORKING SITES – A DESIGN PERSPECTIVE

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## Abstract

*Social networking sites (SNSs) are quickly becoming the main venues for social interaction of Internet users. As the competition between these online services is growing ever stronger, the success of SNSs derives from persuasive core application designs that influence users in taking specific actions, such as joining the community or recruiting new users. Therefore there is a need to identify relevant, value-adding features that facilitate social interaction and that are integrated in the group's socialization rituals. The present study employed Cialdini's framework in the analysis of SNSs design characteristics that facilitate social influence leading to the fulfillment of site marketing objectives, such as member acquisition, member retention and user loyalty. We examined social application features of the three major Romanian SNSs, i.e. Facebook, Hi5 and Neogen on six dimensions corresponding to Cialdini's social influence principles: reciprocation, consistency, social proof, liking, authority and scarcity. We thereby extract core application commonalities and differences and identify design gaps from a social influence perspective that are to be explored and exploited as a source of competitive advantage. Marketing implications of the results are discussed.*

**Keywords:** social influence, persuasive design, persuasive site application, social networking sites

## 1. BACKGROUND AND MOTIVATION

Social networking sites (SNSs) have become the most important meetings places of Internet users. As main venues for online social interaction of online users, SNSs are one of the fastest growing businesses on the Internet. But as the competition is growing ever stronger, the need to differentiate is gaining in importance as well. In this context, the success of SNSs derives from the employment of a persuasive design that fulfills marketing objectives, such as user acquisition, user retention etc. Making use of a social web design that uses social psychology principles in order to adequately stimulate the processes of offline interaction is needed for the achievement of marketing objectives.

Hence, Social Design becomes a market competitiveness factor in Social Networking Sites and we identify a need for relevant, value-adding design features that facilitate online social interaction.

A further argument for the development of this paper has been the fact that we have been identified little attempts to structure social design features under a relevant theoretical framework derived from social psychology. And even more so with regard to SNS. More specifically, extant scientific literature does not provide a social influence perspective on SNS design.

In our paper, we try to respond to the issues mentioned above by use of an exploratory research on the most important three Social Networking Sites in Romania.

## 2. PURPOSE OF THE STUDY

The purpose of this paper is to understand how social influence principles are integrated into a SNS core application design in order to achieve marketing objectives. Moreover, we aim to find out which social influence principles are not currently used in SNS design, and the application of which could potentially have relevant, value-adding impact on SNS competitiveness. Our final goal is to structure social design features under a relevant theoretical framework derived from social psychology, an endeavor which is novel in the scientific literature dedicated to design applications of social psychology.

We employ the study of SNS design features using a structured approach, i.e. Cialdini's framework consisting of six major social influence principles: reciprocity, consistency, social proof, liking, authority and scarcity. This is, of course, not a comprehensive listing of all social influence principles. However, it contains the most important features of social influence, as derived from social psychology literature.

It is important to mention that throughout this paper we understand by social influence “the process of changing one's attitudes, values and behaviors in response to attitudes and behaviors of others” (Cialdini, 1984). In addition, the marketing objectives we will be referring to in this paper are: member acquisition (network size), active membership (return-to-site rate) & user loyalty, and content creation.

## 3. LITERATURE REVIEW

A review of the extant literature on design applications of social influence suggests a growing body of literature on website design from persuasiveness perspective. For example, Fogg & Eckles (2007) identify that successful online services share a pattern of target behaviors that are part of an overall framework, which they refer to as the “Behavior Chain for Online Participation”. If this is true for persuasiveness, could this be true for social influence as well?

Oinas-Kunnonen & Harjumma (2008) list techniques for persuasive system content and functionality, describing example software requirements and implementations and suggesting several new techniques. Moreover, the authors propose a new categorization of these techniques, composing of the primary task, dialogue, system credibility and social support categories.

Weiksner, Fogg & Liu (2009) use a Grounded Theory approach to find and name six persuasion patterns. They list four patterns that lead to large-scale viral – Provoke and Retaliate, Reveal and Compare, Expression, and Group Exchange – and that are native to Facebook. The other two patterns mentioned by the authors – Competition and Deception – are adapted to Facebook. But most importantly, Weiksner et al conclude that persuasion in online social networks follows regular, observable patterns. This could be the case for social influence as well.

And Cugelman, Thelwall & Dawes (2009) describe a communication-based influence components model that can serve as a useful framework to describe or design online interventions, whether they adopt interpersonal or mass media approaches, whether they use overt and covert tactics, and whether they are focused on human mediated communication or direct human computer interaction.

It is clear that literature on persuasive web design is growing at a steady pace, but given that design is viewed solely from a persuasiveness perspective, we can identify very brief mention of social influence, which indicated a need for a social influence perspective on design. Moreover, there are no scientific attempts to structure social design features under relevant theoretical framework derived from social psychology. This become even clearer with regard to SNS.

The only attempt to understand application design from social influence perspective that we have come across in Mimunah Ali's study on blog design. Ali (2009) found that design elements of blogs in the same network share similar design preferences shown by the number of similarity occurrence of design preferences across blogs in the same network, pertaining to a hypothesis of

social design convergence among online applications. However, we must mention that Ali has made use of no recognized theoretical social psychology framework for the listing and study of blog features.

On the other hand, there is a growing number of studies on online social influence, such as Postmes et al (2001), Dholakia et al (2004), Guadagno & Cialdini (2005, 2007), Ellison et al (2007), Okdie & Guadagno (2008), Guadagno (2009) etc. These studies are from a pure social psychology perspective, with no reference to marketing.

Moreover, these studies investigate mostly text-based computer-mediated communication and explore topics like compliance through authority and consistency. Specifically, Cialdini & Guadagno (2005, 2007) note in their review of online social influence literature, that only two of the six principles of influence have been examined empirically in online contexts: authority & commitment / consistency. The studies reviewed indicate that sometimes online influence attempts function similarly to attempts of the same kind in other contexts and sometimes they not. Therefore, from a research perspective, online social influence has received a little attention, particularly in SNSs.

#### 4. METHODOLOGY

In order to understand how social influence principles are integrated into a SNS core application design from a marketing perspective, we make use of a cross-comparison of three case studies. Specifically, we study three SNSs: Hi5, Neogen and Facebook. We have chosen specifically these social networks because they are three top SNS in terms of Romanian users, comprising the large majority of Romanian SNS users.

By means of observation, we identify 136 design functionalities. We then structure these SNS functionalities on 3 dimensions: social influence principles / marketing objectives; social influence principles / social network; marketing objectives / social network. This results in 6 tables, which are then condensed into a diagram, for the sake of brevity.

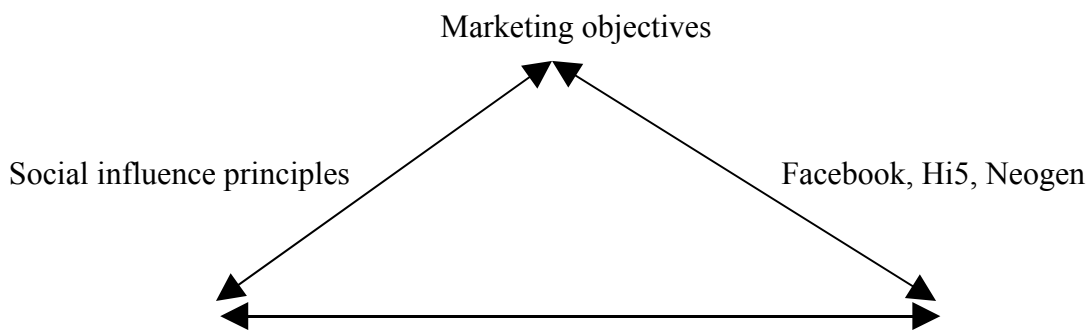


Fig.1 Approach to the study of SNS design features

We structure SNS design features using Cialdini's framework consisting of six major social influence principles: reciprocity, consistency, social proof, liking, authority and scarcity. Below we make a very brief presentation of the six social influence principles we have used in the assessment of SNS design features:

- the principle of reciprocity – it refers to people’s psychological need to return a favor, a gift and to the sense of obligation to make a concession to someone when that person has made a concession. Examples from traditional marketing: the gift as a sales technique, free samples in sales promotion, gifts from parties during elections etc.

- the principle of commitment and consistency – it refers to people’s psychological need to honor a previous agreement or statement and the obsessive desire to be (and appear) consistent and stable in the predispositions and preferences. Once people make a choice or take a stand, they will make enormous efforts to respond in ways that justify their earlier decision. This principle is widely

used in marketing, where it is mostly linked with cognitive dissonance. Examples: low-balling and foot-in-the-door tactics in sales.

- the principle of social proof (social validity) - Robert Cialdini sums up the principle of social proof: "If a lot of people are doing the same thing, then we think: they must know something we don't. Especially when we are uncertain, we are willing to place an enormous amount of trust in the collective knowledge of the crowd." Examples in traditional marketing: "World's number 1 computer", "6 million men around the world use Gillette", the more comments a blogger has, the more he/she will receive (and the more RSS subscribers, the more will subscribe).

- the principle of liking - it refers to the fact that people are persuaded by people they like: physically attractive people, people they feel similar to (people like them...), or people they identify with. Examples in traditional marketing: using celebrities in advertising, using "women like us" in in advertising for Dove products or Activia yogurt.

- the principle of authority – it refers to the fact that people do what the person with the highest title/rank, the fanciest car, or the nicest clothes tells them to do. Is based on the association principle. Examples in traditional marketing: using experts in advertising (see Colgate toothpaste).

- the principle of scarcity - it refers to the fact that when a thing is scarce/ rare, people think that is MUST be valuable (for example, diamonds). Examples in traditional marketing: "Limited Edition", "Limited number of copies", "Purchase NOW and get a discount", "Limited Opportunity available for Only 3 days!!!"

## 5. RESULTS

Our structured approach to the listing and classification of SNS design features on the six social psychology principles mentioned above indicates, first of all, that SNSs converge in social design. We hypothesize that, with time, social networking sites start to structure their design according to the best practices of competitors, practices that adequately mimic offline social interactions leading to the fulfillment of marketing objectives. This in turn leads to a very high degree of similarity and overlapping in terms of social design features between SNSs.

Table 1. Marketing Objectives vs Social Influence principles

	User acquisition	Active membership	Content creation
Reciprocation	△ ◇ ○	△ ◇	△ ◇ ○
Consistency	△ ◇	◇	
Social proof	△ ◇ ○	△ ◇	△ ◇ ○
Liking	△ ◇ ○	△ ◇	△ ◇ ○
Authority	△ ◇ ○	△ ◇	△ ◇ ○
Scarcity	◇	◇ ○	◇ ○

△ - Facebook; ◇ - Hi5; ○ - Neogen

This high degree of functionality similarity or pattern of convergence could also be

attributed to a to a pattern of trial-and-error and imitation that SNSs employ to determine best practices in social design for achieving marketing objectives.

We have synthetically presented the results of our exploratory research in Table 1. It is clear that SNS are organized according to most social influence principles (four principles out of six taken into consideration in our framework). However, we find that consistency and scarcity are under-represented in social design, we have found very few design features that trigger cognitive dissonance processes, as well as no permanent design features emphasizing scarcity.

The results indicates that the intuition of software designers has yet to come up with design features that relate to consistency and scarcity, as opposed to the other social influence principles which SNS application designers have applied almost unconsciously in order to model offline social interactions. These two very powerful social influence principles are necessary for motivating social interactions, therefore their use in SNS design would enhance the fulfillment of marketing objectives.

## **6. LIMITATIONS**

A first limitation is, of course, the use of exploratory research. We need to continue this paper empirically by use of experiments for testing SNS design features. Secondly, we resume to the cross-comparison of only three SNSs. Though Facebook acts as a benchmark for most SNS product managers, it would be interesting to study other smaller networks to check for the use of consistency and scarcity principles.

## **7. CONCLUSIONS**

In this paper we make of a cross-comparison of the design features of the three top Romanian Social Networking Sites using Cialdini's social influence framework. We find convergence in social design, but also structural "holes" in SNS core application design on two social influence principles: consistency and scarcity.

Therefore, SNSs need to design features that trigger user's psychological need to honor previous public commitments (Newsfeed) and user's need to act in accordance to self image (as described in user profile). Also, SNSs need to design permanent design functionalities that accentuate rarity, since rare means valuable.

Given the convergence between SNS features, the development of these new features on consistency and scarcity is recommendable in order to gain a competitive advantage. Though the sustainability of the increased competitiveness is debatable, the development of these new features will surely increase the marketing performance of SNSs through proper mimicking of offline interactions.

## **8. CONTRIBUTION TO KNOWLEDGE**

We contribute to knowledge by providing a systematic approach to the integration of social influence principles into online networking sites design for increased market competitiveness. We hereby identify design gaps from a social influence perspective that are to be explored and exploited as a source of competitive advantage. Moreover, our paper adds to the literature by structuring social design features under a relevant theoretical framework derived from social psychology (Cialdini's six principles of influence), which is a novel endeavor for this field of research. Not least, we offer a starting point for more relevant research on social networking sites.

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