Classifying and Profiling Social Media Users: An Integrated Approach

Zoe- Charis Belenioti, Aristotle University of Thessaloniki, Greece
Andreas I. Andronikidis, University of Macedonia, Greece
Chris Vassiliadis, University of Macedonia, Greece

Abstract
The fast evolving business practice and the continuously changing users' profiles attract researchers' interest, such as Brandtzaeg et al. (2010), Brandtzaeg et al. (2007), Constantinides (2011) and Hsuan (2008). However, the current classification studies allows for users' segmentation in specific social media application and only one at a time (e.g. SNS, blogs). Thus, Beemt et al. (2010) and Brandtzaeg et al. (2010) called for integrated classification researches. The study addresses the gap of users' segmentation within all social media applications exploring how Greek users could be classified according to their "motivation of use", "usage patterns" and "social identity" (n=270). This is the first study that attempts to classify users on the basis of their common demographics (age, gender, educational level, income, and marital status), motivations of use, behavioral patterns - such as frequency of use and usual activities-and social identity in the environment of all social media types. The present study explores users' behavior (n=270) by providing a classification scheme along with a detailed profiling of the resulted clusters. Implementing cluster analysis results indicated that users can be classified into three categories ("Information Seekers", 27%, - "Operational and Psychological Boost Benefits Seekers", 47 %- "Communication Seekers", 26%). The "social identity" factor was also used through Anova Test presenting noteworthy differences among the emerging clusters. The current research contributes to develop a users' classification scheme treating social media as one single category. The paper ends by providing theoretical and managerial implications serving helpful insights about social media patterns.

Keywords: Social media users' segmentation, social identity, social media behavior, e-communication

Introduction

Social media applications are becoming the new communication status quo. Kaplan & Heinlein (2011) categorized them into Social Networking Sites (e.g. Facebook, LinkedIn), Content Communities (e.g. YouTube), Virtual Games/ Worlds (e.g. Second Life), Collaborative Projects (e.g. Wikipedia) and Blogs. Their value is constantly reflected upon in our daily routine and lies in two strands: the social and the business axiom derived from their implementation.

As for the social strand of these new media, Papacharissi &Rubin (2000) pointed out the central role of the Uses & Gratification theory. With the dawn of Net, Papacharissi &Rubin (2000) adapted the classical concepts of Uses and Gratification theory, pioneered by Lazarsfeld (1949) and extended by Katz et al. (1973). According to their results, the main reasons of Internet use are "interpersonal utility, pass time, information seeking, convenience and entertainment" (2000:189). Actually, many people use social media in order to make new friends, keep in touch, to entertain, and boost their confidence and social identity (Hoffman & Novak, 2012; Urista et al., 2007; Boyd et al., 2007; Kraut et al., 1998).

Simultaneously, social media is becoming fast a key instrument and lucrative field from the business perspective thanks to the high consumer engagement offered through social media and web- interactivity (Noort et al., 2012, Pérez Latre& Tsourvakas, 2013). Not only do social media constitute a cost-effective, interactive and, above all, targeted communication tool for every organization (Aaltonen et al., 2013; Statista, 2014), but they also create a co-value for any product or service that can be communicated (Leimeister et al., 2006, Anderson, 200; Vorvoreanu, 2009, Threatt, 2009, Sung et.al, 2010; Nair, 2011). Dominos Pizza exemplifies the co-creation product: the firm invites their customers to create their own pizza named "Dominos Pizza Talent" through a contest within their corporate Facebook channel. "Mama's pizza" is definitely a new co- creative product, as it is a customer- made result
(https://www.facebook.com/DominosGreece?sk=app_149321268577876&app_data).

Undoubtedly, the widespread adoption of these digital media both for social and business reasons has emerged a new communication landscape with new users' patterns. This fast evolving business practice and the continuously changing users' profiles attract researchers' interest, such as Brandtzaeg & Heim (2011), Constantinides et al. (2011) and Hsuan (2008). However, very little is known regarding the users' segmentation and profiles in the context of all social media applications, addressing the research call of Kalmus& Pruulmann- Vengerfeldt (2009), Beemt et al. (2010) and Brandtzaeg & Heim (2011). While the available classifications attempt to focus on specific social media applications (e.g. SNS, blogs and only one at a time), no previous study attempted to develop a users' classification scheme treating social media as one single category. This study addresses this gap by employing behavioral data as the segmentation variables on the basis of Uses& Gratification Theory by Papacharissi &Rubin (2000). The survey extends knowledge about identification of social media users within all social media.

The present study attempts to segment Greek social media users according to their demographic and behavioral characteristics (e.g. Purpose of use, usual activities). This

study's contribution is reflected both on the presentation of new theoretical insights and the provision of interesting implications for enterprises eager to use this new communication tool.

The paper is structured as follows. Section 2 analyses the relevant theoretical framework. Section 3 presents the research methodology. Section 4 includes in depth analysis and elaboration on the results. Section 5 draws conclusions of the study and highlights the theoretical and practical implications as well as proposes avenues for further research.

Literature Review

Definitions and Internet Users' Classification Schemes

Smith set the premises of "segmentation concept" in 1956 mentioning the advantage of segmentation to enterprises. Hopkings (1968) defined segment as "a recognizable group of people that have common requirements that could play a vital role to the strategic marketing management of a product" (Siomkos, 2004:358). Usual criteria of segmentation are demographics, geographical density of population or geographical place of consumers, behavioral with variables like the frequency of use of a product, level of adoption, volume of usage, usage situation, and psychographics with variables such as lifestyle, personality, values and opinions.

So far several academics have created typologies of Internet users according to various criteria, such as their usual activities on the Net of Net Generation (Beemt et. al., 2010), time spent on-line (Forysth et al., 2000), psychographics (Assael, 2005) and users'culture (Johnston & Parminder, 1999). Furthermore, Meyen et al. (2009) found that behavior depends on demographical criteria, such as age, sex, status and occupation. Additionally, based on the premises of social capital theory Meyen et al. (2009) customized the media richness theory within Internet and created the following typology consisting of 7 segments "Virtuosi", "Professionals", "Addicts", "Affiocandos", "Companions", "Cautious" and "Affiliated. Moreover, Aljukhadal and Senecal (2010) divided Internet Users in 3 categories labeled "Basic Communicators", "Lurking Shoppers" and "Social Thrives". Finally, Brandtzaeg et al.(2010) trying to segment Internet users according to their usage patterns, created a typology with 5 segments, namely "Non-Users", "Sporadic Users", "Instrumental Users", "Entertainment Users" & "Advanced Users".

Social Media Users Typologies Review

Until now a lack of extensive classification schemes regarding users the totality of 6 types of Social Media (Blogs, Content Communities, Social Networking Sites (hereinafter SNS), Virtual Worlds- Games, and Collaborative Projects) is noticed, which can be mainly attributed to the Social Media's short "life–cycle". The only prior segmentation of social media users was conducted this year by Strickland (2013) and attempted to investigate the classification of social media users according to their influence in the social media arena. The emerged profiles users were named as follows: "Social Movers", "Actively Liked", "Reserves'" and "Listeners". Thus, the available typologies are presented below concerning, however, only the cases of SNS, Content Communities and Blogs.

SNS attract academia's attention. So far, many researchers have attempted to classified users of SNS such as Kozinets (1999), Johnson& Smaragdi (2001), Nielsen (2006), OFCOM(2008), Brandtzaeg & Heim (2011) and Constantinides et al.(2011).

Usual motivation of Content Communities users is information seeking, social interaction, diffusion of ideas and knowledge, self- presentation and personal fulfillment. Moreover, age constitutes an important predictor with content sharing being much more common among younger people (Stefanone& Lackaff, 2009; Kalmus et al., 2009). So far, only Courtois et al, (2009) & (2011) and Hsuan (2008) attempted to segment content communities users.

Blogs have a wide range of topics and formats, ranging from personal diaries to a forum commenting on and reviewing political, financial, technological and various other issues. Basic motivation of using a blog is the interactive communication, the freedom of expression among bloggers, the boost of social capital or self – esteem and positive social identity (Miura& Yamashita, 2007). According to Chung& Chiou (2009) factors affecting users' devotion to blogs are the perceived benefits and the pressure/ feedback that users receive from their cycle. Several studies have been carried out on segmentation of bloggers (e.g. Kalmus et al., 2009; Budak et al., 2011; Mathioudaki&Koudas, 2011). The key segmentation studies deployed until now are presented in the Table 1.

Table 1: Summary table of Key Segmentation studies in Social Media

Citation-Typology's Focus	Design/Method	Sample	Purpose	Findings/ Preposition
Kalmus, Runnel and Siibak (2009), Typology of Bloggers	Quantitative Research, Survey, Cluster analysis	(N =) 713 among 11- to 18-year old	To research the behavior in terms of online content creation among young Internet users in Estonia	"The Versatile, Blog-Centered Type", "The Homepage Centered Type", "The SNS-Centered Type", "The Forum Centered Type", "The News-Comment Centered Type", "Indifferent Type"
Budak, Agrawal, Abbadi,(2011), Typology of Bloggers	Algorithms; Measurement	N/A	To investigate existence of mavens, connectors and salesmen in the blogosphere	"Connectors", "Mavens", "Salesmen" and "Translators"
Mathioudaki & Koudas (2011), Typology of Bloggers	Experiment	N/A	To define the notions of `starters' and	"Starters" & "Followers"

			`followers' and investigate their computation in real blog tracking systems.	
Courtois, Merchant, Ostyn&Lieven De Marez(2009), Typology of users in Content Communities & collaborative Projects	Qualitative Research (Interviews), Quantitative Research Hypothesis Test	(N=)450	To explore how uploaders define their videos' viewership, given the inherent uncertainty of its actual composition	"An offline identified public'', "An – online identified public and "An online unidentified public''.
Hsuan (2008), Typology of users in Content Communities & collaborative Projects	Quantitative Research , Web-based survey	(N=)1,055	To segment the users according to their behavior within the Content Communities	"Neither consume nor create content", "Only consume content", "only create content", "Both consume and create content"
Kozinets (1999), Segmentation of SNS user	Theortical Review	N/A	To segments users of SNS	"Tourists", "Minglers", "Devotees" and "Insiders".
Johnson& Smaragdi (2001), typology in New Media	Quantitative Research, Survey, Cluster analysis	N/A	To segments users according to their patterns of usage within new media and other areas of us	"Low media users", "Traditional media users", ""Specialists'' and "Screen-entertainment fans''
Nielsen (2006), typology of users in Social Media	Quantitative Research, Survey	(N=)2 m.	To segment users in Social Media context according to the degree degree of users	"Luckers", "Interminents"and "Heavy contributors"

			participation	
OFCOM(2008), Typology of Users in SNS	Qualitative Research	(N=)52	To identify, explore and understand the behaviors, attitudes and barriers to people's use of social networking sites	"Aplha Socializers Users", "Attention Seekers", "Followers", "Faithfull" and "Functionals"
Brandtzaeg& Heim (2011), Typology of Norwegian Users in SNS	Quantitative& Qualitative analysis, Survey, Cluster analysis	(N=)5,233	To classify SNS users according to their patterns	"Sporadics", "Luckers", "Socializers", "Debaters" and "Actives"
Constantinides (2011)	Quantitative Research, Survey, Cluster analysis	(N=)400	To segment Dutch users of SNS according to their the demographic, social and behavioral characteristics	"Beginners", "Habitual Users", "Outstanding Users" and "Expert Users"
Strickland (2013),classification of the social media influencers	Qualitative Research	(N=) 6500	To segment USA social media users according to their influence	"Social Movers" (High Influence), "Actively Liked" (Medium Influence), "Reservers" (Low Influence),"Listeners" (No Influence)

While the available classification schemes are focused on specific social media categories (e.g. SNS, blogs and only one at a time), the present study aims to develop a users' classification scheme treating social media as one single category and employing motivational and behavioral data as the segmentation variables. Then, in case different segments/clusters emerge, the labeling and detailed profiling (e.g. demographic and behavioral data) of the resulted clusters will follow. Therefore, we explore the following research questions:

RQ1: How could be social media users segmented according to their "motivation of use" and "usage patterns"?
RQ2: In case different Social Media users' segments are created, do these segments differ in all factors that have been employed for the segmentation process?

Consumer Behavior & Social Media Theories

Based on the central concept of "uses and gratifications theory" in which people use communications media to gratify needs or wants, Papacharissi & Rubin (2000) identified five different motives for Internet use: *"interpersonal utility, pass time, information seeking, convenience and entertainment"* (2000:189). Indeed, the last decade more and more people use Net not only for instrumental reasons but also for social purposes. Some people log in various SNS to extend their social networks or communicate with their friends while other prefer Virtual Worlds, Blogs or Content Communities in order to entertain, boost either their social capital, or their social identity and confidence (Hoffman & Novak, 2012; Urista et al.,2007; Ellison et al.,2007; Kraut et al.,1998).

According to Utz (2010) the appearance of Net brought to the spotlight new theories, such as "Impression Formation" and "Social Identity". Especially, the Net's unique characteristics (such as anonymity or absence of verbal and face to face cues) in the SNS' context allowed users to expand their ties and format their identity and booster their level of collective self – esteem as well as their sense of group belonging. (Turkle1995;Boyd& Elisson, 2007; Donath& Boyd, 2004; Elisson et al, 2007; Walther, 1996, McKenna et al. 2000; Valenzuela et al. 2006). Other researchers examined the relationship between social identity and psychological well- being with SNS. According to Baker (2009), social identity is directly correlated to collective identity and collective self-esteem. Valkenburg et al. (2006) found that low self-esteem can impel adolescents, particularly girls, to use the Internet more often in identity exploration, while Elison et al. (2007) concluded that Web provides benefits for users with low self- esteem. Thus, we formulate the following research question:
 RQ3: Are significant differences noticed between segments towards the social identity dimension regarding the use of social media?

Concluding the available segmentation studies examined users' behavior within specific social media kinds. This paper provides a users' classification scheme within all social media platforms examining the following research questions:
RQ1: How could be social media users segmented according to their "motivation of use" and "usage patterns"?
RQ2: In case different social media users' segments are created, do these segments differ in all factors that have been employed for the segmentation process?
RQ3: Are significant differences identified between segments towards the social identity dimension regarding the use of social media?

Method

For the purpose of the current study, a questionnaire served as a data collection instrument. The convenience sample was used. We obtained data from 280 Greek social media users within age from 18 to plus 65 years old. We also excluded ten answers because they were invalid.

As for the demographic criteria, we examined factors such as age, gender, educational level, income, marital status and as for the behavioural criteria, parameters like the behaviour that each user possess within Social Media.

We also distributed a pre- test questionnaire to 10 respondents in order to examine questionnaire's credibility and comprehension. The questionnaire was composed of 23 questions and based on a combination of closed-ended, dichotomous and multichotomous, multiple choice intervals (Likert) – scales. The questionnaire was divided into 3 parts.

We developed an exploratory quantitative research and analysed the data with the statistical program SPSS. Before conducting the cluster analysis, we used Factor Analysis in order to explore whether separate items could be grouped into underlying factors that would be used for the cluster analysis (i.e. instead of single items-questions). Then, we used cluster analysis to determine different clusters of social media users based on the criteria of (a) the motivation of use (question 15) and (b) the usual activities in the environment of Social Media(question 16). Since the number of clusters was unknown in the beginning, we used Hierarchical Clustering with Wards method. Having obtained 3 clusters, we employed the k-means cluster to fulfill the cluster membership. Furthermore, descriptive statistics tests and cross- tab tests revealed interesting findings about the correlation of clusters and various variables, such as socio-demographic characteristics, aptitude, motivation of use, experience and activities of Social Media users, the number of personal accounts, friends and way of access that panel sample members have in each social media kind. Through One way ANOVA and Post- Hoc test we identified the significant differences between the emerged segments. Finally, One Way ANOVA and Post Hoc test revealed the correlation between the cluster and the dependent variables such as the construct of collective- esteem (question 17, items 11-21).

Results & Discussion

To address the RQ1 and RQ2, before the cluster analysis, we first used Factor Analysis in order to explore whether separate items could be grouped into underlying factors that would be used for the cluster analysis (i.e. instead of single items-questions). Thus, through the Principal Component Rotation Varimax method, we extracted communalities with the lowest percentage of variance among the examined variables. The key dependent variable of the sample that was classified into 3 types users was "the reason of social media use" and "the usual activities" each segment has within social media'. Since, KMO= 0.880>0.50, Approx. Chi-Square 2991,362, sig: 0.001< 0.05, df 210, Factor Analysis was used. The Varimax Rotation Matrix reduced the initial 30 items in 22 items in 4 factors identifying types of uses as shown in the Table 2.

Table 2: KMO & Factor Loadings- Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,880
Bartlett's Test of Sphericity	Approx. Chi-Square	299 1,362
	df	210
	Sig.	,000

Factor Loadings- Factor Analysis

Factors	Factor Loadings
Factor 1- Operational Reason and Activities	Sharing Files_ activities(0,818), Commenting the posts_ activities (0,789), Referring to the daily routine_ activities(0,730), Sending private messages_ activities (0,723), Tags_ activities(0,722), Profile Update(0,703), Sharing_ Reason(0,682), Gossip_ activities(0,667)
Factor 2- Communication	Sending public messages (0,701), To stay in touch with the family_ reason(0,699), To stay in touch with friends and acquaintances_ reason(0,682), Searching information for issues that I am interested to_ activities (0,672),inform about events_ reason(0,506)
Factor 3- Information	To retrieve information about various duties(homework, job)_reason (0,887), To watch videos(0,772), To get information that I can't through traditional media_ reason(0,746), To learn more information about something that I heard about_ reason(0,739)
Factor 4- Psychological Boost	To reduce my loneliness_ reason(0,816), To boost my confidence (0,761), To learn more about myself and others _ reason(0,6380), To exchange opinions_ reason(0,580)

Initially, we used Hierarchical Analysis to identify the number of clusters in which the sample's observations will be group into. Having obtained 3 clusters, we also deployed the k-means cluster to fulfill the cluster membership.

Table 3: Oneway ANOVA Descriptive & Test of Homogeneity of Variances

Oneway ANOVA Descriptive & Test of Homogeneity		N	Mean	Std. Deviation	Levene Statistic	df1	df2	Sig.
REGR factor 1score, Operational	1	73	-1,016	0,613				
	2	128	0,695	0,653	4,564	2	267	0,011

Reasons	3	69	-0,214	0,831				
	Total	270	0	1				
REGR factor2 score, Communication	1	73	-0,249	1,262				
	2	128	-0,007	0,764				
	3	69	0,276	1,015				
	Total	270	0	1	8,103	2	267	0,000
REGR factor 3 score, Information	1	73	0,646	0,697				
	2	128	0,301	0,552				
	3	69	-1,243	0,824				
	Total	270	0	1	7,759	2	267	0,001
REGR factor 4 score, Psychological Boost	1	73	-0,277	0,820				
	2	128	0,319	1,100				
	3	69	-0,298	0,784				
	Total	270	0	1	5,317	2	267	0,005

Given the K- Means Cluster Analysis, three distinct types of users emerged reflecting different behavioral patterns and motivation of social media use. These three types are Information Seekers, Operational Benefits& Psychological Boost Seekers and Communication Seekers, respectively. According to the figure below, Operational Benefits and Psychological Boost Seekers is the biggest cluster (47.4%), followed by Information Seekers (27%) and Communication Seekers (26%).
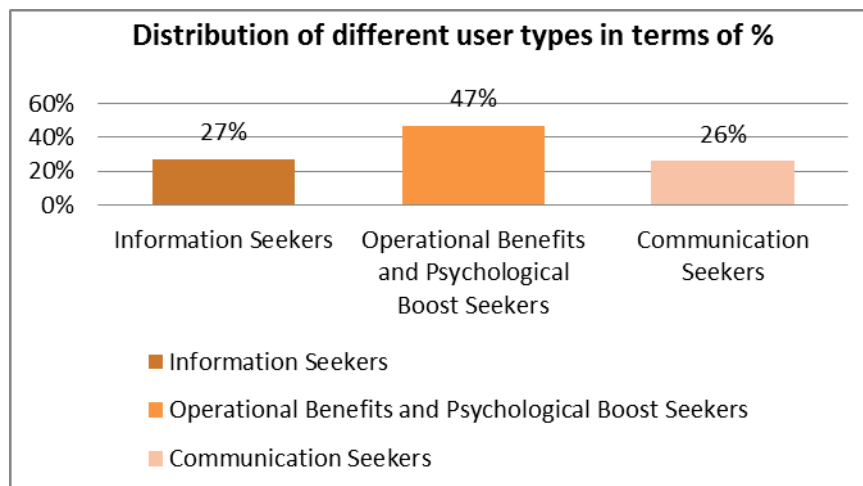

Figure 1**:** Distribution of different user types in terms of %

Additionally, we implemented one way ANOVA test to identify the significant differences between the emerged segments (Table 4). Likewise, one Way ANOVA test was also employed to identify the correlation between the cluster and the dependent variables comparing means such as the construct of collective- esteem-social identity(Cronbach's Alpha 0.746>0.07 (question 17, items 11-21, Tables5-7, RQ3).

Table 4: ANOVA Test between clusters

– ANOVA FOR 4 FACTORS		Sum of Squares	df	Mean Square	F	Sig.
REGR factor 1 score, Operational Reasons	Between Groups	140,639	2	70,319	146,269	0,000
	Within Groups	128,361	267	0,481		
	Total	269,000	269			
REGR factor score 2, Communication	Between Groups	9,833	2	4,917	5,065	0,007
	Within Groups	259,167	267	0,971		
	Total	269,000	269			
REGR factor score 3, Information	Between Groups	148,912	2	74,456	165,544	0,000
	Within Groups	120,088	267	0,450		
	Total	269,000	269			
REGR factor score 4, Psychological Boost	Between Groups	24,817	2	12,408	13,568	0,000
	Within Groups	244,183	267	0,915		
	Total	269,000	269			

Labeling and Detailed Profiling of the resulted Clusters
The clusters derived from the aforementioned analysis are analytically described in the following section.

1. Information Seekers: This cluster comprises 27% of the sample. These users engage in information and oriented activities in the social media, while they abstain from communication activities. As for the demographic analysis, they are young women (25 -35, 13.7%) with a low (41%) and middle class background (14%) and high educational level – holding bachelor (34%) and Master/PhD (18%). They are experienced users of the Internet (18.9%) but they are not equally tech-savvy. Their preferred log in device is their PC (20.7%). Information Seekers prefer blogs to other social media in which they have no account (blogs: 14.8%, content communities: 14.1% and games: 20.7%) or only one account in the case of SNS (10.7 %) and Content Communities (11.5%). Consequently, the majority of them has no friends in the case of Games (21.9%), Blogs (17.8%) and Content Communities (19.3%) or few friends that are not more 50 in the context of SNS(4.1.%). Hierarchically, after blogs, they prefer Content Communities, then SNS and finally Virtual Worlds/ Games. Furthermore, the results showed that these users visit blogs on a daily basis (9.6%),

Content Communities (16%) and SNS (10.7%), contrary to Games where only the 3% visit so often. As a result, users seeking information are more active and extrovert on blogs, since they like to comment and share content contrary to other social media applications. Generally speaking, they are content consumers in the context of all social media applications, showing/featuring a passive behavior and encompassing the highest abstention levels inform content creation (Blogs: 18.1%, SNS: 14.1%, Games: 23.7%, Content Com.18.9%). Furthermore, regarding their behavioral patterns on the Internet, the majority of these users surf only for instrumental reasons, such as collecting information (24%), reading newspapers (21,8%), downloading files (14%) and using e-banking services (6.1%) .This user group generally features a high level of internet literacy (18.9% of the segment have been using Net for more than 5 years) and engages in a mediocre daily use (11.5%surf on the Net on 5-13 hours / per week). As for their attitude towards technology, these users are not so techno- savvy as the mean difference of the Post- hoc test has shown (m=- 1.968, sig: .0000). According to ANOVA Test results (sig: 0.09>0.05), there is no correlation between social identity and users seeking information: therefore, these users are not identified socially by their participation in social media.

2. Operational and Psychological Boost Benefits Seekers: This cluster which represents the sample majority (47. 4% of the sample) comprises women and men from 25 to 35 years with high educational level (students or holders of Bachelor or Master Degrees) and low-middle class background. These users prefer social media for operational and psychological purposes, such as communication, sharing files, boost of confidence or reduction of loneliness. They are techno- savvy, as they exploit all web – services and have the most positive attitude towards the technology. This group exploits all benefits of the Internet, such as downloading music (28.9%), sending messages (25.9%), ordering products (23%), playing games (17.3%), seeking travel information (26.2%), seeking jobs (12.6%), reading newspapers (38.9%), and retrieving educational or working information (40.7%). The main reason of their participation in social media is the ease of use, entertainment as well as the psychological boost that Social Media platforms offer. That is the reason why they log both via mobile (13.3%) and PC (32.6%). Consequently, most of them hierarchically use SNS, Content Communities, Blogs and last, Virtual Wolds/Games. The majority of them have at least one account in Content Communities (24.8%) and SNS (23%) where the 21.1% may have from two to four accounts. On the contrary, the majority of these users have no account in Blogs (26.7%), Games (33.3%). They prefer mainly SNS, where they have more than 2 accounts with more than 400 friends. Content Communities are followed with 1-2 accounts and less than 150 friends. Games are last in the ranking, since the half sample doesn't have an account, while the other half seems to have 2-3 with less than 100 contacts. As for the social capital, the biggest social capital emerges in the SNS example, with the 19.6% having more than 400 friends and minorities of 1.5% with friends between 11- 50 people, in contrast to the other social media application where the majority have no friends (Blogs: 26.3%, Games: 32.2%, Content communities: 24.8%) or very few contacts -maximum 10 friends- (Blogs: 9.3%, Games: 4.1%, Content Communities: 9.3%). From them, the 36.5% visit Content Communities on a daily basis. The 41.4% visit daily SNS, while the 21.5% have daily use of blogs and the 4.8% visiting Games. They are by far the most active and extrovert users, since they comment and engage on a daily basis with posts uploaded on SNS, Blogs, Content Communities and 3-4 times/week in the context of Virtual Games. They comment weekly on blogs (15.6%) and Content

Communities (13%), daily the SNS (26.7%) and a small minority of 5% comment weekly the content of Games. They are "content consumers" preferring commenting to creating their own content. Nevertheless, in SNS they are described as content – consumers, because they "produce" content daily (22.3%). Moreover, ANOVA Post Hoc Test showed that Operational and Psychological Boost seekers have the most positive attitude to Technology, compared to Information and Communication Seekers (m= 1,968, sig:.000 and m= 1,487,sig:0.004, accordingly). As a result, they surf for more than 13 hours on the Net weekly (21.5%) and they are experienced users of the Net (44.8%). Regarding the correlation between cluster and social identity, ANOVA Test (sig: 0.00<0.05) showed a significant statistical correlation between these two variables, contrary to the previous user profiles.

3. Communication Seekers: This is the smallest cluster, as it includes the 25.6 % of the sample. Communication Seekers are less technology affiliated than the other user types. Here women between 18-24 years of low- middle class dominate. Concerning their on-line behavior, these users claim the highest percentage in activities such as chatting and watching films (15.2%). The majority of them type surf for about 5-13 hours on a weekly basis (11.1%) and they are also experienced Web users (18.9%). They lie between the "Information Seekers" and the "Operational & Psychological Benefits Seekers" in terms of technology affiliation. They primarily use SNS, then Content Communities, after Blogs and, last, Virtual Worlds/ Games. They log in via their PC (17.8%), while access from mobile devices (mobiles: 0.7%, PC and mobile: 7%) remains premature within this category. Individuals of this cluster use social media for communication purposes; in order to stay in touch with friends and acquaintances, to be informed about events and activities of groups or organizations, to search for information, to send private messages, send public messages comment and gossip. Consequently, they visit Blogs once a week (9.6%), SNS and Content Communities on a daily basis (15.2%), while they abstain from Games (18.5%). The majority of them have no friends or few friends (10) in the case of Blogs (18.5% and 3%), Games (21.5% and 8.5%) and Content Communities (18.5% and 4.1%). On the contrary, in the context of SNS the 9.6 % have from 101- 400 friends, while the 5.6% have more than 400 contacts. Communication Seekers have no or one account in blogs (16.7%, 6.7%), games (20.4%, 4.1%), at least one account in SNS (13.3%) or two (5.9%) and no one (11.9%) or one account (10.7%) in the Content Communities. They are also proven content consumers, since they tend to consume and not to create except for the case of SNS where they upload content on a daily basis (9.3%). Having communicative motives, they rarely – twice a week- comment and interact via posts in blogs and SNS (7.8% and 8.5%, respectively) and abstain from Games and Content Communities (22.2% and 15.6% answered ''never'') or they would comment once a week (2.6% and 5.9%, respectively). According to the ANOVA Post- Hoc these users have no correlation with technology. (m= 0.48144, sig: .624).Finally the findings of ANOVA Test (sig: 0.00<0.05) revealed a significantly higher statistic relation between their participation in on-line communities and the social identity, compared to the rest of the clusters.

In order to address the RQ2, ANOVA and Post- Hoc Tukey Test (Table 5)for each of 4 factors (Operational Benefits, Communication, Information, and Psychological Boost) was employed to assess how distinct the clusters are. With regards to Factor "Operational Benefits" it was showed that the Operational and Psychological Benefits Seekers have bigger mean difference than the Information Seekers (mean difference:

1.712' sig: .001) and Communication Seekers (mean difference: .910 & sig: .001) because these users prefer Social Media for entertainment and operational proposes. As for the Multiple Comparison among the Information & Communication Seekers, the study shows that Information Seekers are not so affiliated with this factor as Communication Seekers (mean difference: -.802, sig:.001). In terms of the second Factor "Communication", an important statistical correlation is identified only between the Information and Communication Seekers, with the latest being more affiliated (mean difference: .526 and sig: .005) than Information Seekers. Regarding the 3rd Factor "Information", Information Seekers show a more intense relationship (mean difference: .345 and sig: .002) than the Psychological& Operational Benefits Seekers and Communication Seekers (mean difference: 1.890, sig:.001). Furthermore, Psychological& Operational Benefits revealed a bigger relation with this factor than Communication Seekers (mean difference: 1. 545 and sig: .001). Finally, as for the 4th factor (Psychological Boost), Psychological &Operational Benefits Seekers have a bigger relation to this factor than the Information Seekers (mean difference: .597 and sig: .001), but lower than the Communication Seekers (mean difference: .617 and sig: .001).

Table 5: Post- hoc Tests Tukey HSD among all factors and clusters

Regr. Factor 1: Operational Benefits			
Cluster	**Comparison Cluster**	**Mean Difference**	**Sig.**
Psychological and operational benefits Seeker	Information Seekers	1,712	000
Psychological & operational benefit Seekers	Communication Seekers	910	000
Information Seekers	Communication Seekers	-,802	000
Regr. Factor 2: Communication			
Cluster	**Comparison Cluster**	**Mean Difference**	**Sig.**
Communication Seekers	Information Seekers	526	005
Communication Seekers	Psychological &operational benefit Seekers	284'	132
Information Seekers	Psychological &operational benefit Seekers	-,242	217
Regr. Factor 3: Information			
Cluster	**Comparison Cluster**	**Mean Difference**	**Sig.**
Information Seekers	Psychological &Operational Benefits Seekers	,345	002
Information Seekers	Communication Seekers	1,890	000

Psychological &Operational Benefits Seekers	Communication Seekers	1,545	000
Regr. Factor 4:Psychological Boost			
Cluster	**Comparison Cluster**	**Mean Difference**	**Sig.**
Psychological &Operational Benefits Seekers	Information Seekers	,597	000
Psychological &Operational Benefits Seekers	Communication Seekers	,617	000
Psychological &Operational Benefits Seekers	Information Seekers	,597	000

Examining the RQ3, whether or not significant differences are noticed among users types towards the Social Identity variable (Cronbach's Alpha 0.746 >0. 7) employing the ANOVA (Table 6, Table 7) and Post Hoc Tukey HSD Test (Table 7)statistically significant differences (sig: 0. 001< 0.05) are emerged only between the cluster of Communication Seekers and Operational & Psychological Benefits Seekers.

Table 6: Oneway ANOVA Descriptive & Test of Homogeneity of Variances between Clusters and Social Identity

ANOVA BETWEEN CLUSTERS & SOCIAL IDENTIY								
REGR, Clusters (I) for Social Identity (D)		N	Mean	Std. Deviation	Levene Statistic	df1	df2	Sig.
	1	73	26,973	6,416	2,918	2	267	0,056
	2	128	30,719	5,432				
	3	69	26,362	5,993				
	Total	270	28,593	6,178				

Table 7: ANOVA among Clusters (I) & Social Identity (D)

ANOVA AMONG CLUSTERS (I)& SOCIAL IDENTITY (D)						
ANOVA among clusters (i)& social identity (d)		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	1113,42	2	556,711	16,238	0,000
	Within Groups	9153,76	267	34,284		
	Total	10267,2	269			

Table 8: Post Hoc Test Tukey HSD, between Clusters - Social Identity

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.
1	2	-3,746[*]	0,85	0,001
	3	0,610	0,98	0,809
2	1	3,746[*]	0,85	0,001
	3	4,356[*]	0,87	0,001
3	1	-0,610	0,98	0,809
	2	-4,356[*]	0,87	0,001

According to the findings, social media affect more Operational& Psychological Benefits Seekers than Communication Seekers. Finally, Information Seekers are not identified socially through the social media use revealing the lowest correlation.

Conclusion

This study has identified three types of social media users according to demographics and behavioral patterns: the Information Seekers, the Operational &Psychological Benefits Seekers, and the Communication Seekers.

Information Seekers prefer primarily blogs rather than the other social media. Their second choice is Content Communities. Then, SNS and Virtual Worlds/ Games follow. These users visit blogs daily. Within other applications, they reported a passive and non- frequent use. Therefore, they have few accounts and few friends. ANOVA (one way) revealed no significant differences between these users and social identity. This result may be explained because these users surf on the Net for informational or instrumental reasons. The Information Seekers segment is consistent with Mathioudakis&Koudas (2011), Hsuan (2008), Constantinides et al. (2011) and Brandtzaeg&Heim (2011).

The cluster of Operational and Psychological Benefits Seekers includes the majority of users, distributed equally between men and women of 25-35 years old. Their basic incentive is the ease of use and all its advantages. Thus, they have numerous accounts and vast friends. Moreover, they log in social media both via mobile and via PC. Consequently, most of them firstly use SNS, secondly Content Communities, thirdly Blogs, and finally, Virtual Wolds/Games. The majority have the biggest number of accounts in each social media category (especially in the case of SNS, they usually have more than 2-3 accounts), more than 250 friends and they visit social media very

often. They perceived their participation through these communities as an important part of their social identity. This result may be explained by the popularity of SNS and the demographic profile of the users (young people). This cluster has a bigger correlation with the social identity. A possible explanation for this is that operational and psychological benefits are the main reason of use. This finding is identical to Aljukhadar& Senecal, (2010), Brandtzæg& Heim, (2011), Hsuan (2008) and Constantinides et al. (2011).

Finally, Communication Seekers use Social Media purely for communication purposes. Communication Seekers are young "content consumers" and perceive social media as a great communication medium. These patterns may partly be explained by the fact that they use Internet to communicate. Consequently, they have many friends and accounts. They prefer surfing SNS, Content Communities, Blogs and Virtual Worlds Games. Thus, they are habitual bloggers, average users of Content Communities, expert in SNS while they abstain from Games. Also, they do believe that their participation affect their social identity. Compared to the other clusters they usually log in via their mobiles, rather than their PCs. These results identified consistencies with Aljukhadar& Senecal, (2010), Brandtzæg &Heim (2011) and Constantinides, 2011.

Overall, this study consolidates previous findings and extends our current knowledge about the patterns of social media users. The research further shows significant differences between the emerged clusters and the factor of social identity. Hence, this typology provides meaningful insights to marketing practitioners addressing Wang's et al (2012) call for identification of users. Understanding users helps organizations to develop a customized strategy for launching successfully products in the social media arena.

Limitations & Further Research

During the research several limitations have to be considered. First, the limited bibliography within the segmentation of users in all Social Media categories was predictable given that each of 6 instruments has unique characteristics. Second, another important limitation was the absence of intercultural holistic study concerning the differences in use between Greek users and European users.

Beyond any doubt the marketing aspect of Social Media is a versatile field offering an enormous research potential. This research could be expanded by creating a more detailed segmentation of users by inserting complementary factors, namely psychographics criteria. Finally, a prosperous field would be this typology to be re-examined towards the variable of Word of Mouth.

References

Anderson, P. H. (2005). Relationship marketing and brand involvement of professionals through web-enhanced brand communities: The case of Coloplast. *Industrial Marketing Management, 34*, 285–297.

Assael Henry (2005). A demographic and psychographic profile of heavy Internet users and users by yype of Internet usage. *Journal of Advertising Research, 93*.

Aljukhadar M. and Senecal S. (2010). Segmenting the online consumer market. *Marketing Intelligence & Planning*, *29(4),* 421-435.

Aaltonen S., Kakderi C., Hausman V., Heinze A. (2013). Social media in Europe: lessons from an online survey. *Paper presented in 18th UKAIS Annual Conference: Social Information Systems*, 19-20 March 2013, Worcester College, Oxford, UK.

Barker V. (2009). Older adolescents' motivations for Social Network Site Use: The Influence of gender, group identity, and collective self-esteem. *Cyber Psychology & Behavior,* 2009, *12(2)*, 209-213.

Beemt, A.A.J. van den, Akkerman, S. & Simons, P.R.J. (2010). Patterns of interactive media use among contemporary youth. *Computers in Human Behavior, 26*, 1158-116.

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

Brandtzaeg P, Hertzberg B., Endestad E. & Torgersen L. (2007). Children's usage of media technologies and psychosocial factors, *New media & society*, *9 (3),* 425–454.

Brandtzæg P., Heim J. (2010) & Karahasanovic A. Understanding the new digital divide— A typology of Internet users in Europe. *International Journal of Human Computer Studies,* 123-138.

Brandtzæg, P.B., & Heim, J. (2011). A Typology of Social Networking Sites Users. *International Journal of Web Based Communities*, 7(1), 28-51.

Budak C., Agrawal D., Abbadi A. (2010). Where the Blogs tip: Connectors, mavens, salesmen and translators of the Blogosphere. I*n Proceedings of the First Workshop on Social Media Analytics (SOMA).*

Constantinides E., Maria del Carmen Alarcón del Amo & Carlota Lorenzo Romero (2011). Profiles of Social Networking Sites Users in the Netherlands, *Working Paper, University of Twente (Netherlands), University of Castilla- La Mancha (Spain)*.

Courtois C., Mechant P., De Marez L. & Verleye G. (2009). Gratifications and seeding behavior of online adolescents. *Journal of Computer-Mediated Communication, 15*,109–137.

Courtois C., Mechant P., Ostyn V & De Marez L(2011). Uploaders' definition of the networked public on YouTube and their feedback preferences: a multi-method approach. *Behavior & Information Technology*, 1–13.

Chung C., Chiou J. (2009). The effect of community identification on attitude and intention toward a blogging community. *Internet Research, 19 (4)*, 393-407.

Donath, J., & Ellison, B. (2004). Public displays of connection, *BT Technology Journal, 22 (4),* 71-82.

Ellison, 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,* 1143–1168.

Forysth J., Lavoie J. & McGuire T. (2000). The McKINSEY Quarterly- Segmenting the e- Market, http://mkqpreview1.qdweb.net/PDFDownload.aspx?ar=939.

Hoffman D. & Novak T. (2012). Potential of the social media as instruments of higher education marketing: a segmentation study. *Editorial, Journal of Interactive Marketing 26*, 69–70.

Hsuan T. (2008). Understanding content consumers and content creators in the Web 2.0 era: A case study of YouTube users, *Conference Paper Submitted to Communication and Technology Division 2008 Conference of the International Communication Association.*

Johnston K. & Parminder J. (1999). Internet as ''virtual cultural region'': are external cultural classification schemes appropriate? *Internet Research: Electronic Networking Applications and Policy, 9 (3), 178–186.*

Johnsson-Smaragdi, U. (2001). Media use styles among the Young, *In: S. Livingstone, & M. Bovill (eds.) Children and their Changing Media Environment: A European Comparative Study*. Hillsdale, NJ: Lawrence Erlbaum.

Kaplan A, Haenlein M. (2010). Users of The World, Unite! The challenges and opportunities of social media. *Business horizons, 53(1)*, 59-68.

Kalmus V., Runnel P & Siibak A. (2009). Mapping the Terrain of "Generation C'': Places and Practices of Online Content Creation Among Estonian Teenagers. *Journal of Computer-Mediated Communication 14,* 1257-1282.

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Ulilization of mass communication by the individual. In J. G. Blumler, & E. Katz (Eds.*), "The Uses of Mass Communications: Current Perspectives on Gratifications Research."* Beverly Hills: Sage.

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998).Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53* (9), 1017-1031.

Kozinets, R. (1999). E-tribalized marketing? The strategic implications of virtual communities of consumption. *European Management Journal, 17(3),* 252-264. Lazarsfeld, P.F., & Stanton, F. (1949). *Communication Research*. New York: Harper and Row.

Leimeister, J., Sidiras, P. and Krcmar, H. (2006). Exploring success factors of virtual communities: the perspectives of members and operators. *Journal of Organizational, Computing & Electronic Commerce, 16(3),* 279-300.

Mathioudakis M. & Koudas N. (2009). Efficient identification of starters and followers in social media, *ACM,* 708-719.

McKenna, Katelyn Y.A. & Bargh J. (2000). Plans from Cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review, 4*, 57-75.

Meyen M., Pfaff- Rüdiger S., Dudenhöffer K. & Huss J. (2011). The internet in everyday life: a typology of internet users. *Media, Culture & Society,* 873-882.

Miura A. & Yamashita K. (2007). Psychological and Social Influences on Blog Writing: An Online Survey of Blog Authors in Japan. *Journal of Computer-Mediated Communication 12,* 1452–1471.

Nair N. (2011). Understanding and Measuring the Value of Social Media. *The Journal of Korean Consumer Participation in Virtual Brand Communities in Social Network Sites, Journal of Global Marketing, 23*, 1-16.

Nielsen, J. (2006). Participation inequality: encouraging more users to contribute. Jakob Nielsen's Alertbox, 9 October 2006, available at http://www.nngroup.com/articles/participation-inequality/

Noort G., Voorveld A. & Reijmersdal A. (2012). Interactivity in brand web sites: cognitive, affective, and behavioral responses explained by consumers' online flow experience. *Journal of Interactive Marketing, 26,* 223–234.

OFCOM. (2008). Social networking, a quantitative and qualitative research report into attitudes, behavior and use. *Office of Communication, London.*

Papacharissi, Z. & Rubin, A.M. (2000). Predictors of Internet use. *Journal of Broadcasting and Electronic Media 44 (2),* 175-196.

Pérez-Latrel F., Tsourvakas G. (2013). Social Media: Managerial and economic opportunities and challenges, in (Ed.) Friedrichsen& Mühl-Benninghaus, <u>*Handbook of Social Media Management (*</u>pp. 201-216).Springer Berlin Heidelberg.

Siomkos G. (2004). *Strategic Marketing Management,* in Greek, (pp. 350-358) 2nd Edition Athens, Greece Stamoulis Publishing.

Sung, Y., Kim Y., Kwon O. & Moon J. (2010). An explorative study of Korean consumer participation in virtual brand communities in Social Network Sites. *Journal of Global Marketing, 23,* 1-16.

Statista (2014). Statistics and facts about social networks, http://www.statista.com/topics/1164/social-networks/ .

Stefanone M., Lackaff D. (2009). Reality television as a Model for online behavior: blogging, photo, and video sharing. *Journal of Computer-Mediated Communication 14*, 964–987.

Strickland M. (2013). Perfecting the over- done social media segmentation. Advances in validating cross- media segmentation. http://c.ymcdn.com/sites/www.casro.org/resource/collection/0A81BA94-3332-4135-97F6-6BE6F6CEF475/Paper_-_Margie_Strickland_-_Symphony_Advanced_Media.pdf.

 Threatt, S. F. (2009). Facebook and the ideal social marketplace: a study of the marketing benefits of social media practices. *A Thesis Presented to the Faculty of the Graduate School University of Southern California in partial fulfillment of the requirements for the degree master of arts (Strategic Public Relations), August 2009.* Turkle, S. (1995). Life on the Screen: Identity in the age of the Internet, New York, NY: Touchstone.

Valenzuela S., Park N. & Kee K. (2006). 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,* 875–901.

Valkenburg, P. M., Peter, J., and Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self esteem. *CyberPsychology & Behavior, 9(5)*, 584.

Vorvoreanu, M.(2009). Perceptions of corporations on Facebook: An analysis of Facebook social norms. *Journal of New Communications Research, 5(1)*, 67-86.

Urista M., Dong Q. & Day K. (2007). Explaining why young adults use MySpace and Facebook through Uses and Gratifications theory. *Human Communication*, 215-229.

Utz S. (2010). Show me your friends and I will tell you what type of person you are: How one's profile, number of friends, and type of friends influence impression formation on social network sites. *Journal of Computer-Mediated Communication 15,* 314–335.

Wang X., Yu C. & Wie Y. (2012). Social media peer communication and impacts on purchase intentions: A consumer socialization framework. *Journal of Interactive Marketing 26*, 198–208.

Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research, 23*, 3–43.
Contact email: zoibelenioti@gmail.com/zbele@jour.auth.gr