DOES POPULARITY IN SOCIAL NETWORKS INFLUENCE PURCHASING AND LIFESTYLE DECISIONS? THE MEANING OF ONLINE FRIENDSHIP

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ABSTRACT Nowadays, millions of people use social network sites (SNSs) to communicate with each other, but little is known about the real effects that online popularity (i.e., the number of friends on a SNS) has on users' behaviors. This paper explores the social influence of SNSs and demonstrates that the number of online friends on an SNS does not influence its users' purchasing and lifestyle choices. This study also reveals that so-called low-popular users (i.e., users with few friends on a SNS) are influenced by the intensity of their perceived friendships (i.e., how strong they perceive their relations with their online friends). On the contrary, high-popular users (i.e., users with many friends on a SNS) are influenced by their online friends' perceived coolness (i.e., how "cool" they consider their online friends), and, in particular, their influence on purchasing decisions increases with the value of the products that they intend to buy. Results shed light on a new meaning of the term "friendship" on a SNS, which is substantially different from what is common in offline contexts: this new construct, which we call "Friendoolness", can be intended as a mix of friendship and coolness (i.e., social attractiveness, likeability and desirability) and it is mainly based on taking actions to demonstrate that a person has a large number of "cool" friends.

KEY WORDS social network sites, popularity, friendship, coolness

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INTRODUCTION

Social network sites (SNSs), i.e., websites allowing individuals to get in contact with other people, play an important role in our society (Wilcox & Stephen, 2013). Their use has increased because of the diffusion of the Internet (Zhao, Kim, Suh, & Du, 2007) and the general rise of social media (Trusov, Bodapati & Bucklin, 2010). The success of SNSs is based not only on the amount of time users spend on them but also on the number of active users. *Facebook* is the worldwide leading SNS and the most trafficked website in many countries: its typical user spends about 20 minutes a day on the site, and two-thirds of users log in at least once a day (Ellison, Steinfield & Lampe, 2007). In the United States there are almost 165 million *Facebook* users, which makes the US first in the ranking of all *Facebook* statistics by country (Socialbakers, 2012). Despite this growing influence of social networks, the current understanding of how consumers' interactions in SNSs affect their behaviors remains ambiguous. Also the influence that online friends can have on consumers' *purchasing decisions* (i.e., the set of choices made by a consumer prior to making a purchase that begins once the consumer has established a willingness to buy) and *lifestyles choices* (i.e., the choices related to the manner in which people conduct their lives, including their activities, interests, and opinions) is unclear. In this research, we consider these two constructs because they refer to two main categories of consumers' choices; on the one hand, choices specifically related to consumption; and on the other hand choices more generally related to motives (e.g., attitudes and values) behind consumption.

In offline settings, observational studies have highlighted the role of social group interactions and the impact of social influences (Cialdini & Goldstein, 2004). Ritson (2002), in particular, demonstrated that the higher the level of social interaction, the lower the level of social influence. He found that, as the number of people watching TV in the same room increases, the level of their attention to commercials decreases. Practically, with more people and more interactions in the room, there is an opportunity to do other things rather than simply watching the commercials on TV. Paradoxically, commercials broadcasted during television shows with the highest level of viewers are the most expensive ones. Nevertheless, fewer social group interactions (i.e., smaller group of people) lead consumers to higher levels of attention and, therefore, to the higher probability of their being influenced by advertising or by others, not the contrary. Indeed, Katona, Zubcsek and

Sarvary (2011) highlighted the fact that the average influential power of individuals decreases with the total number of their connections.

Based on the above, we suppose that also in online contexts the lower level of interaction (i.e., the number of friends on a SNS), the higher can be expected to be the level of influence of friends on users' behavior, and vice versa. Since consumers are more influenced by external messages and suggestions when they are in smaller groups of people, this study aims to prove that smaller groups of friends on SNSs have a larger influence on users than bigger groups.

This research makes a number of contributions. Findings reveal that on SNSs popularity (i.e., the number of friends a user has) does not affect the level of influence online friends have on users' decisions. Indeed, on SNSs, neither high-popular users (i.e., users with many friends on a SNS) nor low-popular users (i.e., users with few friends on a SNS) are influenced on the basis of the number of their friends. Interestingly, this study demonstrates that, independently by the popularity, users are influenced in choices by either intensity of their perceived friendship or friends' perceived coolness (i.e. how attractive they are as a model to emulate, how likeable and desirable they are). In particular, for purchasing decisions, intensity of perceived friendship significantly affects the low-popular users; whereas friends' perceived coolness significantly affects the high-popular users. This research has also important implications from a sociological point of view, emphasizing how the term "friendship" can have a peculiar meaning in virtual contexts, such as SNSs. A new construct arises, what we call "Friendoolness" (i.e., a mix of friendship and coolness), a phenomenon that occurs when users acquire a sizeable number of friends on a SNS, which allows them to improve their self-images in order to be perceived as cool people. Findings are particularly interesting for marketers that need to better understand consumer behaviors on the Internet and want to improve the effectiveness of their e-marketing strategies.

SOCIAL NETWORK SITES

According to Kaplan and Haenlein (2010), SNSs represent one of the four categories of social media, together with: content communities, microblogging, and virtual social worlds. The number of SNSs has grown quickly in the last few years (Wilcox & Stephen, 2013). They attract more than 90% of the teenagers and young adults in the United States and have approximately 80 million members all around the world (Trusov, Bodapati, & Bucklin, 2010). SNSs are websites where individuals are able to create a public or semi-public profile (on the basis of their privacy settings) and share connections. Nowadays, through SNSs, from wherever they are, consumers are easily and frequently well-connected and enabled to interact with online friends (Boyd & Ellison, 2007; Iribarren & Moro, 2010). Therefore, interest in SNSs has increased tremendously worldwide (Katona, Zubcsek, & Sarvary, 2011): on these

websites, much information can be transmitted by users within their social circle (Nitzan & Libai, 2011), generating a flow of information that may potentially influence opinions or choices (Muise, Christofides, & Desmarais, 2009; Valenzuela, Park, & Kee, 2009). People use these sites to promote self-presentation, in order to acquire relationships, and to make better impressions on others (Chou & Edge, 2012). Indeed, SNSs are online spaces that enable interaction among individuals covering the entire gamut of human activities, including consumption. Therefore, from a marketing point of view, specific issues related to the effects of social networks on users' behavior are coming about.

SNSs, such as *Facebook*, are increasingly being regarded as an interesting source of information for conducting marketing research (Casteleyn, Mottart, & Rutten, 2008) and branding activities (Park, Rodgers, & Stemmle, 2011). *Facebook* is the world's largest online social network (Wilcox & Stephen, 2013). From a scholarly research perspective, it can be used to understand modern social interactions and behavioral patterns. Which, from a managerial perspective, may provide companies with relevant insights for segmenting and targeting their customers (Chou & Edge, 2012; Ellison, Steinfield, & Lampe, 2007; Madge, Meek, Wellens, & Hooley, 2009; Valenzuela, Park, & Kee, 2009). It represents an interesting example of successful social media marketing due not only to the popularity gained from the website, but also because of its diffusion as an advertising tool. Through its official advertising platform (*Facebook Ads*) its penetration in the United States is about 53% in relation to the country's population, and about 72% in relation to the total 245 million American Internet users (Socialbakers, 2012).

SOCIAL INFLUENCE

Social influence occurs when, in a social system, individuals adapt their behavior, attitudes, or beliefs to others (Wilcox & Stephen, 2013). Accordingly, social influence can also be based on network externalities, that is, the phenomenon through which a product or a service acquires more value as more people use it. This phenomenon is well known in the consumption literature as the so-called "bandwagon effect" (Vigneron & Johnson, 1999). Social influence arises from the interaction and the transmission of information within socially-interconnected people (Nitzan & Libai, 2011). Consumer research has found, in fact, that people tend to be more likely to adopt behaviors of individuals with whom they have closer relationships (Brown & Reingen, 1987). Indeed, social influence can be induced by the intimacy of a relationship (Nitzan & Libai, 2011; Ryu & Feick, 2007; Van den Bulte & Wuyts, 2007). Previous research has explored the influence that close friends on social network sites have on users' self-esteem and self-control (Wilcoz & Stephen, 2013).

Some studies have emphasized that offline interactions within a small group have a positive influence on the level of attention and participation (Finn, Gerber, & Boyd-Zaharias, 2005). However, the effects that the level of acquaintance may have on social influence have not been deeply investigated by marketing scholars (Puntoni & Tavassoli, 2000) and remains still ambiguous in regards to SNSs contexts. Therefore, further research on the specific role of social influence on SNSs is needed in order to provide new useful findings for marketing strategies.

Commonly, the number of close friends one has is used to measure the strength of people's connections to their social networks (Marsden & Campbell, 1984). Indeed, connectivity can be defined as the number of other entities directly related to an observed entity (Nitzan & Libai, 2011), that is, the number of people who are part of an individual's social circle. Consequently, in comparison to what happens offline, on SNSs, given their accessibility, the potential level of connectivity among people is higher. In addition, other studies have demonstrated that there is a significant difference between traditional offline social networks and online social networks. In traditional social networks, an individual has about 10-20 close relationships (Parks, 2007) and manages up to about 125 social relationships (Hill & Dunbar, 2003). In comparison, individuals in online network systems frequently accrue friends numbering several hundred (Tong, Van Der Heide, & Langwell, 2008). Therefore, the number of online relationships is significantly higher than offline relationships (Walther, Van Der Heide, Kim, Westerman, & Tong, 2008). SNSs allow people to easily share personal thoughts, pictures, and accomplishments (Wilcox & Stephen, 2013).

Certainly, in offline contexts, highly connected individuals not only influence others, but they are also more likely to be influenced by them (Goldenberg, Han, Lehmann, & Hong, 2009). Indeed, connectivity is arguably also the most common way to measure offline users' influence, their degree of popularity, and their attractiveness (Tong, Van Der Heide, & Langwell, 2008). Therefore, given that relationship building also represents one of the goals of social networking, social influence should play a central role on online social network interactions. In particular, the popularity of individuals within a social network site may be one of the main factors potentially impacting social influence.

Popularity

The term "popularity" represents the combination of behaviors that individuals adopt in peer groups in order to acquire and keep social visibility, status, and power (Bartini & Pellegrini, 2001). According to seminal research (Asher & Coie, 1990; Parkhurst & Hopmeyer, 1993), offline popularity can be categorized into two different constructs: "peer-perceived popularity" (i.e., the reputation that an individual acquires within a group or a class) and "sociometric popularity" (i.e., the number of friends or connections that an individual accrues in a social group).

Thus, in the context of SNSs, the terms popularity in (i.e., the number of friends on a SNS) appears to mainly relate to the latter construct.

A study conducted by Ritson (2002) showed that, as the number of people watching TV in the same context increases, the level of their attention on commercials decreases, and therefore the extent to which these people are influenced by TV commercials decreases as well. This happens because with more people and more interactions in the room, there are more opportunities to do other things rather than simply watching the commercials on TV. In a way, these results suggest that the potential influence of a TV commercial is watered down for each audience member as the number of recipient increases. A similar dilution effect has also been found by Katona, Zubcsek and Sarvary (2011) in a recent study regarding online social influence. In that study, the authors showed that the average influential power of individuals decreases with the total number of their connections. Based on this effect, we expected a similar effect to occur with respect to the influenceability each user perceives in relation to different friendship connections. In particular, we predict that SNS users with a higher number of online friends will declare themselves to be less influenced by their friends than users with a lower number of online friends. Thus, online popularity, expressed as the number of friends on a SNS, should affect users' influenceability, that is, the extent to which users are influenced by their friends on SNSs in regards to their specific purchasing decisions and more general lifestyle choices. Formally:

H1*:* The number of online friends affects users' perceived influenceability in purchasing decisions.

H2: The number of online friends affects users' perceived influenceability in lifestyle choices.

Friendship and Coolness

With the diffusion of the Internet, there was an emergence of online friendships (Parks & Floyd, 1996). Therefore, in the last few years, SNSs have become an important tool not only for maintaining family ties, but also for building relations (Wilcox and Stephen, 2013). Through SNSs, users can create profiles with information about themselves, connect to others who belong to the same online network, and share pictures, video images, thoughts, experiences, and feelings (for instance, through the so-called "status updates"). Thus, the SNS can allow users to create new relationships and foster friendship in cyberspace. *Facebook* is the most notable example of a social network site where people can maintain links or seek to establish new relationships with formerly unknown people (Parks & Floyd, 1996). Indeed, at the time of writing, when individuals become *Facebook*'s users they may create their personal profile and broaden their list of connections, adding other users as "friends", "close friends", or "acquaintances", on the basis of the degree of confidence they

award them. Usually, friends are people with whom users share a personal relationship, whereas acquaintances are people with whom users have a more distant relationship (Ryu & Feick, 2007). Importantly, friendship intensity (i.e., the degree to which an individual is considered a close friend) in real life involves several factors such as caring, support, interest, and disclosure of personal information, which affect personality characteristics and behavioral patterns (Parker & Asher, 1993).

The boom of the SNSs also brought changes in the way individuals present their image within a peer group. People use social networks to fulfill a variety of social needs, including affiliation, self-expression, and self-presentation (Back, Stopfer, Vazire, Gaddis, Schmukle, Egloff, & Gosling, 2010). Some studies showed that the higher the *Facebook* exposure, especially if focused on close friends (Wilcox & Stephen, 2013), the higher the level of self-esteem (Gonzales & Hancock, 2011). Research has also indicated that physical attractiveness is associated with positive perceptions, such as intellectual competence among both adults in the workplace (Jackson, Hunter, & Hodge, 1995) and children in schools (Clifford & Walster, 1973). Krantz (1987) conducted research on the preferences of students in kindergarten and found that attractiveness strongly influenced the choice of potential friends. Indeed, among the factors that allow individuals to acquire popularity, there is physical attractiveness (Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000). This means they pay a lot of attention to how they look also on their online profiles and to the self-image perceived by their circle of online friends. Consequently, individuals seek the approval and the admiration of the people with whom they are interconnected. On SNSs, users often manipulate negative information to present a positive self-view to others (Gonzales & Hancock, 2011). In sum, they want to be perceived not only as popular (Chou & Edge, 2012), but also as cool (Ferguson, 2011). Some studies indicate that coolness represents one of the motivations that induce people to use SNSs (Chu, 2011). It is difficult to give a clear definition of this construct because it describes a phenomenon that changes continuously and may concern philosophies, ideologies, behaviors, personalities or world views (Pountain & Robinson, 2000; Rodkin, Farmer, Pearl, & Van Acker, 2000): the coolness phenomenon should be considered only on the basis of each specific cultural context (Hebdige & Potter, 2008). In this study, which focused on SNSs, the term "coolness" refers to stylish or socially attractive personalities who are admired and imitated. Therefore, the perceived coolness of online friends refers to their apparent degree of social attractiveness, likeability, and desirability.

We argue that, in SNSs, both the intensity of friendship between users and friends (i.e., the strength of interpersonal ties) and the level of friends' perceived coolness (i.e., the extent to which friends are considered cool by users) may have a stronger perceived influence on the users with fewer connections than on the users with many connections. In particular, our third and fourth research questions refer to the

stronger effect of friendship intensity and friends' perceived coolness on both influenceability in purchasing decisions and influenceability in lifestyle choices. We predicted that, as the size of the personal network has an impact on users' decisions, friendship intensity and friends' perceived coolness also influence users. We suppose, however, that such an effect is more significant when users are part of small networks. Formally:

> H3: The effect on users' purchasing decisions of the degree to which they perceive their online friends as (i) close friends and (ii) cool people is higher for low-popular users than for high-popular users.

> H4: The effect on users' lifestyle choices of the degree to which they perceive their online friends as (i) close friends and (ii) cool people is higher for low-popular users than for high-popular users.

METHODOLOGY

This study has exploratory aims and has been conducted adopting a quantitative methodology through an online survey. This survey was carried out between January and March 2013 in Italy using the current leading SNS in the world, i.e., *Facebook*. In Italy, there are currently more than 23 million *Facebook* users, which made this market the 11th in the global ranking of *Facebook* statistics by Country. *Facebook* penetration in Italy was 38.16% in 2012 in relation to the Country's population and 70.85% in relation to the number of Internet users (Socialbakers, 2012). Indeed, most existing studies on social influence adopt a survey approach (cf. Trusov, Bodapati, & Bucklin, 2010). The participants consisted of 645 *Facebook* users, which were recruited by email and invited to fill in an electronic questionnaire. This questionnaire was made up of 15 items and was developed by a group of marketing researchers specialized in marketing and social media. In order to have a global overview of the social dynamics on *Facebook*, the questionnaire was addressed to *Facebook* users who do not use the privacy settings concerning distinctions between "close friends" and "acquaintances"; this choice is explained by the fact that these settings filter the display of users' personal information, thus potentially hindering the process of social influence within acquaintances. Therefore, out of the original 645 participants (hereafter "users"), 351 were excluded because they did not complete the questionnaire or reported that they divided their contacts between close friends and acquaintances. Thus, the final sample consisted of 294 users, 62.6% women and 37.4% men, with an average age of 26.

Measures

Users' number of friends on a SNS (hereafter *popularity*). In order to assess the levels of popularity, users were asked to indicate the number of friends they had on *Facebook*. Through the analysis of quartiles, the number of friends helped to split the original sample (N = 294) into two subsamples: low-popular users, with up to 243 friends (N = 74) and high-popular users, with more than 626 friends (N = 73). Users were also asked if they distinguished between "close friends" and "acquaintances". A high number of friends on this measure indicated great levels of users' popularity. In order to arrive at a random selection of friends, they were asked to choose the first three people at the top of their friends list and the three people at the bottom of their friends list and then type their first name and first initial of their last name. On Facebook, when the survey was carried out, friends were ordered alphabetically. Thus, the list of friends to be evaluated appeared below each item assessing friends' influence.

Users' perceived influenceability in purchasing decisions (hereafter *purchasing decisions*). Three items rated on a 7-point scale (1 = not at all, 7 = very much) were used to assess users' perceived influenceability in buying three categories of products (convenience goods, shopping goods, and specialty goods) for each one of the six friends. The three questions were: (a) "To what degree is [each of your friends] able to influence your choice in buying a convenience product (e.g., toothpaste)?"; (b) "To what degree is [each of your friends] able to influence your choice in buying a shopping product (e.g., clothes)?"; (c) "To what degree is [each of your friends] able to influence your choice in buying a specialty product (e.g., a car)?". The meaning of the three typologies of goods was explained in the question before the presentation of the three items.

Users' perceived influenceability in lifestyle choices (hereafter *lifestyle choices*). One item rated on a 7-point scale (1 = not at all, 7 = very much) was used to assess users' perceived influenceability in making decisions regarding general lifestyle choices. The item was: "To what degree is [each of your friends] on the list able to influence, in general, your lifestyle choices?". The question was repeated for each one of the six selected friends.

Degree to which users perceive their online friends as close friends (hereafter *friendship intensity*). One question rated on a 7-point scale (1 = not at all, 7 = very much) was used to assess the strength of personal ties. The item was: "To what degree is [each of your friends] on the list your true personal friends?". The question was repeated for each one of the six selected friends.

Degree to which users perceive their online friends as cool (hereafter *friends' perceived coolness*). An item rated on a 7-point scale (1 = not at all, 7 = very much) was used to assess the level of friends' perceived coolness. The item was: "To what degree do you feel [each of your friends] on the list is "cool" (i.e., stylish, socially attractive personalities who are

admired and imitated)". The question was repeated for each one of the six selected friends.

Demographics. Seven items were used to assess demographic characteristics of the sample: gender, age, marital status, work status, and income.

RESULTS

The research questions of this research were tested through three main sets of analyses. In the first set, purchasing decisions and lifestyle choices associated with popularity were examined through regression analyses. In the second set, two multiple moderated regression analyses were carried out in order to verify whether the potential influence of popularity, friendship intensity and friends' perceived coolness on purchasing decisions and lifestyle choices significantly changes depending on the level of users' popularity (that is, the number of their online friends). In the third set of analyses, separated multiple regressions were carried out on the high-popular users subsample in order to assess the dependence of their purchasing decisions on popularity, friendship intensity, and friends' perceived coolness, considering three different product categories (convenience goods, shopping goods, and specialty goods).

A regression analysis was performed on each subsample of users (i.e., low popular vs. high-popular) in which the purchasing decisions variable was expressed as a function of popularity (i.e., number of friends on a SNS), friendship intensity, and friends' perceived coolness. Next, another regression analysis was performed for each subsample in which lifestyle choice was expressed as a function of the same independent variables. Results revealed that, for both subsamples, the relationship between number of friends and users' perception of influence in both purchasing decisions and lifestyle choices was not significant. Regressions showed that popularity does not affect users' purchasing decisions and lifestyle choices. Indeed, for low-popular users, the number of online friends does not have a significant effect ($p > .05$) on either purchasing decisions or lifestyle choices. Also for high-popular users, the number of online friends has not a significant effect ($p > .05$) on both purchasing decisions and lifestyle choices (Tables 1 and Table 2). Therefore, H1 and H2 were not supported.

Nevertheless, regressions also showed that for the low-popular users, friendship intensity has a positive effect on both purchasing decisions ($\beta = .33$; $p < .05$) and lifestyle choices ($\beta = .27$; $p < .05$), while friends' perceived coolness has a positive affect only on lifestyle choices ($\beta = .36$; $p < .05$). For the high-popular users, friendship intensity has a positive effect only on lifestyle choices ($\beta = .38$; $p < .05$), while friends' perceived coolness has a positive effect on both purchasing decision ($\beta = .36$; $p < .05$) and lifestyle choices ($\beta = .36$; $p < .05$). In sum, low-popular users declare themselves to be influenced (both in terms of purchasing

decisions and lifestyle choices) by their perceived intensity of friendship (i.e., the degree to which they perceive their online friends as close friends). On the contrary, high-popular users declare that they are influenced (both in terms of purchasing decisions and lifestyle choices) by their online friends' perceived coolness (i.e., the degree to which they perceive their online friends as cool).

TABLE 1: Perceived influenceability in Purchasing Decisions

Independent variables	B	Std. Error	β	t	p
Low-Popular Users					
(Constant)	.50	.39	-	1.30	.20
Number of friends	.00	.00	.06	.54	.59
Friendship intensity	*.20*	*.08*	*.33*	*2.44*	*.02*
Friends' perceived coolness	.15	.09	.24	1.78	.08
High-Popular Users					
(Constant).	.90	.40	-	2.26	.03
Number of friends	.00	.00	.04	.36	.72
Friendship intensity	.15	.14	.17	1.11	.27
Friends' perceived coolness	*.30*	*.12*	*.38*	*2.45*	*.02*

Note: Dependent Variable = Purchasing Decisions. Low-Popular Users (N = 74): R = .51, R^2 = .26, Adj. R^2 = .23, Std. Error = .77. High-Popular Users (N = 73): R = .52, R^2 = .27, Adj. R^2 = .24, Std. Error of the Estimate = .95.

TABLE 2: Perceived influenceability in Lifestyle Choices

Independent variables	B	Std. Error	β	t	p
Low-Popular Users					
(Constant)	.75	.36	-	2.13	.04
Number of friends	-.00	.00	-.07	-.71	.48
Friendship intensity	*.16*	*.08*	*.27*	*2.11*	*.04*
Friends' perceived coolness	*.23*	*.08*	*.36*	*2.88*	*.01*
High-Popular Users					
(Constant).	.07	.33	-	.22	.83
Number of friends	-.00	.00	.04	.44	.66
Friendship intensity	*.34*	*.12*	*.38*	*2.94*	*.00*
Friends' perceived coolness	*.28*	*.10*	*.36*	*2.78*	*.01*

Note: Dependent Variable = Lifestyle Choices. Low-Popular Users (N = 74): R = .59, R^2 = .35, Adj. R^2 = .32, Std. Error = .71. High-Popular Users (*N* = 73): R = .70, R^2 = .49, Adj. R^2 = .46, Std. Error of the Estimate = .79.

Since our results suggested a potential moderation effect of popularity, we sought to deepen our understanding of the role of friendship intensity and friends' perceived coolness in both purchasing decisions and lifestyle choices by taking into account the moderating effect of popularity. To this end, two multiple moderated regression analyses were carried out in order to verify whether the potential influence of friendship intensity and friends' perceived coolness (as the independent variables) on purchasing decisions and lifestyle choices (as the dependent variables), respectively, changes depending on the level of users' popularity (low versus high). Level of popularity was coded using a dummy variable taking value 0 when it is low (meaning that the popularity score falls in the first quartile, namely less than 243 friends) and 1 when it is high (meaning that the popularity scores falls in the fourth quartile, that is, more than 626 friends). Respondents with a popularity score (i.e., number of friends) falling in the second and the third quartiles were excluded from the analysis. Thus the dependent variable was expressed in the regression analysis as a function of the number of friends (as an indicator the absolute level of popularity of a user), friendship intensity, friends' perceived coolness, which served as independent variables, and the relative level of popularity (low versus high), which served as moderator, and three interaction terms between each of the three independent variables and the relative level of popularity (i.e., number of friends by level of popularity, friendship intensity by level of popularity, and friends' perceived coolness by level of popularity).

The first multiple moderated regression analysis used purchasing decisions as a dependent variable. Results in Table 3 show that the fit of the model is acceptable (R^2 = .30, Adj. R^2 = .27). In addition to a significant effect of friendship intensity on purchasing decision, results showed no significant interaction effect, thus suggesting that the relative level of popularity does not moderate the simple effects of the three independent variables on purchasing decisions (p > .10). Therefore, H3a and H3b were not supported.

TABLE 3: Results of the Multiple Moderated Regression analysis with a dummy variable and interaction terms (Purchasing Decisions)

	B	Std. Error	β	t	p
(Constant)	.502	.434	-	1.157	.249
Number of friends	.001	.002	.533	.478	.633
Friendship intensity	*.203*	*.094*	*.265*	*2.170*	*.032*
Friends' perceived coolness	.152	.095	.207	1.588	.115
Level of popularity (0 = low, 1 = high)	.395	.564	.196	.701	.485
Level of popularity × Number of friends	-.001	.002	-.628	-.514	.608
Level of popularity × Friendship intensity	-.051	.157	-.102	-.324	.746
Level of popularity × Friends' perceived coolness	.146	.146	.269	1.002	.318
R = .552; R^2 = .304; Adj. R^2 = .269; Standard error of estimation = .863					

Note: N = 147 (Low-popular users = 74; High-popular users = 73); Dependent Variable = Purchasing Decisions.

The other multiple moderated regression analysis used lifestyle choices as dependent variable. Results in Table 4 showed that the fit of the model is acceptable (R^2 = .67, Adj. R^2 = .42). In addition to the simple effects of friendship intensity and friends' perceived coolness, the results showed that, also in such a case, the moderating effect of relative level of popularity was non-significant. In fact, the relationship between each of the three determinants (number of friends, friendship intensity, and friends' perceived coolness) and lifestyle choices (dependent variable) does not change with the relative level of users' popularity, as suggested by the three non-significant interaction effects (p > .10). Therefore H4a and H4b were not supported.

TABLE 4: Results of the Multiple Moderated Regression analysis with a dummy variable and interaction terms (Lifestyle Choices)

	B	Std. Error	β	t	p
(Constant)	.754	.376	-	2.007	.047
Number of friends	-,001	.002	-.667	-.673	.502
Friendship intensity	*.162*	*.081*	*.217*	*1.996*	*.048*
Friends' perceived coolness	*.225*	*.083*	*.316*	*2.723*	*.007*
Level of popularity (0 = low, 1 = high)	-.682	.488	-.348	-1.398	.164
Level of popularity × Number of friends	.001	.002	.776	.715	.476
Level of popularity × Friendship intensity	.174	.136	.358	1.284	.201
Level of popularity × Friends' perceived coolness	.055	.126	.103	.434	.665
R = .671; R^2 = .451; Adj. R^2 = .423; Standard error of estimation = .747.					

Note: N = 147 (Low-popular users = 74; High-popular users = 73); Dependent Variable = Lifestyle Choices.

Finally, a set of regression analyses was conducted on the high-popular users subsample in order to assess, considering three different product categories (convenience goods, shopping goods, and specialty goods), the dependence of such users' purchasing decisions on popularity (i.e., number of friends), friendship intensity, and friends' perceived coolness (Tables 5 and Table 7). Results showed a positive relationship between friend's coolness and purchasing decisions for shopping goods (β = .48; p < .05) and specialty goods (β = .49; p < .05). This relationship remained non-significant when the products were convenience goods (p > .10). Which is maybe due to the low level of involvement associated with the consumption of these goods. Since the purchase of convenience goods is very frequent, effortless, and typically self-unrelated, consumers are likely to buy them routinely, without attaching importance to what cool friends might think or to whether or not they could approve the purchase.

TABLE 5: Perceived influenceability in Purchasing Decisions (convenience goods)

Independent variables	B	Std. Error	β	t	p
(Constant)	.82	.43	-	1.914	.06
Number of friends		.00	.03	.28	.78
Friendship intensity	.24	.15	.26	1.60	.12
Friends' perceived coolness	.14	.13	.18	1.08	.29

Note: High-Popular Users (N = 73): Dependent Variable = Convenience Goods; R = .42, R^2 = .17, Adj. R^2 = .14, Std. Error = 1.03.

TABLE 6: Perceived influenceability in Purchasing Decisions (shopping goods)

Independent variables	B	Std. Error	β	t	p
(Constant)	.72	.39	-	1.83	.07
Number of friends		.00	.01	.09	.93
Friendship intensity	.13	.14	.14	.97	.34
Friends' perceived coolness	*.39*	*.12*	*.48*	*3.26*	*.00*

Note: High-Popular Users (N = 73): Dependent Variable = Shopping Goods; R = .59, R^2 = .35, Adj. R^2 = .32, Std. Error = .94.

TABLE 7: Perceived influenceability in Purchasing Decisions (specialty goods)

Independent variables	B	Std. Error	β	t	p
(Constant)	.50	.39	-	1.29	.07
Number of friends		.00	.03	.32	.93
Friendship intensity	.12	.14	.12	.85	.34
Friends' perceived coolness	*.40*	*.12*	*.49*	*3.39*	*.00*

Note: High-Popular Users (N = 73): Dependent Variable = Specialty Goods; R = .59, R^2 = .35, Adj. R^2 = .33, Std. Error = .93.

Finally, in order to verify the possible effects of the demographic variables on Lifestyle Choices and Purchasing Decisions, a set of ANOVA analyses was performed. Results showed that the relationship between Lifestyle Choices and demographic variables is not significant ($p > .10$).

CONCLUSIONS

Results first revealed that for both subsamples (low-popular users and high-popular users) there is not a significant relationship between the

number of friends and the perceived influenceability in purchasing decisions and lifestyle choices. We demonstrated that, on *Facebook* the size of a user's personal network does not affect the level of influence that friends can have on the same user's decisions. Indeed, findings reveal that there are no differences in terms of influenceability arising from other members of the SNS between low-popular *Facebook* users and high-popular users of this SNS. The results of this study do not support the literature (e.g., Katona, Zubcsek, & Sarvary, 2011) insofar as there is not a strong positive link between a low number of *Facebook* friends and social influence. In contrast, our results suggest that the number of friends one has on *Facebook* is irrelevant from a social influence point of view. On the basis of this finding, a one might argue that reaching high-popular users on social networks like *Facebook* has the same marketing value as reaching low-popular users. Indeed, if in offline contexts the size of the social circle influences consumers' decisions, in online contexts that influence could not be the same.

Second, our research highlights that, only for low-popular users, the friendship intensity plays an important role in both lifestyle choices and purchasing decisions. Interestingly, friendship intensity has a significant positive effect on the purchasing decision of low-popular users, while for high-popular users, friendship has a significant effect only on lifestyle choices. This can be due to the fact that friendship intensity is strongly linked to the friendship quality, which has been defined as "a multidimensional construct reported by both dyadic members that taps the affective level of closeness, security, help, companionship, and lack of conflict that one shares with a friend" (Boman, Krohn, Gibson, & Stogner, 2012, p. 3). Therefore, friendship quality is characterized by several factors: caring, support, interest, disclosure of personal information and feelings, and mutual help (Parker & Asher, 1993). However, these factors, which affect personality characteristics and behavioral patterns, cannot be completely found within SNSs because of the virtual nature of their relationships (Tong, Van Der Heide, & Langwell, 2008), which allows individuals to accrue hundreds of friends without any face-to-face relationship. In sum, results suggest that on-line relationships are not genuine personal relationships. Marketers should therefore take into account these findings in order to plan more efficient promotional activities and advertising.

Third, findings showed that friends' perceived coolness significantly affects purchasing decisions and lifestyle choices for both subsamples. Such an effect proved to be more intense for high-popular users. This may be due to the fact that coolness is associated with personality characteristics such as likeability, desirability (Dar-Nimrod, Hansen, Proulx, Lehman, Chapman, & Duberstein, 2012), youthfulness (Martino, 2000), and attractiveness (Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000), which are positively related to social preference and, consequently, to popularity. The coolness factor is reputed to be particularly useful for marketing researchers because it helps predict

new trends and consumer changes (Southgate, 2003). Many marketers consider cool people to be "style leaders" who may be involved in promoting innovative products in the realms of technology, fashion, and leisure (Nancarrow, Nancarrow, & Page, 2002). Consequently, our result leads one to advance that marketers that attempt to develop an effective online word-of-mouth campaign with a large number of people should focus on cool people linked to high-popular users.

Fourth, the analysis of specific product categories reveals that within high-popular users the importance attributed to online friends' perceived coolness is higher for the choice of products whose purchase implies considerable effort in terms of time and money (e.g., cars or luxury goods). This suggests that users with a larger number of friends feel more influenced by the opinions and impressions of other users who are considered cool if the product is more unique and expensive. This is likely due to the fact that more expensive products are usually cooler than the basic ones and can impress others (Uzgoren & Guney, 2012). These results can be of help for strategic communication planning and for developing consumer-generated advertising or viral marketing (Park, Rodgers, & Stemmle, 2011). In particular, for instance, results suggest that marketers could successfully use the coolness factor in planning ads for expensive or/and high-value goods targeted to high-popular users.

Managerial implications

This research has important implications for marketers also because it underlines the fact that the nature of friendship on SNS is different from friendship in offline contexts. On *Facebook*, many users accrue a large amount of "weak" connections in terms of social influence, that is, connections that have access to personal information but do not significantly influence their behavior. This phenomenon can be explained by the fact that popularity is associated with peer group acceptance (i.e., the degree to which individuals are liked or disliked by others in their peer group) both in traditional friendship (Blyth, 1983; Gifford-Smith & Brownell, 2003) and virtual friendship (Tong, Van Der Heide, & Langwell, 2008). Indeed, research shows that there is a curvilinear relationship between the number of friends that users have and others' perceptions regarding their social attractiveness (Tong, Van Der Heide, & Langwell, 2008). Consequently, individuals accrue a large number of friends on *Facebook* in order to be liked more and to project an image of coolness.

Importantly, this allowed detecting a new phenomenon that we called "Friendoolness", regarding individuals' tendency to acquire a large amount of friends on a SNS in order to improve their self-image and to be perceived as cool people. Friendoolness is based on connectivity and not on the recognition of values or intimacy. Moreover, it differs from acquaintance relationships because "friendool" individuals share and have access to a large amount of personal information denied to acquaintances. This new construct is sociologically different from

traditional friendship and can help companies to develop advertisments specifically addressed to "friendool" individuals. These users are likely to be the most valuable to advertisers because of their social influence. Traditional friendship has been defined as a relationship "in which there is deep mutual affection, a disposition to assist in the welfare of the other, and a continuing desire to engage with the other in shared activities" (Matthews, 2008, p. 158). Thus, the main characteristics of traditional friendships have to be founded in similar attitudes, values or interests and in a certain degree of intimacy (La Gaipa & Werner, 1971; Lowenthal & Weiss, 1976; Olczak & Goldman, 1976). Offline friendship requires a mutual recognition; time spent together and, above all, virtues recognized in the other (Fröding & Peterson, 2012). All these characteristics can be distorted in online contexts because of the virtual nature of the relationship. Indeed, in contrast with traditional face-to-face relationships, on SNSs individuals are more likely to lie (Raynes-Goldie & Walker, 2008). For example, individuals can construct fake profiles, inventing physical and personality characteristics or posting false information about their life in order to model their self-image, which can be perceived as highly socially attractive. Thus, virtual friendships may be characterized by a lack of honesty (Cocking & Matthews, 2000; Fröding & Peterson, 2012). This study shows that individuals accrue an extremely wide number of friends on SNSs but they do not consider their virtual friends as real friends. This phenomenon can be observed irrespective of the size of the network.

Limitations

This research is not without limitations, and we address three important ones. The first relates to the dataset. The survey considers only one SNS (*Facebook*) and covers a short period of time (eight months). The second limitation relates to the nationality of users. A potential issue with our sample is that this research involved only Italian users. The third potential limitation relates to the fact that technology changes constantly and *Facebook* continuously introduces new devices and new privacy settings, which may change the access of personal information and consequently may affect behavioral dynamics (Park, Rodgers, & Stemmle, 2011).

Our research points to several interesting areas for future research. For instance, further studies are needed to carry out data regarding other SNSs and to understand whether the behavioral dynamics evidenced in this study are also replicable on minor SNSs. It would also be interesting to evaluate whether or not the same results can be found in other countries, and compare, for example, the findings deriving from an analysis of mature markets with those deriving from an analysis of developing markets. Additionally, it is important to note that the construct of "Friendoolness" and the sociological rationale underlying it must be further explored. Indeed, the question of the different meanings

of friendship between offline and online networks has not received a great deal of attention in marketing literature yet.

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REFERENCES

Asher, S. R., & Coie, J. D. (1990). *Peer rejection in childhood*. Cambridge: Cambridge University Press.

Back, M. D., Stopfer, J. M., Vazire, S., Gaddis, S., Schmukle, S. C., Egloff, B., & Gosling, S. D. (2010). Facebook profiles reflect actual personality, not self-idealization. Psychological Science, 21(3), 372–374.

Bartini, M., & Pellegrini, A. D. (2001). Dominance in early adolescent boys: Affiliative and aggressive dimensions and possible functions. Merrill-Palmer Quarterly, 47(1), 142–163.

Blyth, D. A. (1983). Surviving and thriving in the social world: A commentary on six new studies of popular, rejected, and neglected children. Merrill-Palmer Quarterly, 29(4), 449–4.

Boman, J. H., Krohn, M. D., Gibson, C. L., & Stogner J. M. (2012). Investigating friendship quality: An exploration of self-control and social control theories' friendship hypotheses. Journal of Youth and Adolescence, 41(11), 1526–1540.

Boyd, D. B., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. Journal of Computer-Mediated Communication, 13(1), 210–230.

Brown, J. J., & Reingen, P. H. (1987). Social ties and word-of-mouth referral behavior. Journal of Consumer Research, 14(3), 350–362.

Casteleyn, J., Mottart, A., & Rutten, K. (2008). How to use Facebook in your market research. International Journal of Market Research, 15(4), 439–447.

Chou, H. T. G., & Edge, N. (2012). They are happier and having better lives than I am: The impact of using Facebook on perceptions of others' lives. Cyberpsychology, Behavior, and Social Networking, 15(2), 117–121.

Chu, S. C. (2011). Viral advertising in social media: Participation in Facebook groups and responses among college-aged users. Journal of Interactive Advertising, 12(1), 30–43.

Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. Annual Review of Psychology, 55, 591–621.

Clifford, M. M., Walster, E. (1973). The effect of physical attractiveness on teacher expectations. Sociology of Education, 46(2), 248–258.

Cocking, D., & Matthews, S. (2000). Unreal friends. Ethics and information technology, 2(4), 223–231.

Dar-Nimrod, I., Hansen, I. G., Proulx, T., Lehman, D. R., Chapman, B. P., & Duberstein, P. R. (2012). Coolness: An empirical investigation. Journal of Individual Differences, 33(3), 175–185.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook 'friends': Social capital and college students use of online social network sites. Journal of Computer-Mediated Communication, 12(4), 1143–1168.

Ferguson, S. (2011). A global culture of cool? Generation Y and their perception of coolness. Young Consumers: Insight and Ideas for Responsible Marketers, 12(3), 265–275.

Finn, J. D., Gerber, S. B., & Boyd-Zaharias, J. (2005). Small classes in the early grades, academic achievement, and graduating from high school. Journal of Educational Psychology, 97(2), 214–223.

Fröding, B., & Peterson, M. (2012). Why virtual friendship is no genuine friendship. Ethics and Information Technology, 14(3), 201–207.

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendships, and peer networks. Journal of School Psychology, 41(4), 235–284.

Goldenberg, J., Han, S., Lehmann, D., & Hong, J. (2009). The role of hubs in the adoption processes. Journal of Marketing, 73(2), 1–13.

Gonzales, A. L., & Hancock, J. T. (2011). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. Cyberpsychology, Behavior, and Social Networking, 14(1-2), 79–83.

Hebdige, D., & Potter, A. (2008). A critical reframing of subcultural cool and consumption. European Advances in Consumer Research, 8, 527–528.

Hill, R. A., & Dunbar, R. I. (2003). Social network size in humans. Human Nature, 14(1), 53–72.

Iribarren, J. L., & Moro, E. (2010). Affinity paths and information diffusion in social networks. Social networks, 33(2), 134–142.

Jackson, L. A., Hunter, J. E., & Hodge, C. N. (1995). Physical attractiveness and intellectual competence: A meta-analytic review. Social Psychology Quarterly, 58(2), 108–122.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. Business horizons, 53(1), 59–68.

Katona, Z., Zubcsek, P. P., & Sarvary, M. (2011). Network effects and personal influences: The diffusion of an online social network. Journal of Marketing Research, 48(3), 425–443.

Krantz, M. (1987). Physical attractiveness and popularity: A predictive study. Psychological Reports, 60, 723–726.

La Gaipa, J. J., & Werner, R. E. (1971). Attraction and relevancy of attitude similarity-dissimilarity: Impersonal topics and friendship beliefs. Psychonomic Science, 22(2), 83–84.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. Psychological Bulletin, 126(3), 390–423.

Lowenthal, M. F., & Weiss, L. (1976). Intimacy and crises in adulthood. The Counseling Psychologist, 6(1), 10–15.

Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university: It is more for socialising and talking to friends about work than for actually doing work. Learning, Media and Technology, 34(2), 141–155.

Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. Social Forces, 63(2), 482–501.

Martino, W. (2000). Mucking around in class, giving crap, and acting cool: Adolescent boys enacting masculinities at school. Canadian Journal of Education, 25(2), 102–112.

Matthews, S. (2008). Identity and information technology. In J. Van den Hoven & J. Weckert (Eds.), Information technology and moral philosophy (pp. 142–160). Cambridge: Cambridge University Press.

Muise, A., Christofides, E., & Desmarais, S. (2009). More information than you ever wanted: Does Facebook bring out the green- eyed monster of jealousy? CyberPsychology and Behavior, 12(4), 441–444.

Nancarrow, C., Nancarrow, P., & Page J. (2002). An analysis of the concept of cool and its marketing implications. Journal of Consumer Behaviour, 1(4), 311–322.

Nitzan, I., & Libai, B. (2011). Social effects on customer retention. Journal of Marketing, 75(6), 24–38.

Olczak, P. V., & Goldman, J. A. (1976). Psychosocial maturity and interpersonal attraction. Journal of Research in Personality, 10(2), 146–154.

Park, H., Rodgers, S., & Stemmle, J. (2011). Health organizations' use of Facebook for health advertising and promotion. Journal of Interactive Advertising, 12(1), 62–77.

Parker, J., & Asher, S. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. Developmental Psychology, 29(4), 611–621.

Parkhurst, J. T., & Hopmeyer, A. (1998). Sociometric popularity and peer-perceived popularity: Two distinct dimensions of peer status. Journal of Early Adolescence, 18(2), 125–144.

Parks, M. R. (2007). Personal networks and personal relationships. Mahwah, NJ: Lawrence Erlbaum Associates.

Parks, M. R., & Floyd, K. (1996). Making friends in cyberspace. Journal of Computer-Mediated Communication, 1(4), 80–97.

Pountain, D., & Robins, D. (2000). Cool rules: anatomy of an attitude. London: Reaktion.

Puntoni, S., & Tavassoli, N. T. (2000). The influence of mere social presence on message reception (Working paper No. 03-204). London: London Business School Centre for Marketing.

Raynes-Goldie, K., & Walker, L. (2008). Our space: Online civic engagement tools for youth. In W. L. Bennett (Ed.), Civic life online: Learning how digital media can engage youth (pp. 161–188). Cambridge, MA: MIT Press.

Ritson, M. (2002). Are you paying attention? A new study shows that people spend most of their time avoiding TV ads. Financial Times, May 14, 2.

Rodkin, P. C., Farmer, T. W., Pearl, R., & Van Acker, R. (2000). Heterogeneity of popular boys: Antisocial and prosocial configurations. Developmental Psychology, 36(2), 14–24.

Ryu, G., & Feick, L. (2007). A penny for your thoughts: Referral reward programs and referral likelihood. Journal of Marketing, 71(1), 84–94.

Socialbakers. (2012). Facebook statistics. Available online: http://www.socialbakers.com-/facebook-statistics/united-states.

Southgate, N. (2003). Coolhunting, account planning and the ancient cool of Aristotle. Marketing Intelligence and Planning, 21(7), 453–461.

Tong, S. T., Van Der Heide, B., & Langwell, L. (2008). Too much of a good thing? The relationship between number of friends and interpersonal impressions on Facebook. Journal of Computer-Mediated Communication, 13, 531–549.

Trusov, M., Bodapati, A. V., & Bucklin, R. E. (2010). Determining influential users in Internet social networks. Journal of Marketing Research, 47(4), 643–658.

Uzgoren, E., & Guney, T. (2012). The snob effect in the consumption of luxury goods. Procedia - Social and Behavioral Sciences, 62, 628–637.

Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site? Facebook use and college students' life satisfaction, trust, and participation. Journal of Computer-Mediated Communication, 14(4), 875–901.

Van den Bulte, C., & Wuyts, S. (2007). Social networks and marketing. Cambridge, MA: Marketing Science Institute.

Vigneron, F., & Johnson, L. (1999). A review and a conceptual framework of prestige-seeking consumer behaviour. Academy of Marketing Science Review, 99(1).

Walther, J. B., Van Der Heide, B., Kim, S., Westerman, D., & Tong, S. T. (2008). The role of friends' appearance and behavior on evaluations of individuals on Facebook: Are we known by the company we keep? Human Communication Research, 34(1), 28–49.

Wilcox, K., & Stephen, A. T. (2013). Are close friends the enemy? Online social networks, self-esteem, and self-control. Journal of Consumer Research, 40(1), 90–103.

Zhao, H., Kim, S., Suh, T., & Du, J. (2007). Social institutional explanations of global Internet diffusion: A cross-country analysis. Journal of Global Information Management, 15(2), 28–55.