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## STUDY THE EXPERIENCE OF APPLYING ETHNOGRAPHIC RESEARCH METHOD IN ANALYZING USER BEHAVIOR IN SOCIAL NETWORKS

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### ABSTRACT

*New human societies in the ICT-based ecosystems makes new concepts such as social networking and the second life. It seems that the usual analyzes that using network analysis software, by reducing the social action to quantitative data, cannot analysis complexities and context of human behavior. However, the origin of social networking sites should be considered a scientific computer but it seems that we also need to study the social concept of social networking sites in the subset of social communication science, because of changing the nature of the media in new world. In this paper, we try to study the ethnographic capacity, as one of the qualitative methods, for analyzing social networks and applied researches in the field of social networks.*

**Keywords:** *Ethnography, Social Network Analysis, Social Media, Qualitative Method, Interpretation, Data Mining.*

### INTRODUCTION

The usual and common literature of social network analysis as a paradigm, which is referred to as a key method in modern sociology (NN, 2011), is that “the analysis of social networks represents social relations in network theory which consist of nodes (indicating individual actors within the network) and relationships (representing relationships between individuals, such as friendship, kinship, organizational status, etc.). These networks are often found in the social network diagram in which the nodes are represented with dots and relationships are represented with lines (Oftade, 2015, 17). The network consists of connections that has a regular and non-random distribution. (Barabási, 2013) The research carried out in this way has mainly been conducted in the field of technical disciplines and engineering, and its entry into the field of human sciences is a new phenomenon. (Noghani, Sadeghi Nejad, 2014, 3).

Social networks analysis which is considered as a modern social tool since the first half of the twentieth century, and emphasizes on the analysis of the structure of relations between social actors is based on four main characteristics; it emphasizes the relationships between actors and their characteristics; it is based on Systematic data gathering; it uses graphics and it uses mathematical and computational tools to understand information (Freeman, 2004).

Data analysis in social networks due to the broad functions it has in various sciences from sociology to microbiology and neuroscience (Denny, 2014) and its roots goes back to

sociometrist and its first application in 1934 by Moreno (Monero, 1934); after a periodic interruption, it was noticed again in the late 20th century (Friemel, 2007). Currently, the analysis of social networking data is based on opinion polls and taste polls, and it has been, and it is today the interest of economic marketing and advertising and business propagandists. For example, when a producer intends to distribute or produce a product for a targeted society, his success depends largely on his knowledge of the taste and the needs of the target community.

Nowadays, “the concept of social networks in the context of the largest contemporary human communication network became closer to applied approach” (Shokrkah, 2015), therefore, it seems that with the increase of virtual and social networks of all social activities of societies, the analysis of the behavior and taste of the audience in social networks more likely match the tastes of the entire audience, and thus advertising based on the data of these networks will be more effective. The data produced by the users contain valuable information that helps to better target advertising (Singh et al., 2014).

Identifying the status of politicians' acceptance, conducting scientific and research services, election taste polls, identifying and tracking money laundering and terrorism, and assessing public opinion prior to large-scale decision-making are other forms of social network analysis. Therefore, social network analysis has a wide-ranging function in anthropology, economics, biology, information sciences, organizational studies, geography, and psychology (Oftade, 2015, 26).

Information on social networks can generally be classified in two general categories; first, the data that are inherently quantitative; the existence or non-existence of relationships with users; the interests such as favorite artists and athletes that the user points them him/herself; favorite art styles; religious and political interests that the user has directly and clearly expressed in the network are examples of this type; the classification and analysis of such data is much easier than the second type.

The second category of information is qualitative data such as the behavior and taste of the audience. It seems that marketing services based on theses are likely possible through the quantitative and inverse analysis of behavioral symbols with the help of psychologists and sociologists. In fact, part of the social network analysis function is the structure analyzes of relationships on other social phenomena (Butts, 2008).

As a result, the social network analyst paves the way for social network analysis with the aggregation of quantitative and qualitative data which are converted into quantitative symbols. The production of big data which is formed from the aggregation of the data of individual identities, becomes transpersonal and categorized identities. The first step is in analyzing social networks; although the use and analysis of personal data in security and justice areas are extremely important, in the areas of marketing and advertising, data classification and the formation of identities are collective and cumulative which has great value in the data mining process; Indeed, ‘the focus of social network analysis is among and not between people’ (Oftade, 2015, 28).

The route to domestication of such services in our country is closed or expensive and time consuming due to the wide variety of reasons, and therefore we should consider alternative short term, low cost and less technology dependent methods; if we are to be the recipient of the service, marketing and advertising services based on the analysis of social networking data are available as consultancy services, but it is unlikely to be able to depend on it as a stable and reliable source.



Limited quantitative approaches for analyzing the content of social networks are primarily property-related; the predominantly Western ownership of these networks will give the ability to collect all the data released on the network only to the super owners of social networks and the governing bodies of the host countries. The security and user designs of many social networks do not even allow limited, subject-based, location-based data collection capabilities to data collection engines.

In addition, providing such services are highly dependent on technical ability in storage, aggregation, architecture and data processing; moreover, the transformation of qualitative data into quantitative data, the creation of a logical relationship, the design of warning and instant evaluation systems depend on deep and extensive research in the field of human ethology.

In addition to the above technical limitations, it seems that the methods in the analysis of social networks are subject to inherent constraints; the process of data distribution and networking in the context of virtual social networks, contrary to real social networks, don't have a normal distribution (Givian, 2010). Human relationships in the real environments are the results of natural biology and network communications over time that has a very gradual and networked development, but the creation of human relationships or, more correctly, social capital in the virtual social network is highly influenced by designing and managing relationships in the Social Network.

While accepting the fact that formation of friendships in these networks is largely dependent on the real relationships and the development of these relationships like real environments is through friends of friends, it seems that features like searching, network suggestions as well as managing circles and creating closed loops by the network management, take out the normal distribution of data and takes it into managed distribution; this is why it claim that 'social networks and many other networks are neither regularized nor randomized, but with a little bit of randomness they are completely regulated' (Noghani, Sadeghi Nejad, 2014, 9); Therefore, data analysis in random sampling seems to be extremely fragile and inaccurate. Reuters's Revealing report in 2014 report on the juggling of seven hundred thousand Facebook users to conduct psychological research is just one example of manipulating network management on user relationships and data. In fact, the frequent use of communication technology has not made us face a heterogeneous and network-like society, but it has become a network which is a social substitute that takes the shape of a society (Wittel, 2001).

In addition, much emphasis on nodes and the relationships between them in quantitative analysis of social networks brings to mind the concept that in these analyzes, the existence or non-existence, extent and distribution of high-quality communication, and the quality of communication are not so important.

Therefore, considering all of the above limitations, the main issue in this paper for examining ethnographic capacities in social networks is that usual methods based on quantitative data seems to separate phenomena and social actions in social networks from their context, and in addition to de-contextualization of social actions, it is trying to reduce it to digitalized data, and this process may not have the ability to understand the semantic complexity of social actions in the networks.



## RESEARCH METHODS

The present study has been developed and published using library studies and a combination of findings with the researcher's experience from the use of ethnographic methods in the study of social networks. The written experiences of the researcher in the present article had been obtained with the aim of identifying and classifying the interests, needs and benefits of social media users.

The present research is the researcher's contribution to using the ethnographic method in analyzing the behavior of social network users over a period of almost two years, and observed participation of about 16,000 hours in various social networks to measure the interests and needs of Iranian users in social networks.

## RESEARCH LITERATURE

### *Social Networks*

Scholars use the concept of social network to explain the complex set of relationships among individuals in the community and use it to analyze and understand the individual's behavior in the community. Social networks are structures of social relations, which stand in the opposite of the herd which refers to a group of people who have formless and herding relationship. Since in recent years' cyber creation has made it possible to form communities and relationships among individuals on the platform of cyberspace, this concept has entered into the concepts of this field (Saeed, 2015).

So far, there are various definitions of social networks that often emphasize the simple concepts and features of social networking websites; dating, diary publishing, entertainment content, profiling, etc. are the main features that define social networks (Wu & Other, 2010); social network is an environment that users create profiles and display them in order to represent themselves and to influence (Taghipour and Zamani, 2017, 31); they form relationships with acquaintances and strangers and publish content that they have produced. Individuals on social networking websites are not only seeking networking and meet strangers, but they also organize communication with the acquaintances they already associated with (Boyd and Ellison, 2007).

The social network is an action based on requirement; it is a hub for like-minded people with common interests and goals who make their communication in a community. The core of the social networking is dialogue, and relationships are formed on such basis. Social networks have meta-narratives like story structure, which is a standardized narrative based on a format, and the self-representation of individuals in these networks is based on the same narratives of networks and in dialogue with other members of the network. The social network is a pre-established cultural identity template in the representation framework, and feeding information into the social network happens from within the same templates; and whether you like it or not, this is the rule of the game in social networks: accept the template or otherwise be excluded (Shokrkhan, 2013).

The social network is a place for social media activities; in fact, the researcher's definition for social network is that the social network is the crystalized objectivity and perfect form of social media concept that consists of network-like features that have a capacity which almost make it impossible to have any activity other than social media in its context. Of course, the purpose for mentioning this, is that the users who deliberately try be unilateral media on social networks,



such as celebrities who have chosen the network space to say, and not to hear, and not to see the interests of their audience and in a word not to have a dialogue.

It should be noted that, as the Webster and Oxford Dictionaries explain in the definition of social network, the social network is concerned with personal and work relationships between individuals and has been used from the past in social sciences and urban studies; what is commonly used among scholars and general population for social network, in fact, expresses the concept of social networking sites that are also used in this research.

Mathematically, the social network is a graph in which each participant is called actor in the network and he/she is displayed with a node in the network. Actors can be human beings, organizations, groups, or any other set of related entities. Communication between actors are displayed by the link between the corresponding nodes. The social network analysis process generally involves the use of questionnaires, interviews and observations as a tool for data collection on communications between actors in the network.” (Sepehri, Riahi, 2010, 85)

A social network is a social structure that consist of individual or organizational nodes that connects one or more specific types of relationships such as financial affairs, friendships, kinship, web links, or like a contagious disease. (Tollaie et al., 2017)

Of course, it should be noted that the process of social interaction under Web 2.0, goes toward the creation, communication and exchange of information; a topic that can be referred to as movement toward creation of a semantic social network and semantic web (Ereteo, Gandon, Buffa, n.d), Therefore, the concept of social network analysis may in the near future change its concept of analyzing a social network platform to a social web.

Today, “the concept of social networking is approaching in an applicable way to the largest contemporary human communication network” (Sokrkah, 2015), in a way that with the increase of virtual communities of all social activities of societies, it seems analyzing the behavior and taste of the audience in social networks will be more consistent with the overall taste of the audience, and therefore advertising based on these networks will be more effective.

The usual and common literature of social network analysis is that “social network analysis represents social relationships in network theory that consists of nodes (representing individual actors in the network) and relationships (representing relationships between individuals such as friendship, kinship, organizational status, etc.)” These networks are often found in the social networking diagram, in which nodes are represented by dots and relationships are represented with lines.” (Oftade, 2015, 17) The research with the aid of the method is mainly conducted in the field of technology and engineering, and its entry into the field of human sciences is fairly a new phenomenon (Noghani, Sadeghi Nejad, 2014, 3).

## RESEARCH FINDINGS

### *Social networking and network communities*

Although examining the cultural and social dimensions of technology and technology based-tools are not emerging approaches to technology, with the emergence and expansion of cyberspace as a technology-based environment and its social perception as a technical platform for human bio-sociology, it can open a new window to see this highly challenged category of the present century in a new light.

Howard Ringld used the term “virtual society” for the first time in 1994 to describe an electronic society that collects people based on their common interests and benefits (Hoppmann, N.D).



Afterwards, the concept of network society and information communities that Castells sees as the result of the information and communication revolution, can also be the foundation of this societal approach to technological developments in information and communication. Castells' belief in the fact that today's human society resides in the third era of our history, that is the age of information, also helps this point that we are basically confronted with a society whose networks form its social appearances. (Castells, 2001, 543) A few years later from the presentation of the concept of the network community in 2001, Castells in the Internet galaxy introduced the Internet as expansion of life in all its dimensions in terms of its users' participation (Bell, 2011, 129), and Salter refers to it as "social fabrication" (Salter, 2004, 135). In fact, we are faced with a human ecology based on net which can be described with concepts like neighborhoods or netvilles (Hampton & Wellman, 2003).

Castells goes even further and describes the society's relationship with information technology and considers technology as the community itself (Castells, 2001, 32). A society that is the result of the information revolution and the expansion of networks, and he calls is the "virtual society". Castells divided virtual societies into two groups that have different lives, a small minority living in the electronics realm that he named electronic villagers, and another group that explores networks as "random attacks" (Castells, 2001, 420); a subject that can be used to move towards strengthening social relations (Vivian & Sudweeks, 2003).

In describing these two groups, it seems that we can analyze in this way that Castells' first intention for creating "network society", is a society to which networks are embedded and transformed their social structure, but Castells by creating the concept of "electronic villagers", in fact talks about a community in which its relationship with networks and cyberspace is not just embedded but rather infrastructural. It seems that the second term, in which the concept of the Castells' network community is transiently expressed, is an ecological network for social interactions of network communities; a concept that in the last years of the twentieth century, which Castells deals with the concept of a networked society, it is not tangible with the advent of social networks today; Although it is evident that the concept of Castells' networked community is a much broader concept than social networks.

Later, Castells refers to the creation of the concept of "self-communication mass" based on internet social networks, refers to them as a new social structure in the center of a network societies that shapes social movements of the twenty-first century (Castells, 2014, 185 and 186). In spite of this perspective, the socio-technical approach to information and communication technology also provides ground functions such as changing communal relation patterns and it has a relationship with the cultural and social context, and he believes that information and communication technologies include contexts, environmental conditions and complex cultural and social context (Ibrahim Abadi, 2013, 90).

Therefore, according to Castells' information revolution, it seems that we are faced with a post-revolutionary society, and in order to discover a society that facing the dynamic conditions of a revolution within a revolution, we must move with it and feel it. one of the options for real analysis and exploration of complex social cumulative behavior and social interactions of a particular or ethnically confined society, is the ethnographic method. Obviously, in order to understand the human society based on the technologies of the age of information and communication, we highly need to find out the qualities and circumstances in structures and



social contexts of that society; a matter which seems to be beyond the power of purely quantitative methods and analysis of network relations.

By loyalty to this sociological perspective towards cyberspace, it can be argued that the threats of social networks to interactive media is an inadequate and insufficient definition. Social networks which can be considered as the emergence of social action and the formation of social societies on the basis of information technology, are human environments that comprehending them can be similar to human societies.

Although Habermas's public domain has democratic origins and is defined in the field of political science, it seems that the social impressions of social networks are close to the general public topic that Habermas addresses and emphasizes to the extent that Hollab believes that the public sphere of Habermas is shaped by the dialogue and negotiation of citizens about public issues and not by government issues but with cultural affairs (Holab, 1996, 26).

Part of the present public sphere, which is influenced by the socioeconomic conditions of modern societies and human struggle for living, is thus manifested in the context of technology and in the form of social media, and the public sphere of Habermas which is a social community for conflicting of public ideas, gossiping, criticism and sharing of political concepts between ordinary people and an opportunity for citizens communication and discourse to enhance and promote political choice when combined with the requirements of today's lifestyle, manifests as functions of social networking.

Considering social networks as a manifestation of the Huberman public sphere faces criticism; for example, in a research entitled "Public domain and dialogue in the cyberspace of virtual social networks" concludes that although the promotion of the possibility of communicating and trading information in virtual social networks makes it possible for dialogues, but is also limiting it and confounding. (Yazd khasti et al., 2013, 90).

#### *Objective-oriented cognitive approaches to social network analysis*

In the struggle of the twentieth century, which paved the way for a modern quantitative and numerical measures, and presented all scientific endeavors in the form of the natural sciences, the emergence and expansion of qualitative approaches based on interpretive reception and perception began a competitive method in the human sciences; which so far, the competition at a higher level can also be analyzed in the form of subjectivity and objectivity.

In an objective-oriented approach to science, which does not make a clear distinction between natural sciences and the social sciences, the researcher inevitably has to find a consistent and uniform way for universal and inclusive measuring and issuing scientific findings, and in many cases it does not accept the complexity of human actions and social phenomena so that Popper Bard believes that the inability of quantitative methods in analyzing complexities of the social sciences is less complex than the natural sciences (Kachuyian, Fuladian, 2007, 44); while Max Weber on the opposite side in explaining the complexity of social realities believes that the description of the smallest parts of reality cannot be complete, because the factors affecting it are infinite, and each new finding uncovers a few minor contributions which we can never comprehensively state them all in a ruling (Weber, 2008, 124). Weber, while pointing out the absurdity of cultural event analysis (Weber, 2008, 127), even considers comprehensive research on any phenomenon which expresses the reality of that phenomenon to be senseless and believes that acquiring knowledge of causal laws is the mean of research rather than its purpose (Weber, 2008, 125).



But the qualitative approach by giving authenticity to the perspective and understanding the human case for research, believes that in order to find the true cause of events, one should try to understand human subject from the phenomenon and its interpretation and meaning to the phenomenon. In fact, in the face of the subjective epistemology, reality is not something that meets the narrow scales of natural science, but they search for reality beyond what meets the eyes of humans as an effective factor and in the meanings of phenomena.

In the beginning, it may be doubtful to describe the confrontation between subjectivity and objectivity and social networks; it should be explained that, as further explained, essentially the researcher's perception of network relations and user interaction in the network is strongly influenced by the researcher's cognitive basis which is seriously manifested in the methodology of social network researcher; so that it can be assumed that objective-oriented epistemology of network relations are represented in graphs and network diagrams, while subjectivists interpret the network relations and the interpretation and the meaning the users themselves give to their relations and the network. A qualitative researcher attempts to discover the user's own interpretation and meaning of network behavior; it seeks to find the user's understanding of likes and comments, a concept that its roots can be found in Max Weber understanding approach.

For example, when a researcher seeks to describe emotional relationships between users, the interpretation of the concept of user generated content based on the researcher's knowledge and understanding may introduce results differently from the user's own understanding. The researcher should seek to discover the meaning that the user him/herself gives to the content, that is, "the observer's effort to find the meaning for social interaction, through an empathic link with the actor." (Alsty, 2013). Therefore, in the absence of researcher's access to such understanding, the relationships that represent a meaning for the researcher perhaps would be different in the mind of the user; the origin of this difference is the epistemological differences and the difference in the value system of the researcher and the user.

The launch of qualitative efforts that arose in the form of ethnographic trips by Western sociologists and anthropologists to African and Asian societies, was suddenly created a fundamental doubt regarding anthropological methods which became known as the crisis of representativeness (Hatch, 2014, 100); critics believed that it was not possible to sit arbitrarily in the position of an observer, and the researcher observes the community, and watch the phenomenon and draw conclusions about it.

"There is a well-known photo that reflects this concept beautifully. This image depicts a group of native people who lined up outside the tent of an anthropologist. They are watching Bronislaw Malinowski, one of the founders of cultural anthropology who was typing his field notes. Malinowski was so fascinated by the task of registering his observations about the natives, that was unaware of them watching him (observing him). The photo questions the modernist view of anthropology by transforming the relationship between the observer and the observee, and by such means, it shows cultural natives are cultural, real cultural experts." (ibid)

Therefore, it seems that despite the emphasis on the extensive performance of statistical analyzes on social networks for the discovery of deep knowledge and perception of the complexity of the network, it is highly necessary to represent the "representation revolution" in social networks. On a larger scale, our confrontation with Internet is, in fact, in such a way that we are faced



with a phenomenon that is constantly changing, and we need qualitative research in order to recognize it (Postill & Pink, 2012).

Anthropology relies on the paradigm of subjectivism, which produces qualitative research methods and it seeks to give authenticity to human beings as the actors and creator of the social phenomenon, and acknowledges his understanding as the cohesion of the social fabric. If, it seeks the meaning of women covering in a society, this is a self-driven interpretation which interpret covering and give meaning to it, and the researcher does not seek to generalize and impose his perception of social action on the actor.

In a qualitative approach, the researcher, as a component that is no longer considered disturbing research activity, needs to kneel to the human phenomenon and try to understand and learn from human societies and human behaviors (Guivian, 2010). The researcher must blend with the phenomenon and live with it; he/she must accept that the phenomenon is not only what he/she understands but the phenomenon is what the human before him understands, interprets, and give meaning. In this approach, we want to be part of the community in understanding the quality of social relationships and understand the relationship along with feelings. We are actually trying to analyze the events through the community search (Postill & Pink, 2012).

Developing this notion from researcher's point of view regarding research on social networks is that the researcher considers a learner and detector position and instead of interpreting network relationships in the form of graphs, he/she tries to discover and understand the user's social behavior in social networks.

What has made the qualitative method more functional as a new method in the field of human science's research of the present day is the relatively rapid changes in modern social structures which has led these societies to the complexity and diversity of the human worlds; and this complexity and interconnected relationships are the cause of the expansion and diversity of socially influential components. Therefore, the complete discovery of social relations in these other societies is not possible in the form of theoretical models and abstract tests.

Social networks can be considered as a whole and complete proof of this complexity in the community; for discovering complex social phenomena, we have to use quantitative methods, or simplify them to the level of quantitative and mathematical rules or move complex social phenomena into isolated direction causality of mechanical perspective.

The qualitative method of research, instead of reducing the phenomenon to isolated and quantitative variables, and attempts to remove the phenomenon artificially and experimentally, it tries to remove the researcher from the work place and take him to the context of the current phenomenon in social fabric formed in the bed of social networks. Consequently, the field of study in the qualitative research is not the artificial situations in the laboratory, but it is the interaction and action of the studied phenomenon. (Flick, 2009, 16). It seems that analyzing the content of posts and comments, regardless of the context of life, is the same position of laboratory and artificial situation. The ecological context in the social network is the user's world' in fact, the researcher must know that the user's world is different from the world of the network. the researcher must try to reach the user's environment similar to his target community. The space of the target community is the content that the user faces and immerses in it. The content forms the world of the user and the people who are exposed to them; people and pages that the user follows form the social architecture of the environment in which the user lives. The first job of a researcher is to understand this world and try to reach it. The way to reach this common world



is to interact with the long-term life of user in user's space. In time, the influential people, the circles, rituals, relationships, and goals of the target communities reveal themselves to the researcher. Virtual ethnography is not simply a virtual experience, but it should be accompanied by a connection to the material world and living in the ethnographic context and through the acceptance of good faith (Postill & Pink, 2012).

Real knowledge is the result of long immersion and extensive discussions in real social environments. The sincere familiarity with the performances and the meaning of social action to properly explain the subject is a research imperative. (Lindelph, Taylor, 2009, 44). The researcher must be careful that the fictitious identities and any factor that makes his identity artificial and abnormal are major obstacles for being accepted by the target community.

The term "participatory observation", which is used frequently in a qualitative way, means that researchers who use this technique are contributing members of a culture, group, or environment, and typically accept roles that are considered appropriate and safe for the members (Lindelph, Taylor, 2009, 36).

By adding himself to the environment, the researcher tries to make himself part of the group, so that other members feel conjugated with him and provide more informative information, he also gets closer to what the members of the group think and perceive. The researcher tries to fit himself as a familiar member and attempts to reduce his noise as a researcher as much as possible. The success of collaborative observation depends on the researchers' use of their cognitive and emotional responses to other people and their reflection on those responses (Lindelph, Taylor, 2009, 37).

One of the main differences in quantitative and qualitative research methodology is that in the qualitative research, the goal is not to reduce complexity by decomposing the problem into several variables, but the goal is to increase the complexity by adding contextual information to the analysis (Flick, 108, 2009).

Qualitative researchers are essentially seeking to preserve and analyze the form and content of social action that is tied to situations and to escape from being placed in mathematical and formal forms (Lindelph, Taylor, 52, 2009).

Finally, the element that should be considered in order to better understand the concept and function of the qualitative research method in network is the lack of efforts of qualitative researchers to generalize their research data. Clearly, qualitative research contrary to quantitative method does not attempt to use research data for deductive or inductive conclusion, but qualitative research attempts to describe the phenomenon itself, its social context, elements, and relationships with phenomena, regardless of the generalizability and valuation of research data.

### *Ethnography in social networks*

In any research that is categorized in the social sciences, and especially in communications science, the researcher inevitably has to deal with cultural dimensions of a society and tries to explain it, describe it or analyze it. Ethnography, in order to achieve one or more components in the culture of society, provides a way for describing the objective of that community and the attitudes of individuals brings the culture to the researcher. It sends the researcher to the community in order not only to describe what he has seen, but also to recognize and understand the knowledge that people believe in and act based on the deepening of that knowledge. In fact, ethnography is not just a researcher's statement about the behavior of individuals, but the



researcher must have intellectual thought and reasoning so that his behavior is achieved. In simpler terms, the researcher in ethnography, not only sees the community as a scholarly spectacle, but also seeks to see the people beyond their visions.

Thus, the scholar does not apply his opinion to people and their actions, and describes what is. To understand the culture, we need description and description is the objective presentation of the facts about society, the organizational structure of society, the laws, customs and common beliefs from the cultural point of view and the interests of an observer (Spreadley, Kurdy, 2007, 27).

The achievement of such a description is not realized unless the researcher approaches the community by understanding cultural and social conditions and then reaching out to the social behaviors of that society. Ethnography is usually a universal description of the members of a culture and the links between them; a description tries to express the most important and immaterial aspects of a culture.

Internet or online ethnography, to which Kozinets refers to as Netnography (Kozinets, 2010), does not necessarily need to travel to the study field, it's actually a kind of trip to a tribe centered around a media. In fact, we are choosing to travel to an online community (Postill & Pink, 2012). Although it seems that there is no precise boundary between offline life and second life or online life; that is many users bring what they value and define to online space from their own cultural environment. (Kozinets, 2010). Digital or online ethnography does not mean using special techniques such as interview and observation, but it refers to an approach to the study digital culture with specific epistemological characteristics (Varis, 2014, 2).

#### *Limitations of content analysis of messages on social networks as a community based on virtual ecosystem*

Although analyzing the content of exchanged messages and targeted sampling in social networks are considered as a qualitative method, and despite the undeniable benefits, it seems to somehow lead to a separation of the message from the context of the social networking community. The author believes that the analysis of communication messages in social networks is a kind of effort from a media perspective to social networks; in a media perspective of social networks, these networks have been considered as interactive forms of past media, which in addition to interaction, it provides the possibility of publishing picture and sound; Media seem to be the only function of social networking functions as one of the cyberspace manifestations of the ecosystem. Obviously, contrary to media perception of social networks, when we try to consider social networks as a community based on the information technology ecosystem, and like Shokrkhah we maintain a "culture" for it (Shokrkhah, 2008, 45), content analysis of messages in social networks will be the reduction of this community to the space of exchanged messages. In ethnographers' perspective towards social networks, the message in the network is regarded as a social action in a social space influenced by its context and habitat, which strongly needs the understanding and perception of the virtual community; the concept of a secondlife or another life believes in the existence of age, character, the social and economic class similar to real life (Ghobadi, 2012, 22). The same impression of cyberspace has been formed and developed.

On the other hand, even if we consider media view of social networking to analyze the content of exchanged messages in the data mining framework, the analysis of the content will not transmit much information. The field of publishing message, the communication channel, and most importantly the message recipient, are excluded from the analysis of social networks in this



approach. According to the receiving paradigm of Stewart Hall, which includes a transition from a technical approach to the semiotic approach regarding messages, messages are not considered as a message-carrying capsule that the sender throws for the receiver and the receiver receives it passively. Based on this approach, the message is not what the sender sends, but rather it is what the receiver receives and interprets based on the “systems of representation of concepts and signs” (Givian, sarvary Zargar, 2009). The message is transmitted by the producer and then interpreted by the recipients according to the system of values, attitudes and beliefs, and the “socio-cultural framework governing the creators of the messages” (Mohseniyan Rad, 1990, 325). “The meanings that appear in me or you at any moment are the results of interpreting and discovering our subjects and our environment,” says Mohsenian-rad, quoting by Bern Lland. (Mohseniyan Rad, 1990, 326), the same is true for the sender of the message; there is no guarantee that the analysis of the issued message by the researcher as the third person corresponds with the intention and the interpretation of message generator.

In addition, the effects of the messaging environment as well as the transmission channel should also be added to the process of receiving and processing messages; therefore, it seems that isolation of the message and analyzing it as a researcher, regardless of its meaning by the parties of exchange, does not consider a major part of the value of the message.

#### *The application of ethnography in the analysis of social networks*

This article seeks to demonstrate how ethnographic method as one of the qualitative methods can be effective in the study and analysis of social networks; Although the writings of Noghani and Sadeghnejad, quoted by Scott and Carrington, claim that the Department of Anthropology at the University of Manchester in their study of analysis of social networks focused on describing the characteristics of the structure of tribal associations (Noghani, Sadeghi Nejad, 2014, 3).

When we accept that we are facing online societies, and human conditions and collective actions prevail over these societies, in order to find complexities and discover relationships and meaning in relationships, we need methods to describe and try to utilizes the human complexity of the researcher for perception and comprehension of social networking. Indeed, what make the researcher to focus on the ethnography of social networks and the complexities of human relationships and giving descriptions are these complexities. By complexities mentioned above, we mean not only complex relationships but also the complexity of the factors affecting the communication, production and dissemination of the message and how to create a social circle, and the dynamics and social movements in these networks.

The use of ethnography in analyzing social networks does not mean the discovery of the existence of a relationship or draw a network of relationships with even showing of production and dissemination trends; it is apparent that quantitative methods that follow data analysis on social networks are well able to provide such information on social networks.

#### *Methodological codes in ethnographic social networks*

Researcher's findings with the use of experience of utilizing the ethnographic method in research to gauge the interests and needs of users in social media provide the following tips and codes for other researchers.

1. **Goal Setting** - The researcher must first understand that the world of social networks consists of large and small nations and countries, it must be specified exactly which society is targeted or what concepts are sought. If he seeks to discover the social action of



a specific group or community, his work would be easier, but if he seeks a conceptual discovery, he or she will need to drown in the network in order to find the meaning among the circles and groups.

2. **The possibility of the impact of the history of relationships** - The researcher should note that he is trying to shape his network upon entering the network management based on the information he enters. If he/she use an email to register that has already been used, analyze the data from that email and the people associated with it, this information is the basis for the network's suggestions. The researcher should try to use the newly created email and provide the information that the network provides for research purposes.
3. **Attempt for natural behavior** - The researcher should try to behave naturally; management of many networks such as Facebook, guesses the fake user through behavior analysis, and may block his account or attempt to restrict the activity by gaining information. Therefore, if the researcher follows a particular topic or specific people, he/she should avoid adding them quickly and consistently; also avoid just viewing and not contributing to the content creation process, such as posting and commenting, and sharing; The researcher must try to shape his social capital overtime and with patience.
4. **Not limiting to the relationship circle** - The depth of the researcher in the network is very a sensitive and accurate matter. The user must, on one hand, live in the target community and determine what it is that he is looking for, and on the other hand, he/she must be careful not to be caught in the created circles.
5. **Attempt for being accepted in the targeted community** - finding a target community and being accepting by that community through creation of temporary and fictitious identities in the form of fixed accounts is not possible; this does not mean that the researcher must enter with real name, but it means he/she must try to be accepted. The choice for profile names and pictures have very important role in being accepted; at least actual and true use of the images in the profile plays an important role.

In many qualitative ways, this phenomenon with all its natural attributes pave the way for researcher to get to the questions and the unknowns. In this method, the researcher does not enter research with preconceived assumptions and the tested theories, rather he goes through the phenomenon and understands it, and uses theories to analyze his own perceptions, or even invent theories through his empirical discovery.

Instead of taking a step based on a pre-designed model and map, he/she dives into a phenomenon and, based on his experimental revelations, plans the next steps. Instead of following the pre-tested models and extracting past experiences, he, himself experiences, discovers, plans, theorizes, and eventually creates what he has understood.

6. **Attempt for becoming a member** - A researcher should try to be part of an element, network or a group that he wants to investigate or at least try to resemble its members, so he may understand how they perceive, how they see and how they behave. The method of qualitative research by understanding that the researcher needs to choose in order to see, hear, focus, think and analyze phenomena, accepts and recognized such effect. Ethnography in social networks should pay attention that an important part of the process of accepting and becoming a member of the community is interaction and activity in the group. If the researcher suspects that monitoring and collecting data in the context of the network is his main activity, then the fate of failure is unlikely to be



realized. The researcher should know that he has lived naturally in network in order to be accepted. Writes, ask questions, make comments, likes and, in a literal way, increase his/her social capital by living naturally.

7. **The attempt to increase social capital** - The social capital of a user in social networks is created and developed through mutual activity and existence, social interaction and the creation of a sense of trust and social credibility; the more the researcher increases and develops this capital, the likelihood of his success in developing a successful report in the field of ethnography will be further enhanced.

The number of followers, re-sharing, likes, and the ability to create social waves and content trends are among the main components of social capital in social networks; clearly, production of content and engagement with other users is crucial in the creation of this capital.

8. **The use of informants** - It should be noted that in most cases the search for informants on media with high social capital in the network shorten the analysis path of the ethnographer researcher; informants of social networks are old, effective, and direct users; those who can trigger the reaction of others, their sayings have feedback, create a context for discussions and spark the trends; the use of statistical analyzes and network relations graphs can be very effective in obtaining these informants; interviewing informants or their participation in the final report can be an effective method to collect information.



## CONCLUSION

Let's assume that a researcher wants to ethnograph the community of another nation, he faces problems such as language, culture and customs. Researcher must understand what his targeted community say, become familiar with the terms and slangs and understand the situation, but this is just the first step; the second step is that the researcher needs to be accepted in order to achieve real and natural behavior, or to minimize the impact of the "stranger". As already mentioned, ethnographer is not just an observer, but he is an actor and a contributor. The researcher, like a ping-pong player, must have a reciprocal behavior with the subject of study, understand the "why" of community behavior, understand the semantics of individual and collective words and actions, and wait for feedback for his behavior.

When we talk about a second life or a virtual ecosystem, and we regard social networks as a sign of it, we prescribe that the researcher must live, socialize, and live in this habitat. Like the tribe that he traveled for exploration, he must rotate in the virtual tribes and become like them. He should not think that he only needs to analyze others and their messages; To discover a complete understanding, he must live in the culture, mingle in order to understand; must become one with the society; he must be accepted by his existence and his naturalness, and in the context of his time; he must dissolve and digested in the virtual society in order to understand and describe the complexity of behaviors, relationships, and processes. A true society, with all its solidity and gradual movement and its long-term change, forcing the researcher to survive for some time; obviously one must live in a virtual society with all its essence of fluidity and rapid changes and of its identity; one must blend with its users and their culture in order to achieve an approximate and appropriate understanding of it.

It is believed that by digging and analyzing the content of multiple campaigns, commenting, or analyzing dialogues of multiple contributing accounts, or ultimately by analyzing graphs for social networking relationship analysis, it can reach from the outside to what goes deep in the underlying layers of social networks and obtained the complexity of human relationships in these networks; which is a shallow expectation. This does not mean that the methods are essentially useless and lack efficiency. Rather, it means that, in addition to the broad knowledge of data mining, such as the recognition of mechanisms of production and dissemination of data and the analysis of relationships, we strongly need deep descriptions and efforts to explore the complexities.

An ethnographer in social networks should live in this environment; not being captured by groups and circles; find a way to discover the worlds of others through writings and comments; does not assume that everywhere, everything looks the same; shifts from one place to another; reach ceilings; not becoming captive in the waves; not being drown in a world of meanings; should not forget the reason he entered the virtual tribe; once in a while reaches the peak of a mountain that the river of contents flows underneath in order to understand how far he came and dive back into the river, and repeat this; understand the user's world. And in one word, dose not assume the fish tank as the ocean.

The final report of ethnographer which is explained in detail, can largely contribute to social networks analysis and represents its complexities. In fact, it can be concluded that quantitative methods for social network analysis and extracting network graphs and ethnographic analyzes in social networks, complement each other and can somewhat confirm the results of one another.

The results of ethnographic methods, due to their descriptive nature, can put researchers at the heart of the issues and face the researcher with mental nodes in these networks. The description of social complexities and entanglements can be the place for the development of issues and hypotheses which their measurement of the amount and the possibility of their generalization requires the implementation of quantitative methods.

The discovery of the extent of the effect of variables on each other in causal relationships requires the use of non-ethnographic methods, and, on the other hand, quantitative analysis and network graphs can alert the mindset of the qualitative and ethnographer researcher about the characteristics and dimensions of the target community and make his collaborative vision more purposeful and useful.

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