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WHY DO STUDENTS USE VIRTUAL SOCIAL NETWORKS IN IRAN: A SYSTEM APPROACH

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ABSTRACT

Rise of Social Network Sites, such as Facebook, significantly influences the behaviour of students around the world nowadays. Different studies have been done up till now to investigate different stimuli on using Facebook. In this study, as one of the first attempts to investigate dynamic influencing factors, systems approach is used to consider such factors' effects and their feedback simultaneously. After finding major factors and estimating the behaviours, in order to verify effects of them, an online questionnaire was prepared to gather Iranian Facebook users' attitudes toward these factors. After interpreting answers, we ran a dynamic simulation model and made some discussions about the effects of different factors on the time which users spend in Facebook. The results show that negative impact of filtering causes decrease on time users spend in Facebook. Under current situation, although filtering on internet has its effects on users in Iran, tendency toward using different facilities of Facebook is strong enough to overcome these negative effects.

KEY WORDS

social networks, students, Iran, system dynamics

CLASSIFICATION

JEL: M39, P46

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INTRODUCTION

Social network sites (SNS) are web based services that allow individuals to construct a profile within a bounded system, interacting with a list of other users and passing through their list of connections and those made by the others. The nature of these connections may vary from site to site [1].

Social network sites were started by Sixdegree.com, launched in 1997. Then, Ryze.com was launched in 2001. In 2002, Friendster was launched as a social complement to Ryze. From 2003 onward, many SNSs were launched that caused users pay less attention to them, even projects of Major Corporation like Google's Orkut (Orkut failed to make a sustainable U.S user base). MySpace.com was begun in 2003 and gradually attracted users, especially teenagers. Furthermore, MySpace differentiate itself by regularly adding features based on users demand and allowing users to personalize their pages. A detailed study of SNSs' history and scholarship can be found in [1].

In 2004, an undergraduate student of Harvard University designed Facebook to only support distinct college. In the beginning, a user had to have a harvard.edu email address to join Facebook. By September 2005, Facebook expanded to include high school students, professionals inside corporate network and eventually everyone. At first, unlike other SNSs, Facebook users were unable to make their full profiles public to all users. Possibility for outside users to make different application which allows users to personalize their profiles and perform other tasks was another specific feature of Facebook. Figure1 depicts the growth of Facebook across global regions.

The more users a network attracts, the more influential it would be on different issues like social, political, economic, and other social related issues. It was believed that there is a relationship between growth of Facebook and unemployment as indicated by comscore research in June 2007. Facebook can also be used as a place for transferring knowledge, for example the communication between diabetes in Facebook [2]. Virtual social networks (VSN) like Facebook change the way of noticing people's voice by governors or other administrators. In a study, it was reported that how students used Facebook to influence negotiation process between administrations of university and faculty when faculties were on strike [3].

A complex system is the system that we cannot simply find out its behavior by looking through the system. According to characteristics for a complex system, continuing changes, interactions, nonlinear relations, feedbacks, history dependency, self-organizing, adaptivity, which are mentioned in Business Dynamics [4], and different aspects of Facebook were mentioned above, it can be perceived that using VSNs is a complex system. So, to perform any kind of analysis, a tool which has the ability to overcome this complexity is needed.

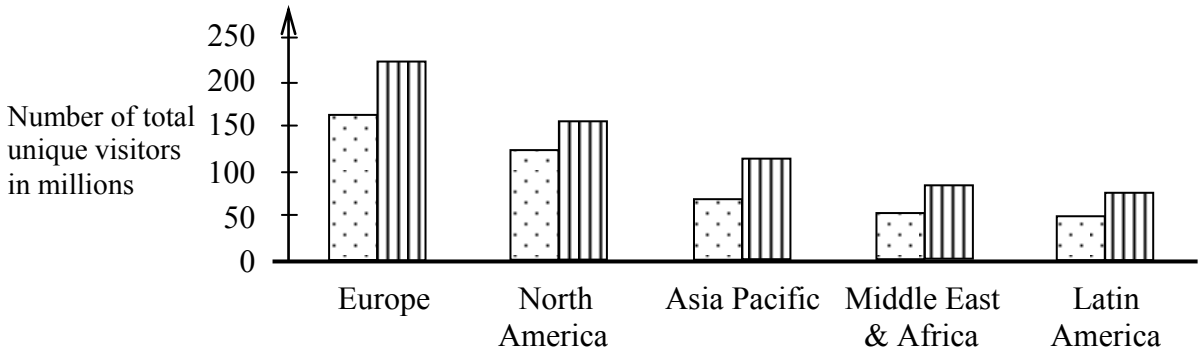

Figure 1. Growth of Facebook across global regions. Data: March 2010 (doted bars) and March 2011 (bars with lines). Adapted from http://www.comscore.com.

System Dynamics (SD) is a tool which gives the ability to do various kinds of analysis through this complexity. System dynamics approach considers all factors in the system's boundary and their effects besides feedbacks simultaneously and shows us the behavior of system by simulation [4]. As the considered problem has a lot of complexities with different kinds of cause and effect relations and feedbacks, it is very suitable to use System Dynamics (SD) approach here. Not only SD was listed as a powerful social simulation tool [5], but also it was applied in different social studies before [6-8].

Different studies have been done up to now about Facebook, generally, all kind of SNSs [9-12]. Most of the students have Facebook account, that's why different studied have been dedicated to using of Facebook among students [10-15]. For instance, the impact of Facebook in the peer relation and the adaption of students with social emotional and behavioral difficulties within school are examined in [16]. The questions like why college students use SNSs, how they use this sites and how this sites influence the development of individuals identity is the subject of a study that is referred in [17]. For the target of this paper, students are selected as a target group for some reasons: 1) basically Facebook was a place for students. Therefore, its characteristics are more fitted to students. Therefore, interpreting of students' behavior in Facebook is more meaningful, 2) they were more accessible than other people for authors because we are in same academic environment, and 3) moreover, in Iran, students were first groups who were attracted by Facebook.

An investigation has been done on Facebook and Orkut in India and Pakistan to show what features of Facebook and Orkut are more important for users [11]. But the discussion of how Facebook and Orkut meet users' needs was not presented. Some researchers studied in their work to find out the possibility that people with certain characteristics were more likely to be Facebook users and to determine whether these characteristics were related to different usage of the site [18]. Some studies explored how personality characteristics influenced the ways in which university students utilized Facebook [9]. They investigated very well in their work the relationship between scores of Big Five and the usage of Facebook, but then again, they did not consider the feedback of using Facebook on these characteristics.

As VSN is a kind of media, gratification theory [19] can be well applied to describe consumer behavior. Gratification Theory (GT) assumed to be one of the "most influential theories in media research" [20]. GT tries to clarify the gratification which consumers are looking for in specific media and their sensitivity for that medium [21]. It explains that how different people can use same media for different purposes [20]. Some researchers in this area argue that, while at first people are attracted to the media accidentally, they will not keep on using the media unless they are provided with explicit benefits.

Unwillingness-to-communicate is defined as a tendency to avoid oral communication and to view the communication situation relatively unrewarding. Considering gratification theory, some authors used it to examine how the unwillingness-to-communication influences gratification obtained from Facebook use [10]. The relationship between unwillingness-to-communication and the behavioral outcome of Facebook use was investigated too, but it was not discussed that people keep on using Facebook only for same primitive reasons or not, they will being gradually changed.

Expectation Disconfirmation Theory (EDT) describes an individual's behavioral process from the initial pre-use expectations of a product to the post-use perceptions of the product. There are proposed research model that investigate the factors influencing user's continuance intention to use Facebook based on EDT and the motivation of using Facebook [22]. They considered the feedbacks correctly by EDT but not simultaneously considering all factors.

Like other countries, Facebook found its way in Iran too. First group of Iranian internet users that walk in to Facebook were students that have the memory of Orkut in their minds[1]. The new innovations, good look environment, professional designing, being international and more importantly birth place of Facebook (that was a university) were primary factors that could encourage Iranian students to welcome Facebook.

The point that is more considered in this study is "what happens to Iranian Facebook users after a while of being a member?" We want to investigate how feedback from Facebook's facilities affect users attitude toward using Facebook. Do users spend the same amount of time in this VSN after being satisfied or not, their courage will be damped? All previous studies only discussed the need of people to use such systems but they did not talk about how they will behavior after a while.

Based on concepts were presented in some previous studies [17, 22], which argue about how student use Facebook and what are the influential parameters, we analyze effects of some factors on the amount of time which Iranian students spend in Facebook daily. In fact we consider the factors that are more influencing on Iranian students that encourage them spend more time in Facebook. Unlike previous works which did not consider effects of feedbacks on users or did not consider these feedbacks simultaneously, we consider this issue in our work through a System Dynamics (SD) simulation model. In other word, our model has the ability to interpret the intra-relation of parameters and their simultaneous effect on the final consumer desire for Facebook. Simulation models give us a useful insight about the system under study by showing us the evolution of system and also we can have some guesses about the behavior of the system in future. Although a previous work [23] applied a dynamic model of using Facebook, it was limited to online games in Facebook. Hence, this paper is the first study of dynamic effects of online social networks, i.e. VSNs, through a system dynamics model that considers most of aspects in using VSNs.

This study is organized as follows. First the research methodology is described and system dynamics approach is explained briefly. Next, a systemic view of the problem is developed through causal loop diagrams which depicts different factors and their effects into the system; moreover, system dynamics model of the problem is presented. Then, results of simulation and discussions are presented. Finally, a conclusion completes the paper.

MATERIALS AND METHODS

First concentration was on finding the factors and their effects in our model. Then the causal relations between these factors are considered. To find the relationships among these variables, we need to use users' attitudes toward their use of Facebook to establish these relations. Hence, we made an online questionnaire and ask students to fill it. Here, System Dynamics is briefly introduced at first and then, the way questionnaire is used.

SYSTEM DYNAMICS

System Dynamics (SD) is an approach which is used to analyze a system's behavior and to overcome the complexities of problems and it was primarily introduced by J. W. Forester in 1960s at Massachusetts Institute of Technology (MIT). The basics of SD are acquired from the area of electric circuits, servo-mechanism theory and feedback control theory. As a result, SD considers the system as a complex of feedback processes. In the book *Industrial Dynamic* [25] it was shown that how modeling of human behaviors together with policies that govern it in a human system could help to make better perception of the system and its behavior in future. It is not so rough to say that SD consists of four main concepts: system, feedback, level, and rate.

Causality and Feedback

The causal relation presents that an element has impact on others. To model these impacts, Causal Loop Diagram has been developed. Every feedbacks of different elements has a polarity either positive (+) or negative (–). For example, if element B move in the same direction of element A when it is affected by A, the polarity of relation from A to B is positive (i.e. $\partial A/\partial B > 0$), while negative polarity means move in the inverse direction.

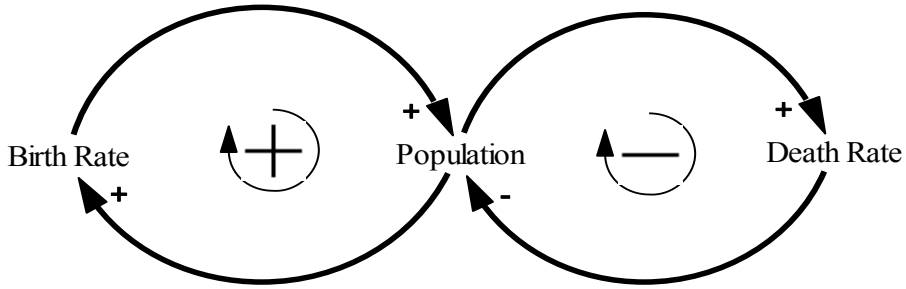

Figure 2. The diagram of causal relationship.

Feedback loops are main reason for complexity in the dynamic behavior of a system. There are two kinds of feedback: Reinforcing (R) and Balancing (B). As it is presented in Figure 2, rising of population would increase the number of birth which in result population would be increased. It is an example of R loops. In contrast, increasing population would raise the number of deaths and consequently the population would be reduced. It is an example of B loops.

Level and Rate

To form a differential equation which is needed to simulate a system, two variables are used: level and rate. Current condition of a system is called level; for instance, the level of an inventory in any time point. Rate measures the change of level during time passage; for instance the rate of production (units per hour) in a factory. Time factor is a distinguishing factor in realizing levels and rates. Net rate (a summation of all positive and negative rates that affect a specific level) is required to calculate the value of level. Stock and Flow Diagram (SFD) is applied to formulate the levels and rates for simulation. SFD formulas, which are infact differential relations, are illustrated as follows:

$$Stock_t = Stock_{t-\mathrm{d}t} + \mathrm{d}t \cdot (\mathrm{Inflow}_{t-\mathrm{d}t} - Outflow_{t-\mathrm{d}t}),.$$

$$\frac{\mathrm{d}(Stock_t)}{\mathrm{d}t} = Inflow_t - Outflow_t .$$

where $Stock_t$ is value of stock in time t. Every CLD has a corresponding SFD. For example, Figure 3 shows the SFD concerning CLD in Figure2.

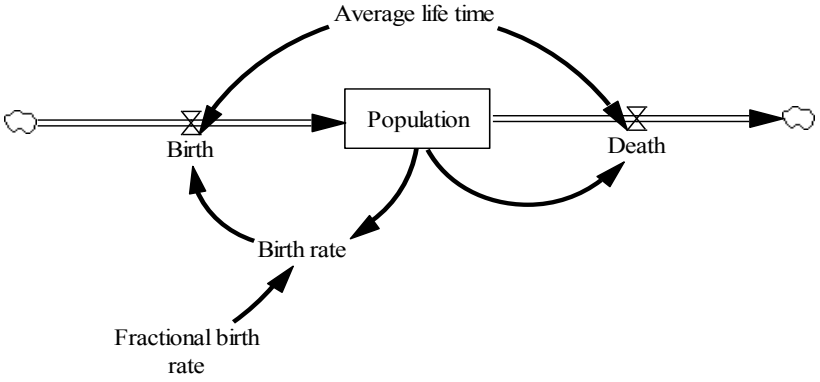

Figure 3. Stock-flow diagram.

In this example, “Population” is assumed to be a stock, while “Birth” and “Death” are both rates. One additional variable is used here “Fractional birth rate”. It is an expectation of birth rate per person and is dimensionless. So, the value of “Birthrate” would be “Population” multiplied by “Fractional birth rate”. Since the process is not happening in one moment and at least it takes average lifetime of people in “Population” to add their children to “Population”, “Birth” can be the value of “Birthrate” divided by average lifetime of people in “Population”. The same is true about “Death”. While the birth directly increases the population, indirectly increases the deaths and causes decrease in population and subsequently it decrease the birth. Hence, it is evident that a nonlinear relation exists and the system’s variables cannot be determined by linear equations [4].

DATA GATHERING

A total of 44 Iranian students participated in the study. We asked students of different majors (Engineering, Management, Economy, ...) from different universities in Iran to fill a five-point Likert questionnaire. The link of questionnaire was shared in Facebook so every student could fill it. Most of them were in the age between 22 and 26. From total number of filled questionnaire, only 40 numbers of them were usable. Average age of participants was 24,02. Participant answers the questions that reflect their views about:

- how much time in average they spend daily in Facebook
- how they divide this time to different aspects (reading news, having fun, talking to friends …)
- how much does Facebook influence their habits in real life
- how much negative factors (i.e. filtering, inefficient internet, etc) affect the users

Finally, the answers are normalized between 0 and 1 (very low to very high) and the final parameters are determined based on average answers to the related questions.

It should be noted that the questionnaire is not used to build the model’s structure, rather it is used to estimate the required parameters of the simulation model in order to produce more real behavior by the simulation of the model. Hence, the few numbers of filled questionnaires does not affect the model seriously.

CAUSAL LOOP DIAGRAMS (CLDs) OF MAJOR FACTORS IN USING FACEBOOK

Here, the factors and their effects that we considered in our model are introduced. Four of them are incentives for Facebook users that keep them using Facebook and one of them has negative effect and it is kind of barrier in front of Iranian users. For each factor we draw the causal loop that shows their effects. The first four factors that are listed below are based on previous studies with a few changes:

- Information Seeking
- Fun and aimless activities
- Lectern to present yourself (writing Status, establishing a special interest groups, comment on others’ beliefs…)
- Keep Offline Contact (finding old friends)
- Filtering and Deficiency of internet in Iran

INFORMATION SEEKING

Many of Facebook users replaced reading newspapers and watching news on TV, by reading news in Facebook. Thus, it can be a good incentive that keeps them online in Facebook, for

the fact that as doing other activity there, you can read the latest news, too.

Before being a member of Facebook, those who would read every day newspaper or watch TV news, has a determined amount of time during the day assigned to stuff like this. This time is represented in our model by "Assigned Time in Life for news reading and information seeking". But after being a member of Facebook, some parameters like, "quality of news pages in Facebook", "Usefulness of what others share in the Facebook", "Presence of Journalists in Facebook", make Facebook so attractive for them to get latest news, this attractiveness is represented by "Facebook Attractiveness in Information Seeking and News". It is obvious that, the more attractiveness, the more time you spend in Facebook for news and information seeking (time for information seeking and news in Facebook) and in result the less "Assigned time in life for news reading and information seeking" cause the more "average amount of time in Facebook".

Now that "Average amount of time in Facebook" is increasing, in a feedback, you would assign a larger part of this time to the "Time for Information Seeking and News in Facebook)". We should mention here that the "Assigned Time in Life for News Reading and Information seeking" means the specific amount of time you read newspaper or watched news in TV before being a member of Facebook. Figure 4 is the CLD that we consider for this factor.

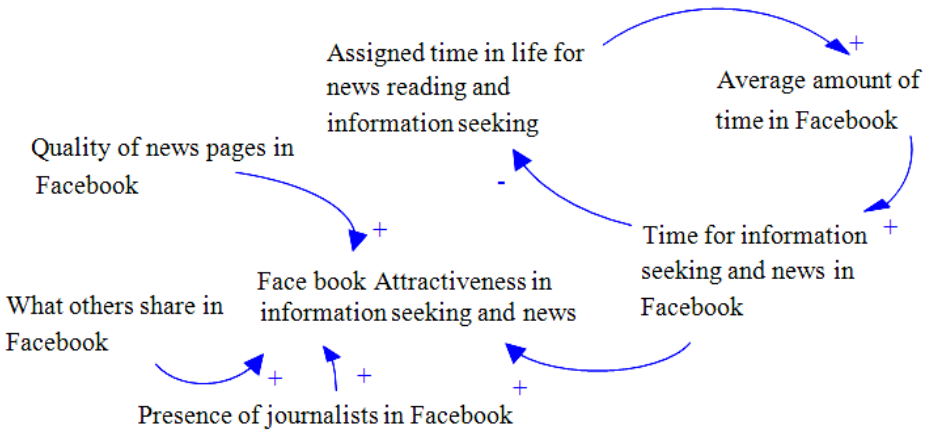

Figure 4. Information seeking causal-loop diagram.

FUN AND AIMLESS

Some users use Facebook aimless and only for fun as it appears the easiest way to spend time and rest. When they come home after a hard day, they sit in front of the computer and start to check friends comment, talk to them, make laugh, play games.

Like the previous loop, stuff like "Quality of chat facility in Facebook", the "Quality of applications in Facebook" and "Excitement of different games in Facebook" are parameters that causes "Facebook Attractiveness for Having Fun". This attractiveness cause you spend more "Time for Having Fun in Facebook" and cut off some amount of time from your leisure time outside the Facebook, "Have Fun and Aimless Activities Outside the Facebook". The result of this cutting and adding is the growth in level of "Average Amount of Time in Facebook". The effect of this growth will be an increase in "Time for Having Fun in Facebook" again, Figure 5.

You can write all of your feelings, beliefs and anything else, share them with others and start discussions about them. of course blogs give you this chance, but, wide spreading beliefs by

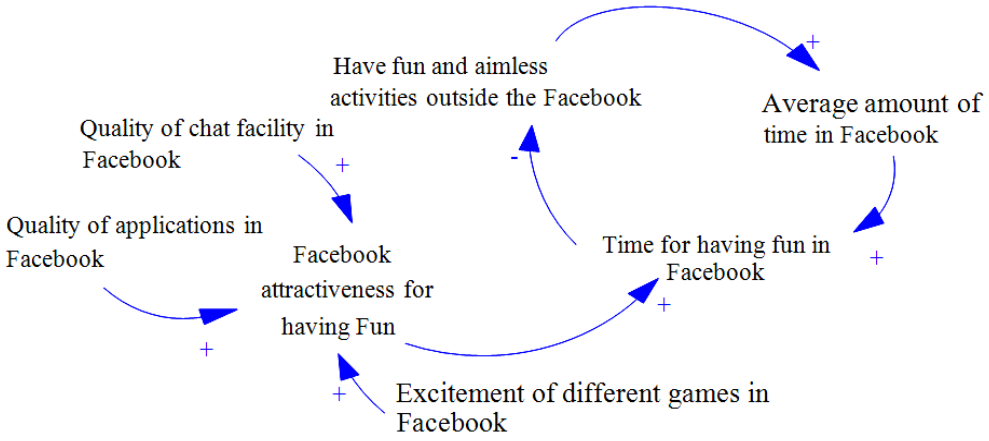

Figure 5. Fun and aimless causal loop diagram.

Facebook is too easy. At the same time that you push "Submit" button to share an idea, all of your friends (and even strangers) can read it in Facebook.

LECTERN

You can write all of your feelings, beliefs and anything else, share them with others and start to discuss about them. of course blogs give you this chance, but, wide spreading beliefs by Facebook is too easy. At the same time that you push "Submit" button to share an idea, all of your friends (and even strangers) can read it in Facebook. The most prominent feature that makes us to give the Lectern attribute to Facebook is its two ways communication. For example, in billboard, newspapers and other similar stuffs, one has the chance to share his/her ideas, but there is no feedbacks or it is very difficult to have feedbacks in Facebook, exactly like lectern, it is very easy for all people to comment on an idea and challenge everything very easily. Moreover, having multimedia capabilities, Facebook is more similar to a lectern relative to billboard, newspaper, etc.

In social interactions, people are naturally inclined to present themselves and gain information about each other [24]. Before Facebook, people use other tool to present themselves to their friends, their colleagues, and to whoever may have some similarities and are interested to same issues, like blogging. But different aspects of stuff like blogging are gathered in one place in Facebook. "Applicability of discussion tools in Facebook" and "frequency of status updating" are sample facilities in Facebook applied for self-presentation. These facilities cause "Facebook Attractiveness of Being a Lectern". This attractiveness makes you replace other thing for self-representation by Facebook. In this way your "Time for presenting yourself in Facebook" increases and "Time for presenting yourself elsewhere" decreases. This increase in "time for presenting yourself in Facebook" will add more time to "average amount of time in Facebook" and as a result again the "time for presenting yourself in Facebook" will increase. This mechanism is represented in Figure 6.

KEEP OFFLINE CONTACT (FINDING OLD FRIENDS)

Though it is not specifically for Iranian, but is a good incentive. All students are very interested to figure out what happen to their college classmates. "Where are they now?" "What are they doing now? And they do this by checking photos, profiles and status regularly. The majority of students want to be together as it is an emotionally factor. For the memories they have during college, for the friendship they make.

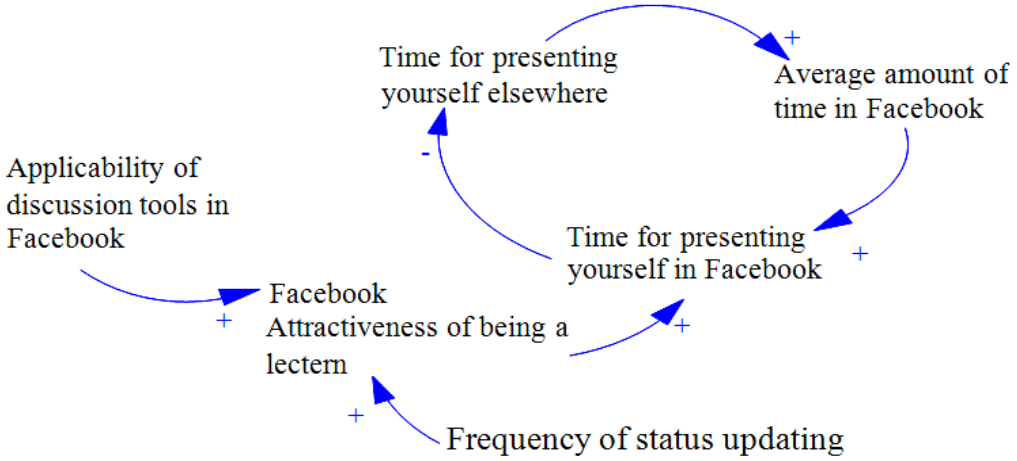

Figure 6. Lectern causal loop diagram.

What do we do when we are with our friends? What do we do when we see an old friend? How do we understand what happened to our old friends? We have special time for things like these. The "Effect of commenting on friends photos and status", the "Effect of making or joining peer groups", the "Effect of sharing photos by yourself" are parameters that make attractiveness toward using Facebook for this target that is represented by "Facebook Attractiveness in Keeping Offline Contacts" in our model. This attractiveness causes you spend more time on Facebook, "Time for Keeping Offline contacts in Facebook", because now you prefer to add more time on "Average amount of time in Facebook and decrease the "time you assign for your offline contacts in real world"; see Figure 7.

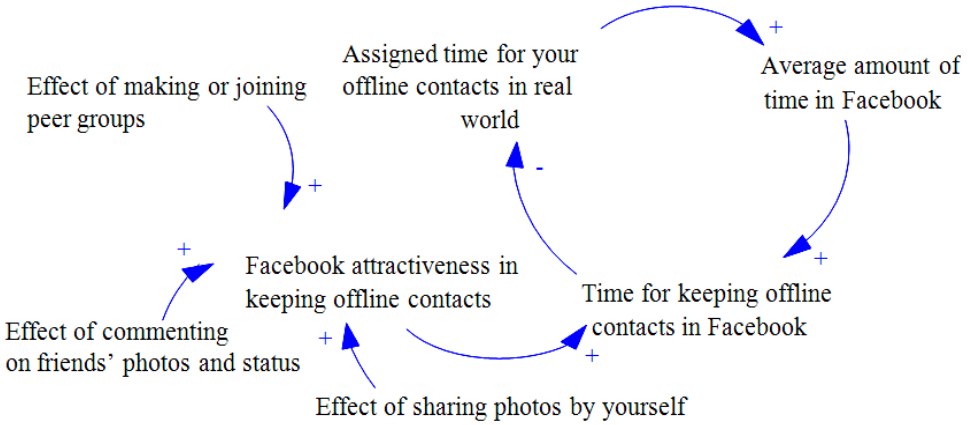

Figure 7. Keep offline contact.

FILTERING AND DEFICIENCY OF THE INTERNET

As we can see in Figure 8, "Effect of Filtering in Iran" and "Effect of Low Speed of Internet in Iran" are two parameters that make negative effects on the "Average Amount of Time in Facebook". It means that we prefer keep our old fashion for the "Time you assign for your offline contact in real world", the "time you assign in your life for reading news and seeming information", "time for present yourself elsewhere", "have fun and aimless activities outside the Facebook".

All of the above mentioned relations are modeled in vensim as it is shown in Figure 8 as a stock-flow diagram.

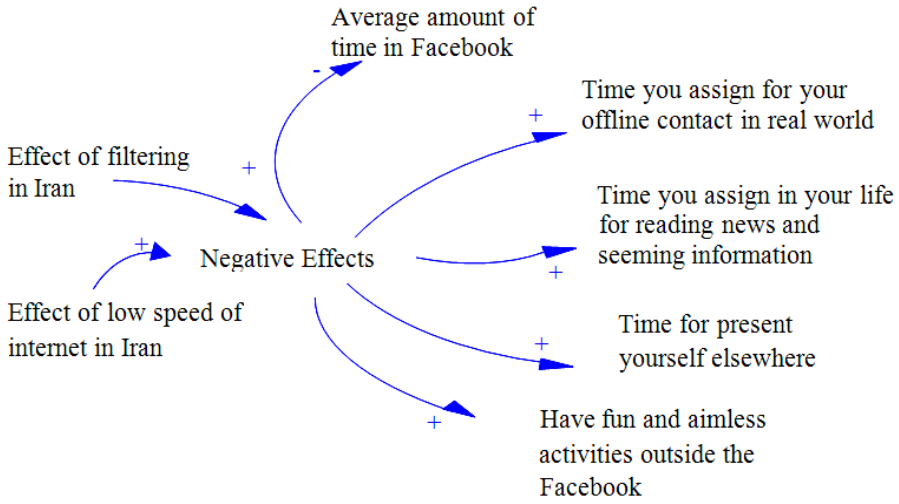

Figure 8. Filtering and deficiency of internet in Iran, causal loop diagram.

SIMULATION RESULTS AND DISCUSSION

We developed our proposed SFD (Stock-Flow Diagram) according to the introduced causal loops and variables. After evaluating questionnaire results; the relationships among variables, units of parameters and variables, were specified and at last the SFD was simulated in Vensim software (Figure 9). Values for parameters are listed in Table 1 (parameters are normalized

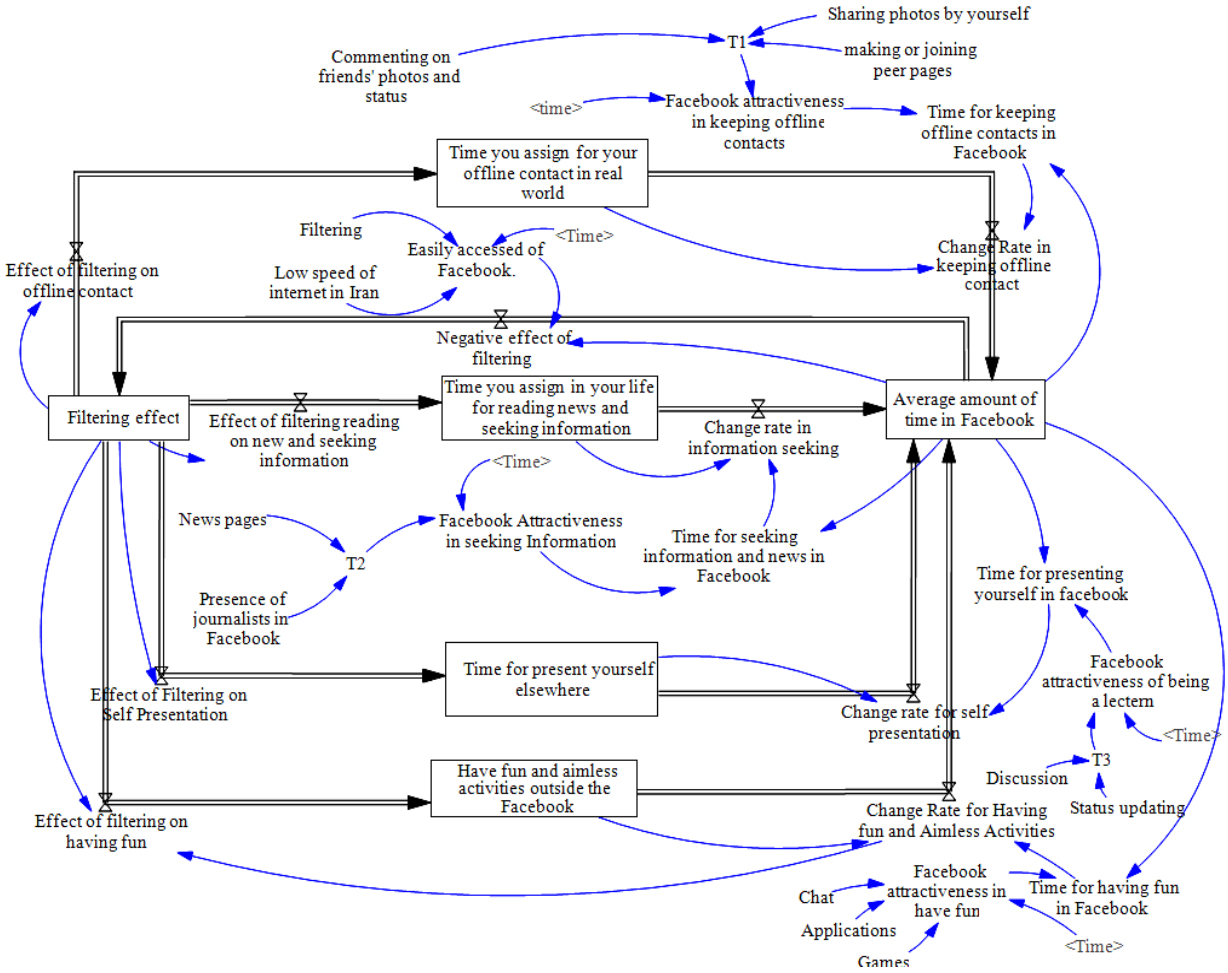

Figure 9. SD model proposed to study dynamics of "Average Amount of Time in Facebook.

Table 1. Values of parameters as obtained from the questionnaire.

Keeping offline contacts		
Commenting on friends' photos and status: 0,3	Sharing photos by yourself: 0,3	Making or joining peer pages: 0,15
Reading news and information seeking		
News pages: 0,3	Presence of journalists in Facebook: 0,2	
Self presentation		
Discussion: 0,15	Status updating: 0,3	
Have fun		
Chat: 0,1	Applications: 0,1	Games: 0,01

between 0 and 1 that is zero means very low and one means very high). The result of questionnaire was interesting ing in two cases: first, students claimed that filtering has less effect on their desire and so does deficient internet, it can be for good internet services (good internet for Iranian internet users is something like 512 Kbps, obviously, it is a very low quality internet speed for many other countries) within universities unlike out of universities or for powerful anti-filtering software that are used; second, the results showed that students are very less interested in using fun tools in Facebook and prefer to use other facilities such as news pages. More attraction is for "Comment" and adaption period is about 30 days. Under these assumptions, we run the model for 300 days (about 1 year).

Let us first consider the effect of filtering and deficient internet in Iran at first and see the behavior of the model. Figure10 shows that in absence of filtering and deficient internet effect "Average amount of time in Facebook", is rising rapidly and after about two months, the rising of halts, which was expected at first, because the desires of users is fulfilled somehow and in return, they do not need to add more time in their daily usage in Facebook. On the other hand, we can see a rapid drop of time users assigned for different stuff in their real life (reading newspaper, talking to friends).

As the parameters are based on users' attitudes and the questionnaire was filled by a sample of students, it is possible that their values change through the time for different reasons. Because different samples of students may give different scores, so to have a suitable analysis, we need to evaluate model for different changes in parameters' values. For this reason, some sensitivity analysis is done on parameters to see what happens to system:

A1: more influenced by filtering and low quality of internet, less interested for using news pages, discussion and status updating,

A2: more influenced by filtering and low internet quality, more interested for using news pages, discussion and status updating,

A3: less influenced by filtering and low quality of the internet, less interested to use news pages, discussion tools, updating photos.

Figure 11 gives an insight about the behavior of model. Both A1 and A2 are influenced by filtering and deficient internet, but A2 is more interested for same facilities that are less interested in A1. So we expect that line A2 locate in upper side of line A1. As it is observed, the behavior of simulated model under this assumption is verifying our expected behavior. It is obvious that line for A1 is under line for A3. Although we have less interest for news pages and discussion in A3, we have less effective filtering too. This means that other facilities of Facebook are accessed easily and for this reason users spend more time; however, in A1, accessibility of other facilities that users keep their interest, is now more difficult, because of more filtering pressure. In comparison of A2 with A3, we see that, at first A2 is upper than A3, because of more interests for facilities, but after a while, being more influenced by filtering in

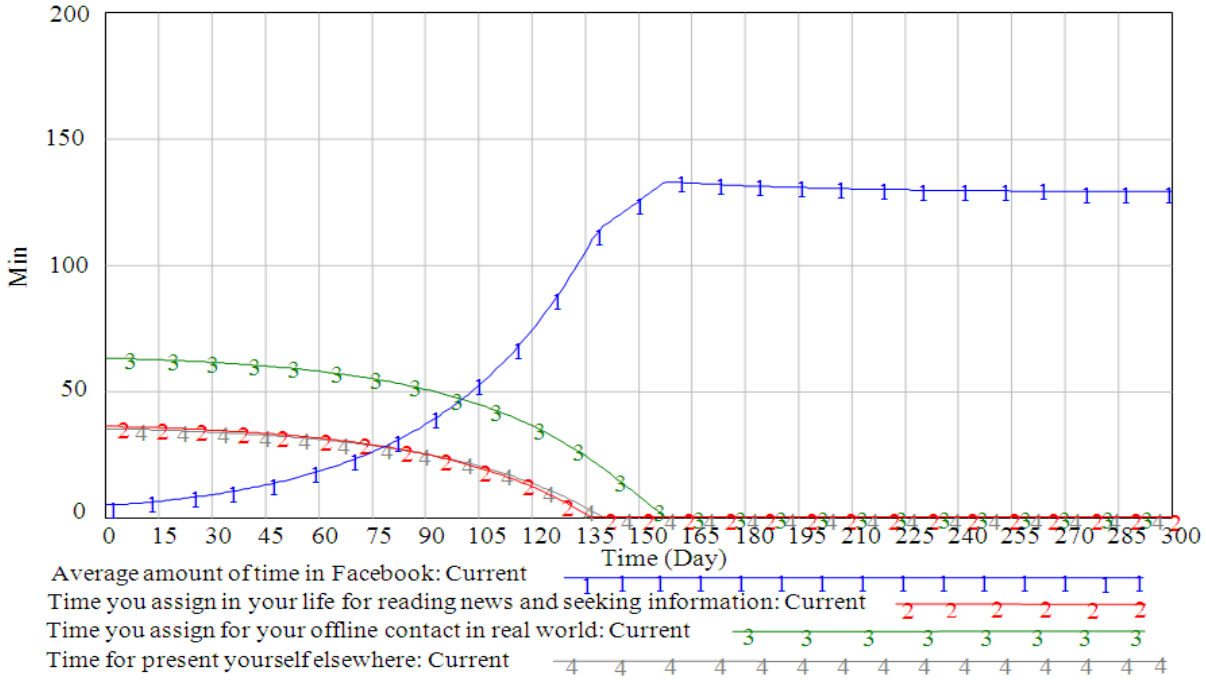

Figure 10. Average amount of time in Facebook (without filtering).

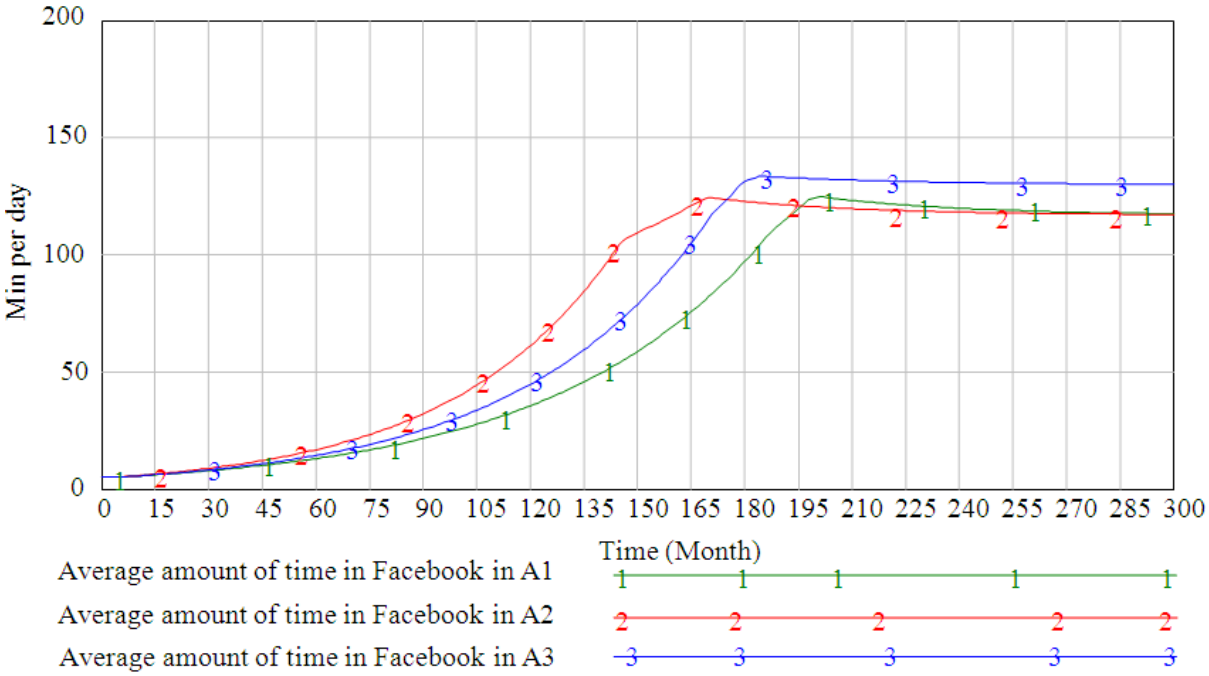

Figure 11. Result of changes in parameters.

A2 shows itself and causes a fall in diagram, but A3 keep on its raise, because the filtering effect is defeated by users' interest, though less interests.

CONCLUSIONS

As one the first attempts to make a system dynamics model of SNSs' dynamics, this study investigated different factors and their different effects in a simulation model that shows the overall behavior of system and variables, simultaneously. After building model's structure based on the related literature, a questionnaire was designed to estimate model's parameters in order that the model produces more real behavior. Simulation of the model makes it

prominent that filtering has its effect even less than other influencing factors, but can be a powerful negative factor. The behavior of system in the case of new improvement of Facebook that is highly dependent to internet speed is considered too and according to model's behavior, users will be more suffered from filtering.

All in all, simulation results are representative of the fact that inappropriate interventions like filtering and inefficient internet speed, are not very successful to prevent users from using Facebook although they can control the rate of participation to Facebook in short-term.

In this study the dynamics of influencing factors on the time that an Iranian student spends in Facebook is investigated; further research could be done on the dynamics of user's population (dynamics of their entrance/exit rate) and effect of other rival social networks (i.e. Google+, Twitter, Orkut, MySpace, etc).

It is worthy to mention that the paper aims just the whole behavior of the system, so the results should be admitted by more precisely callibration of the coefficients based on much more data collected through questionnaires.

ACKNOWLEDGMENT

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REMARK

[1]In fact, there is no official (national or international) statistics of Iranian Facebook users since the website is filtered and users utilize different kind of anti-filters; therefore, their statistics are counted for other countries. Hence, most of information about Iranian Facebook users (i.e. being a student, overall average age, gender, etc) are based on the authors experiences and interactions with users.

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ZAŠTO STUDENTI KORISTE VIRTUALNE DRUŠTVENE MREŽE U IRANU: PRISTUP ZNANOSTI O SUSTAVIMA

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SAŽETAK

Širenje društvenih mreža, poput društvene mreže Facebook, u današnje vrijeme značajno utječe na ponašanje studenata širom svijeta. Različite su studije provedene za istraživanje različitih poticaja korištenja društvene mreže Facebook. U ovom radu, kao jednom od početnih pokušaja za istraživanje dinamike utjecajnih faktora, pristup znanosti o sustavima odabran je za istovremeno razmatranje utjecaja tih faktora i pripadnih povratnih veza. Nakon izdvajanja glavnih faktora i procjene njihovog ponašanja, zbog verifikacije njihovih učinaka, pripremljen je *online* upitnik. Njime su prikupljeni stavovi korisnika društvene mreže Facebook u Iranu o izdvojenim faktorima. Nakon interpretiranja odgovora, numerički je simuliran model te su diskutirani različiti faktori koji utječu na vrijeme što ga korisnici provedu na društvenoj mreži Facebook. Rezultati pokazuju da utjecaj filtriranja smanjuje to vrijeme. Iako u trenutnoj situaciji filtriranje interneta negativno utječe na korisnike u Iranu, uporaba dostupnih opcija na društvenoj mreži Facebook omogućava uklanjanje tih negativnih učinaka.

KLJUČNE RIJEČI

društvene mreže, studenti, Iran, dinamika sustava