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Typologies of social structures in virtual communities – case study on mobile platforms

Andrei COSTINA[1]

ABSTRACT. This study (originally published in Romanian) aims to define certain typologies of individuals involved in virtual communities, more specifically in persistent online worlds. In this case the focus is on a case study applied to the platform called state of survival dedicated to the mobile devices segment. It is a platform that combines in one application various types of gaming with several ways of communicating and socializing. The fact that this game has become extremely popular at the beginning of the pandemic correlated with periods of severe lockdown puts it in a unique socio-cultural context which makes it extremely interesting from the point of digital anthropology research.

The methodology in use is rather traditional as a set of ethnographic and anthropological tools but adapted to contemporary necessities for studying virtual communities. The aim is to develop a form of social group taxonomy outlining their specific characteristics and eventually even the social norm.

The results do not just shape the parameters described above but also involve game mechanics and behavioral patterns as well as the way in which individuals perceive this activity and or their involvement with the virtual world that is correlated with their level of immersion. In this particular context qualitative methods are suitable, but they also have some limitations, it is almost impossible to carry out any statistical research at the level of the general population due to the structure of the platform and the way it

[1] Phd Assistant Professor, Faculty of Political, Administrative, and Communication Sciences, Babeş-Bolyai University of Cluj-Napoca, costina@fspac.ro

functions. On the other hand, one can cover very well certain segments on a very detailed level in order to point out relevant aspects of such virtual worlds.

Keywords: Digital anthropology, virtual communities, social structures and networks, online platforms, persistent worlds, massively multiplayer online, mobile, digital ethnology, games

Introduction

The beginning of the pandemic and especially the lockdown has brought about the series of changes somewhat normal in the behavior of players that prefer mobile platforms. The present study aims to illustrate various typologies of social aggregation in such environments. The example considered for study is called state of survival. The platform is dedicated to mobile terminals and handheld devices and can be downloaded for free from all the application stores on the market.

Obviously since we are talking about a free application the main monetizing system is "in game purchases" with some help from advertising that's being targeted to the user in order to obtain various bonuses. Microtransactions are not absolutely necessary, it is not an exclusive pay to win system but for those who wish to be competitive some spending is required. The same thing goes for those who wish to access the entire array of content of the game elements such as: characters cosmetic improvements or various objects that confer superior abilities to their characters.

The entire system is designed in a modular way stressing out the social side. The entire virtual world is formed out of states hence the name which in turn are formed out of areas with interest points resources or installations that grant players bonuses areas of influence of groups like clans, alliances etc. and individual settlements with their own range of influence. Obviously, the inside of the settlement is a different module, but this aspect, along with the characters and the types of units will be analyzed separately when approaching game mechanics.

The communication modules are based on an in-game chat system in certain cases with voice support. these are structured on various levels out of which the most relevant are the micro level respectively the alliance, the workgroup, and private; the larger ones on an area level state or even world being a lot less structured and obviously much more populated with irrelevant content. Obviously, as in many other cases when we are talking about MMO massively multiplayer online platforms, communication between individuals extends towards other channels such as social networking services, namely Facebook and WhatsApp for smaller groups or private and Discord for larger groups and or individuals that are more taken with their role in the virtual world.

The narrative context is that of a postapocalyptic world where after some failed experiment a virus infects humanity transforming most of the citizens in zombie mutants. The survivors organize themselves in settlements clans and States and try to work together (or to annihilate each other) to gain access to the in-game resources. As the individual progresses new options unveil and the plot is revealed by means of the individual narrative of the characters the same for each player that are present in every settlement.

From a gameplay standpoint the platform is not designed for isolationists, those who want to play solo are marginalized from the start even if they are willing to pay for bonuses. The internal structure of the platform is defined in such a manner that would discourage and eventually stop solo players. This particular way of stimulating the social context makes this virtual world a perfect ground for this study. If other environments allow the forming of social networks with a lot of eccentric nodes in between the members of the communities, the developers of the platform state of survival have decided to make this aspect almost impossible. Subsequently social formations will look in a graphical representation more like swarms or polyhedrons without individuals that are marginally connected to a group.

It is easy to understand why in the context of the outbreak of the pandemic this platform has reached the top 10 best rated applications in Google Play store. It is not just about the narrative but also the level of the complexity of the platform. In order to better understand and research this

virtual environment in which the action is placed one needs to operationalize a few concepts tied to what Richard Bartle wood call *the world,* and the best way to do this is to analyze the game mechanics.

Game mechanics

This game was launched just before the pandemic outbreak by the publisher King's Group and at first glanced it looked just like another zombie game targeted towards users in search of a casual experience. In reality, we are talking about a very complex platform that includes numerous segments. All these modules are shaped accordingly to a certain type of game mechanic.

An important aspect that needs to be mentioned is that the design of the platform allows every player to have two distinct accounts that can be used alternatively with the same profile. These can be localized in the same state for mutual help or can be in different states to ensure a higher level of social diversity. As the afore mentioned, the social aspect but mostly the collaborative one built in this platform are extremely important in the general development of the action.

The mainframe, the skeleton so to speak, is RTS (Real Time Strategy) Basically the user is associated to a settlement in the form of a community of characters that needs to develop, accumulate resources produce units and buildings that would ensure survival. Of course, the city / colony building segment is present here, but it is not the most important. Buildings but mostly units form the so-called red line of the action as well as interaction with other players.

The basic principle is that the player sends the units (preferably along with those of other players) to carry out various operations such as: resources procurement threat and monster elimination missions that are specific to each area capture and protection of certain interest points or attacking other players. The latter is less used, in case a player is attacked by many others in a focused way, usually the group that that particular player belongs to will respond in kind in an organized way and there are very few cases in which players would risk unleashing an all-out clan war.

In the tactic section fortunately, there are only three types of units that play different roles on a classical model. These are: ranged units, high mobility (cavalry type) units, and infantry units (melee type). The combinations of the types of units are somewhat relevant to ensure success, but most of the times the most important aspect is the technological level of development for each type of unit.

In order to produce highly developed, numerous units, one needs resources and buildings within the settlement. At this point the segment of colony management begins. The user is confronted with the challenge of developing the settlement as efficiently as possible to procure the necessary resources for the survival of its inhabitants, developing defense abilities as well as unit production abilities. The whole system is simplified enough to be easily controlled from a mobile device but even though the UI is optimized enough it still requires some management abilities on part of the user.

The most spectacular component of the platform is the RPG role play game. In this context the player sends characters on certain missions and these characters must be controlled individually in order to achieve various objectives usually involving some kind of a confrontation or fight with monsters all in the pseudo isometric system. The more interesting part comes with each character's unique stories traits and abilities from an orphan girl to a retired soldier through a former convict the narrative of this universe makes this platform unique in this segment. The amount of attention to detail that the developers have put into this aspect and the fact that they are always introducing new characters or new developments of existing ones is basically their main unique selling proposal USP for this application.

Although the combination of game mechanics is rather interesting this is not the main objective of the present paper it is just a necessary step in understanding the application functionality it's immersion level and the roles that each user needs to play all these combined with top graphics voice acted dialogues and narrator speech contribute to the popularity of the platform. as the matter of fact due to this level of complexity it is not targeted towards all types of terminals it basically runs in optimal parameters starting with the upper midrange of devices.

Methodology and limitations

This paper aims to define certain typologies of communities and individuals present in the virtual world presented. In order to achieve this objective several combined methods have been used and even though some of them are more traditional in nature they are best suited to this given context because automated data mining in order to build social networks models based on strength theory is impossible.

So, we refer to observation in all its forms ei (Rosenhan, Wilkins and Levine), but participation is the keyword here. Generally speaking, when studying virtual communities beyond the mathematical approach of the graphical representation of the social network only traditional anthropological methods yield reasonable results, albeit adapted and more structured usually with the researcher taking part into that particular community or communities. It is very less likely that a complete outsider would understand the social mechanisms that tie these groups together the types of individuals that compose these intricate structures and even less likely to be able to classify them.

The methodology involved in this particular domain is in a constant state of evolution; initially it was considered that what we call a certain culture is tied directly into its geographical location and the certain set of parameters that could have been considered as local identity. Nowadays we can talk about global systems and any kind of culture no matter how remote is influenced by external factors. As the methodology developed researchers have begun to consider more and more the relationship between the online and offline environments. Some consider the online a separate environment with its own socio-dynamical principles (Soukup 2006).

Christine Hine (1998, p.14-40) because probably expressed this in the best manner even in the early days stating that the Internet can be perceived both as a form of culture in itself also as a cultural artifact. Using solely the version of standalone culture the Internet has a set of norms and practices that are both unique and specific to this particular system and entitled to be studied separately from the unmediated social existence that happens in real life. On the other hand, when we consider the Internet as a cultural artifact it exists in the wider sphere of the cultural context in which every individual dwells.

The interdependence between the online and offline has led researchers to pay a special amount of attention to the way in which the cultural basis of communication both mediated and unmediated are welded together. A good example is the research of Mizuko Ito (2005) in which she regards the mobile phone as a tool of techno social tethering meaning that it functions as an interface in social communication but not as an external construct but rather as an extension of every individual's communicational ability a more simplified form of telepresence. At the same time geographically bounded cultural practices significantly influenced the development of subsequent technologies involved in such modes of communication. It is probably the scenario in which the geographical location influences the most the virtual environment. Basically, we can talk about ways in which technological systems not limited to mobile devices are built socially via the ways they are being used in other words socio-technological practices that put together the cultural landscape of both mediated and unmediated communicational realms.

In this particular case these observations are emphasized since we are considering a world that can be accessed from mobile devices exclusively. naturally this is valid for the general audience and in a more traditional manner because for the more tech savvy there is always the option of using an emulator of mobile ecosystems, usually Android based, on a PC be it desktop or laptop. However, this seems to be a rather narrow niche.

Obviously electronically mediated cultural spaces tear apart any kind of traditional idea related to spatiality. At least for this one reason researchers will have to remodel the way in which they traverse these spaces. Danah Boyd (2008) proposes that instead of considering the site the location as a starting point away that will lead to a multitude of results apparently unrelated, the methodology should rather follow sets of people, places and focal points of cultural interests thus providing a coherent image even though it is multi-site.

Once this approach has been established such a methodological formula allows the anthropologist to follow monitoring study in order to better understand these phenomena that are, by definition, in a state of flux and transformation. The basic idea is that we can no longer consider a form of ethnography and anthropology of isolated communities, but instead that

of the network in which it is necessary to consider the multitudes of plans and platforms that facilitate the process of communication between individuals all combined with a set of social norms that can differ substantially from one environment to another. One can no longer talk about isolated cultures that are being studied as a particular case such as a village that has no significant contact with other cultural values. At the same time narrowing the research in any kind of space be it geographical or digital makes no sense because people cross seamlessly from one to another and sometimes function in both simultaneously.

Another contextual issue is actually one of the limitations of this study and that is attempting to observe certain ethnical communities its main impediment being the language barrier. Unfortunately, it is not the only one, other cultural peculiarities make some of these clans or alliances to be relatively impermeable to strangers. Statistically speaking (Internet World Stats) poorer areas of the planet are better represented from the sheer number of participants in these virtual worlds because they are mainly used as a way to escape the daily not so bright routine. So, the study will include only international communities that use English as a main language.

Besides participant observation another tool has come to the aid of defining the set of specific characteristics to each typology involved here it is the case study both on group clan alliance and on the individual in particular the community leader. In the same manner in order to utilize the same concepts that stand behind each parameter a form of coding in its basic sense defined by Kraut and Johnston even from the 80s.

Another limitation of this study at least in this incipient form is the lack of quantitative methods. This is due to the impossibility of automatically collating data on the level of the entire population present in the virtual world. However, this form of limitation may only change the nuances of typologies not on a fundamental level the study being focused on parameters that do not strongly rely on the quantitative nature of things.

Data collection went through a whole year from January to December 2020 on two separate accounts (a'Savii şi DolithePeaceHound), passing through at least 30 communities in state 255 from the game platform with a population varying in between 1500 and 2500 users. The interaction time

with the platform was on average over 2 hours a day on both accounts, obviously on more than one occasion daily. An important note is that the data gathering process stopped at the time in which for commercial reasons the platform introduced narrative content from The Walking Dead franchise that altered significantly both game mechanics and the media content per se for more than six months.

Results

The set of results are in a primary stage basically we're talking about a preliminary study that can be developed M further detail and a vaster coverage of the collected data. On a first glance one can define general trends only and the focus falls on general common characteristics that outline the given categories.

Following the data analysis process three main trends have emerged that may be defined as categories of alliances groups or clans all with specific shared characteristics and all managed and consequence, naturally, referring to the profile of the leader but also of those who are part of the top tier of the group. Considering Bartle's (2003) typologies for individuals one can find them aggregated in the following sequence. For each typology and the purpose of providing a relevant example a group will be utilized in which both accounts have been present for at least a month thus making the nature of the social organization easier to understand on the whole.

Achievers, or those who wish to accomplish as much as possible within the game are aggregated in top communities with numerous members, a very well-defined hierarchical structure, impeccably organized activities and exceptional management of resources and "personnel". It is a type of social aggregation that is almost militaristic the rules are of any and rather strict closely watched by those responsible and the users that do not adhere to this code of conduct are immediately excluded on the 2nd or the 3rd mistake.

These forms of social aggregation may be called *competitive* because they are focused on success within the game have many members and a large part of the population consists of newer users less powerful and with less

developed abilities who seek the protection help and advice from veteran members. At the same time, they function as a maneuverable population representing brute force by sheer numbers.

The group characteristics are high member count rigorous organization, well established sets of rules, highly focused on results in the game towards the scope of the game, socializing between members is not discouraged but functional communication takes precedence and in order to avoid the formation of subgroups, militarized management and attitude. very few group decisions are discussed outside the inner circle that leads the group however there is a rather strong group cohesion but still in a militaristic sense meaning that the members will protect each other and use the resources at their disposal to achieve common goals. Despite the appearance of camaraderie loyalty does not come into play the users that do not rise to the standards will be immediately removed.

A good example is a group called Marshalls declared as being American International and led by, obviously, Marshall (US). This alliance is situated in the top three of the factions in state 255 but the other two are ethnic Turkey and Latino the first one exclusive for Turkish speaking users and the second one for South Americans with the exceptions of Brazilians. A thing worth mentioning is that the top five alliances receive significant bonuses within the general game mechanics and the first three get to participate in interstadial events where they get to compete against similar other groups from the virtual world in various challenges.

Even if the involved players are beginners, they have the obligation to take part in collective events and the unpassable rule is 24 hours without no involvement means a warning on the second warning the user is kicked out it is a rather common form of norming top tier groups, and the parameter is called AFK time (away from keyboard) which means absent from the game. All activities are organized from the bottom up on a hierarchical scale and everything is reported so that the eventual errors in organization can be corrected.

Due to its high number of members shared activities are organized in several time slots during the day considering the local time of participants. By means of all these concerted actions the alliance makes it a purpose to control as much as possible from the zones of interest and or rich in resources in order

to maintain its position in the general ranking. Any attempt of aggression from other groups is countered with maximum force and it can escalate up to the total disintegration of the attacking groups and subsequently absorbing into the alliance the relevant users from those groups and those who are willing to take upon themselves to stick to the pseudo social norm taken into discussion earlier.

On the other side of the coin one can find a combination between Bartle's socializers and explorers. It is a more *relaxed* form of organization to make an analogy, small Switzerlands in a post-apocalyptic world. Very much focused on socialization these are small communities with a maximum of 20 to 30 users involved, but who are very strong on an individual scale, generally we're talking about top 30 to 50 in the state general ranking for individuals.

These users know each other well even though they do not meet in the real world. Many times, the discussions in the group replace going out in the pub or a bar where members shared their daily problems related to family, job, or the socio economical context of the geographic area that they live in physically. It is a phenomenon that is worth further research more in depth and in more detail in future studies because it is not singular or specific to this platform but it's actually a whole class of such communities that emerged in all virtual environments along with the social distancing in real life during the quarantine periods.

The group characteristics are rather few members relatively well organized very sociable all group decisions are made in a form of democratic rule by agreement of a certain majority, rules are few and lax if they exist at all, mostly the community relies on the common sense of the users. This type of alliances has a medium level of resources at its disposal but access to any form of resources in the game is somewhat guaranteed. Even though their main weapon is discussion and diplomacy forceful actions can be very damaging to other formations by the individual force that each player brings about. Most of the times these players are hardcore veterans that can do extreme damage by themselves. Major alliances would rather avoid conflict which would be way too costly compared to what they would concede on a diplomatic level furthermore obtaining the sympathy of the relaxed group.

In the same sense loyalty between individuals is carried out to the extreme the community will protect an inactive individual for a very long time and in the case of a focused attack from an external power will retaliate with devastating force, many times making eliminating that particular adversary a purpose in itself. Since the users are so few they can organize easily and being very powerful quickly become dangerous on a global scale.

An example that would best illustrate this category is the alliance friendship declared international and led by Wendell (UK) who even though is one of the least experienced members is more active thus getting to command the group. In fact, it is a common practice within these alliances that the group would be led by novices in order for them to better learn the ropes of the game. Usually there are no fixed rules just a daily collective action that ensures the well-being of the alliance.

There are however more or less personal the part talks in the group chat with topics ranging from work issues to the activities of the members' kids on that day. External communication is also very important aspect of this group there are agreements and truces with all neighbors and all more powerful alliances, As the matter of fact, in interstate events most of the time the group will offer valuable assistance for those very competitive at the top.

On an organizational level things are relatively simple assistance is offered unconditionally, aggressive actions against other players are discouraged, and all the efforts are focused towards events that represent challenges within the game this means that most battles will be against NPCs (non-player characters), the downside of it being that it is a type of alliance less suitable for beginners because individual progress is slow, a pace better suited for the more seasoned players who have less time at their disposal to spend playing the game.

A middle ground can be found in the third category of social groups one that can be best described as *occasional*. Even though the frequency of players participating in group events is not necessarily low, besides the top tier the others do not religiously follow a schedule. Such alliances are rather successful, and this is due to the fact that they usually have many members and even though they do not regularly participate in activities there will be enough around for any occasion.

Many times, these social formations have a theme for instance the chosen example is called Big Dogs and the theme is quite obvious. Very often, these alliances divide into subgroups according to various common interests ranging from pets to favorite TV shows. The level of communication is average tasks within the group are very clear but not all users know each other and there's no strong social cohesion or feelings of belonging, camaraderie and loyalty generally applicable.

The group characteristics are weaker organization compensated by the number of actions in players, very sociable and friendly but not so tied to the community. The set of rules comprising the pseudo social norm refer more to the players behavior imposing standards of conviviality and politeness rather than issuing battle orders and organizing aggressive actions. The top tier is very coagulated and works as a driving force for the alliance mostly by power of example. There is a form of competitivity involved, this type of alliance can be found on all levels and certain users will constantly strive to be better but not at the level of the competitive alliances. Actually, those willing to accelerate their progress will tend to migrate towards the competitive type groups.

On a communicational level, things are considerably ambiguous topics and trends vary significantly and externally there is no common direction of the diplomatic speech. But what makes this type of communities really spectacular is diversity. This is probably the most eclectic category of groups they will gather users of all sorts nations and orientations of all interests and trades and last but not least various degrees of involvement into the virtual world of the game.

The example taken into consideration, Big Dogs is international as well, with English as the official language run by (who else) Big Dog (DK) Is pretty relevant for the aforementioned characteristics as it is assumed that all members are dog owners or at least dog lovers. As the matter of fact, most of the social communication is built around experiences related to four legged friends.

In spite of its diversity the group has a few norms for organizing and a hierarchical structure that is better defined as compared to the relaxed groups. Nevertheless, the level of coordination is nowhere near the competitives and

the general set of rules can be bent easily. With over 50 members the force of the group is significant but not its influence certain elements being very vulnerable in the case of a confrontation with a larger group for instance an ethnical group where the diplomatic abilities of the leader are less relevant.

This type of organization represents a good place to start, a new player will receive advice and assistance, but once used to the mechanic of the game should one desire to be more competitive one must migrate to more dynamic alliances. This also works as a very comfortable zone for "retired" players that no longer spend very much time in the virtual world but visit it occasionally.

Theoretically speaking there is a fourth category, the chaotic one, but as the name states the high social entropy element makes such alliances to lose group cohesion rapidly. None of the groups encountered throughout the data collection process had the lifespan of more than three months regardless of the nature of the players or management choices.

Hierarchical structures fall apart easily, and, in most cases, entire subgroups of members migrate or are being absorbed by other more offering alliances at that moment. As a direct consequence in practice, one cannot define this type of category unless considered as an intermediary stage or temporary category.

Conclusions

This preliminary study barely scratches the surface of knowing and understanding of a phenomenon that is so bizarre and complex. It is with the beginning to carry out similar studies may be approaching other virtual worlds though this one is still of high interest on the market. Most certainly the pandemic has altered not just the way in which users perceive media products and their consumer habits but even the means used to communicate information and convey content. At the same time social aggregation algorithms and the nature of communication in such virtual communities that exist in persistent worlds alters significantly veering towards the personal.

This can be observed also in the nature of their relationship individual versus world Bartle and also in establishing the set of behavioral parameters that we frequently call social norm. In the case of virtual communities, further research is worth focusing on the type of information propagation and understanding the ways in which social communication mediated by networks functions. Obviously, there are many similarities but also a significant number of differences between the virtual and the physical. Virtual communities have dynamics and structures of their own same as the real ones even more they influence directly the existence of the physical ones, transforming the individual perception of society and even redefining social norm in the real world. In order to better understand all these mechanisms researchers need to accelerate the development of new methods both qualitative and quantitative and also adapt existing ones to this particular environment.

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