

Massively multiple online role playing games as normative multiagent systems

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Abstract. The latest advancements in computer games offer a domain of human and artificial agent behaviour well suited for analysis and development based on normative multi agent systems research. One of the most influential gaming trends today, Massively Multi Online Role Playing Games (MMORPG), poses new questions about the interaction between the players in the game. If we model the players and groups of players in these games as multiagent systems with the possibility to create norms and sanction norm violations we have to create a way to describe the different kind of norms that may appear in these situations. Certain situations in MMORPG are subject to discussions about how norms are created and propagated in a group, one such example involves the sleeper in the game Everquest, from Sony Online Entertainment (SOE). The Sleeper was at first designed to be unkillable, but after some events and some considerations from SOE the sleeper was finally killed. The most interesting aspect of the story about the sleeper is how we can interpret the norms being created in this example. We propose a framework to analyse the norms involved in the interaction between players and groups in MMORPG. We argue that our model adds complexity where we find earlier norm typologies lacking some descriptive power of this phenomenon, and we can even describe and understand the confusing event with the sleeper in Everquest.

Introduction

The games of today, both computer games and console games, are starting to focus on the opportunities that online co-operation can provide for the gaming experience. Games such as World of Warcraft (WoW) can have as many as thousands of active players in one of their gaming servers at the same time. Much of the “Massively multiple online role playing games” (MMORPG) genre seems to be all about co-operation and playing together and this in turn makes MMORPG:s an interesting phenomenon to investigate. In WoW there are many opportunities to engage in different social formations of different sizes, but one of the most common is to join a guild. A guild is a group of players that decide to play together for a period of time exceeding the length of one playing session. It is also possible to form smaller groups with short term goals.

After exploring the game world of WoW it is obvious that these games have rules, codes of conduct, do:s and don't:s that are either explicit or implicit. We may even want to call them norms, and these norms seem to be part of the very fabric of the interaction in this game genre. It is important to get an understanding for the differences between where a designer actually could influence the norms and where the norms are beyond the control of the designer and perhaps constantly evolving. If we take a close look at different aspects of most MMORPG:s it will be apparent that some parts of the game will live a life of its own, where local norms will appear through the interaction between players.

In "Ten Challenges for Normative Multiagent Systems" (Boella et al, 2008b), one of the examples comes from game playing, describing a team effort in Everquest to kill "The Sleeper", which was initially designed to be unkillable. This example is also used as the running example in (Boella et al. 2008a). Being interested in the design of games and following discussions online, it seems as though the killer actually was vulnerable to the attacks of the group due to a miss when updating one of the zones in Everquest, therefore a series of events led the sleeper to be killed by the group after some consideration from Sony, since one group came really close when the sleeper suddenly disappeared (this is thought to be the result of a Sony employee, resetting the instance when the impossible was about to happen). All other scenarios than this would indicate that the game designer would have made a big mistake in the initial efforts of designing the Sleeper. For more details we include the email send by Sony¹ and an explanation offered on Wikipedia² both focussing on a software glitch as the cause for the first Sleeper killing.

¹ "The Sleeper (11-17-03)

Over the weekend several guilds gathered on Rallos to fight with the Sleeper. Unfortunately, their encounter was cut short due to an apparent bug. I wanted to take a moment here and apologize to those that were there, and to those that have heard about the event through their friends. The bug concerned an NPC in the zone that appeared to have been causing the Sleeper to not focus on the player characters. The decision was made at the time to end the event. Further investigation has only served to make it unclear if this was a real issue or not.

I, on behalf of the company, apologize for any consternation this may have caused during your play time. If anyone is going to defeat the Sleeper, it should be done without any question about the validity of the event. We're very sorry that this first attempt was halted, but at the time it seemed like the best thing to do.

We have resurrected and restored those that participated. We have corrected the potential problem, and have reset the encounter. Other than that one potentially problematic NPC, nothing else about the encounter has been changed.

We want to wish those on Rallos that are planning to tackle the Sleeper the best of luck.

Send me some screenshots of all of you standing around the corpse, I'd love to post them on the site.

Thank you and thanks for understanding,

Alan" (EverQuest Chat)

² "Kerafyrn, "The Sleeper", is a dragon boss in the original "The Sleeper's Tomb" zone.

In this article we will introduce the view on norms as it has developed in the social sciences, mainly sociology. Then we will propose an extension to the normative framework developed by Gibbs (1965) and apply this framework to situations in WoW. Finally we will describe some related research before we finish with conclusions and proposals for future research.

Normative multiagent systems and the definition of norms in the social sciences

At the 2007 NorMAS Dagstuhl workshop the definition of a normative multiagent system was the concluding part of the whole week, together with a list of future research questions. In the introduction to the following JAAMAS special issue (Boella et al. 2008b) the definition voted for by the majority of participants is presented as:

"A normative multiagent system is a multiagent system organised by means of mechanisms to represent, communicate, distribute, detect, create, modify, and enforce norms, and mechanisms to deliberate about norms and detect norm violation and fulfilment."

Note that the definition does not define the nature of the agents (i.e., they can be artificial or human) nor about the boundaries of a normative system (even if it gives the impression of a well-defined system).

Within the social sciences and more particularly in sociology and social philosophy norms are discussed and defined in different ways. We present

While sleeping, Kerafyrn is guarded by four ancient dragons (warders) in "The Sleeper's Tomb". When all four dragons are defeated by players and are dead at the same time, The Sleeper awakes, triggering a rampage of death. Kerafyrn travels through and into multiple zones from The Sleeper's Tomb to Skyshrine, killing every player and NPC in his path. This event is unique in EverQuest, because it can only occur once on each game server. Once The Sleeper awakes, neither he nor the original guardians will ever appear again on that server, unless the event is reset by SOE.

As of 12 July 2008, Kerafyrn remains asleep only on the Al'Kabor (Macintosh) server.

Originally intended to be unkillable, SOE prevented a raid of several guilds on Rallos Zek server from potentially killing him because of a potential bug. SOE later apologized for interfering,[25] and allowed the players to retry the encounter.

"Kerafyrn The Awakened" appears in the expansion Secrets of Faydwer as part of a raid event "Crystallos, Lair of the Awakened" in the instanced zone of "Crystallos." " (Wikipedia)

some of the definitions common on the social sciences and conclude with the framework we will use.

In Gibbs (1965) a typology of norms concerning the regulation of behaviour and acts is described encompassing conventions, morals, mores, rules and laws as depicted in table 1. These various social mechanisms are structured using the following dichotomies:

- Probability that a sanction will be issued (yes – no)
- Characteristics of the agent issuing a sanction (special status or no special status)
- Evaluation of an act (collective or not)
- Expectation concerning the act (collective or not)

		Low probability of a possible sanction when the act occurs	High probability of a possible sanction when the act occurs			
			By anyone (i.e., without regard to status)		Only by a person or persons in a particular status or statuses	
<i>evaluation of the act</i>	<i>expectation concerning the act</i>		By means that exclude the use of force	By means that may include the use of force	By means that exclude the use of force	By means that may include the use of force
Collective evaluation	Collective expectation	Type A: Collective conventions	Type D: Collective morals	Type H: Collective mores	Type L: Collective rules	Type P: Collective laws
	No collective expectation	Type B: Problematic conventions	Type E: Problematic morals	Type I: Problematic mores	Type M: Problematic rules	Type Q: Problematic laws
No collective evaluation	Collective expectation	Type C: Customs	Type F: <u>empty class</u>	Type J: <u>empty class</u>	Type N: Exogenous rules	Type R: Exogenous laws
	No collective expectation	Logical null class, i.e., non-normative	Type G: <u>empty class</u>	Type K: <u>empty class</u>	Type O: Coercive rules	Type S: Coercive laws

Table 1. Gibbs' Norm typology (1965)

Tuomela (1995) on his turn distinguished two kinds of social norms (meaning community norms), namely, rules (r-norms) and proper social norms (s-norms). Rules are norms created by an authority structure and always based on agreement making. Proper social norms are based on mutual belief. Rules can be formal, in which case they are connected to formal sanctions, or informal, where the sanctions are also informal.

Proper social norms consist of conventions, which apply to a large group such as a whole society or socioeconomic class, and group-specific norms. The sanctions connected to both types of proper social norms are social sanctions and may include punishment by others and expelling from the group. Aside from these norms, Tuomela also described personal norms and potential social norms³ containing, among others, moral and prudential norms (m-norms and p-norms, respectively). The reasons for accepting norms differ as to the kind of norms:

- Rules are obeyed because they are agreed upon.
- Proper social norms are obeyed because others expect one to obey.
- Moral norms are obeyed because of one's conscience.
- Prudential norms are obeyed because it is the rational thing to do.

The motivational power of all types of norms depends on the norm being a subject's reason for action. In other words, norms need to be internalized and accepted.

Therborn (2002) distinguishes three kinds of norms. Constitutive norms define a system of action and an agent's membership in it; regulative norms describe the expected contributions to the social system, and distributive norms defining how rewards, costs, and risks are allocated within a social system. Furthermore, he distinguishes between non-institutionalized normative order, made up by personal and moral norms in day-to-day social traffic, and institutions, an example of a social system defined as a closed system of norms. Institutional normative action is equalled with role plays, i.e., roles find their expressions in expectations, obligations, and rights vis-à-vis the role holder's behaviour.

In Elster (2007) a whole range of social mechanisms are described. Among them is the concept of social norms. A social norm is defined as an injunction to act or abstain from acting. The working mechanism is the use of informal sanctions aimed at norm violators. Sanctions may affect the material situation of the violator via direct punishment or social ostracism. An open question is the costs of sanctioning. Apart from social norms Elster describes moral norms (that are unconditional) and quasi-moral norms (like social norms these are conditional but triggered by being able to observe what others are doing instead of by being observed by other people as is the case for social norms). Other connected concepts are legal norms (where special agents enforce the norms) and conventions that are independent of external agent action. In his text, Elster discusses in detail some examples of norms such as: norms about etiquette, norms as codes of honour, and norms about the use of money.

³ Potential social norms are norms that are normally widely obeyed but not in their essence based on social responsiveness and that, in principle, could be personal only.

Combining these frameworks results in the following: Therborns regulative norms encompass all of Gibbs categories whereas Therborns constitutive and distributive norms are outside of Gibbs' scope. Tuomela's r-norms encompass Gibbs type L, M, P and Q and his s-norms type D, E, H and I respectively. The moral norms Tuomela mentions are outside of Gibbs scope as these are norms where an agent is its own evaluator. Prudential norms are incommensurable with Gibbs typology or indeed any other typology. Elsters moral norms are equivalent to Tuomela's moral norms whereas his quasi-moral norms seem to fit to Gibbs type O and S. Elster's conventions map to Gibbs type A and the legal norms to type P or Q. This is presented in table 2 below.

In the remainder of this paper we will use the following notion of norms:

"Norms are statements about the appropriateness of an agent's act which may result in a sanction being issued by another agent or an agent belonging to a specific class of agents."

		Low probability of a possible sanction when the act occurs	High probability of a possible sanction when the act occurs			
			By anyone (i.e., without regard to status)		Only by a person or persons in a particular status or statuses	
<i>evaluation of the act</i>	<i>expectation concerning the act</i>		By means that exclude the use of force	By means that may include the use of force	By means that exclude the use of force	By means that may include the use of force
Collective evaluation	Collective expectation	Elster conventions	Tuomela s-norms	Tuomela s-norms	Tuomela r-norms	Tuomela r-norms/ Elster legal norms
	No collective expectation	Type B. Problematic conventions	Tuomela s-norms	Tuomela s-norms	Tuomela r-norms	Tuomela r-norms/ Elster legal norms
No collective evaluation	Collective expectation	Type C: Customs	Type F: <u>empty class</u>	Type J: <u>empty class</u>	Type N: Exogenous rules	Type R: Exogenous laws
	No collective expectation	Logical null class, i.e., non-normative	Type G: <u>empty class</u>	Type K: <u>empty class</u>	Elster quasi-moral norms	Elster quasi-moral norms

Table 2. Adapted version of Gibbs' norm typology (equivalent to Therborns regulative norms) encompassing Elsters and Tuomelas norm typologies.

Norms in MMORPG

We propose to use the revised framework presented above to understand the dynamics of the most common norms and norm violations in MMORPG:s.

In MMORPG:s severe violations are usually punished by ostracisation of the norm violators or the loss of points in a value system where a player can earn points for assisting the guild in raids (measured in DKP, short for Dragon Killing Points). It may be difficult to differentiate between what social behaviour is acceptable and what is not.

Some players exhibit behaviour that violates norms in ways that could be described as cheating or grief play. Some of these examples are so common that most guilds have structured their rules to cover these issues as well. Smith (2004) mentions three different categories of behaviours that might infringe on the gaming experience of others. The three categories are cheating, local norm violation and grief play.

Cheating

“Cheating” is the use of any technique that runs against the spirit of the game without being technically unfair (in the sense that it is violating a norm). It is however difficult to prove whether or not someone is cheating. The risk of sanctions being made against a violator depends on the severity of the violation. If the violation is very severe there usually is a “High probability that an attempt will be made to apply a sanction when the act occurs” (from Gibbs typology (1965) corresponding to Tuomela s-norms).

Local norm violation

“Local norm violation” is any violation of a mutual understanding of how the game ought to be played. These actions have different level of implications for other players and the players are usually sanctioned if the violation appears repeatedly. These violations have a “High probability that an attempt will be made to apply a sanction when the act occurs” from Gibbs typology (1965) but we have to keep in mind that minor violations might be ignored. These actions could potentially be sanctioned by anyone in the group, but the most probable solution in the case of a raid group would be that the raid leader would solve the problem without the use of force. The severest forms of violations may be punished with ostracism.

Grief play

“Grief play” is a broad category of behaviour which causes a severe and stressful disadvantage to the target. Examples of grief play are; unprovoked harassment through game chat channels, repeatedly killing a player as soon as the character comes back to life, and behaviour not related to the winning condition of the game. Grief play in its different forms is behaviour that infringes the higher level norms of the realm and can be difficult to sanction. The penalty for someone engaging in this kind of activity should perhaps be ostracisation, but since the players are from different factions, it is difficult to make any sanctions from the victim’s side. Grief play would therefore fit the description of “Low probability that an attempt will be made to apply a sanction when the act occurs” from Gibbs typology (1965).

All examples above are examples of social norms, since norm violations are punished with sanctions and are thus in accordance with e.g., Elster and our definition of norms. In the case of the last example this can be hard to prove however. The typology taken from Gibbs gives a better understanding at least when it comes to the probability of a sanction to occur, but it is very difficult to judge from case to case, since all these violations have different severity and impact on other players. Thus it seems that Gibbs framework and consequently also our revised framework may need to be extended to produce a more fine grained categorisation.

Norms regulating the use of money

Not surprisingly, money and valuable equipment may lead to conflicts in MMORPG:s. There are multiple ways of breaching norms for how to distribute money and equipment between all members of a guild. Some of the most common examples where discussions about money occur are the following situations; begging, ninja looting, and twinking.

Begging

Begging is usually other gamers in game asking for money, and this can in fact be disturbing behaviour that many guilds have strict rules against. Most beggars are being ostracised or ignored, since it is hard to make other sanctions against them. Beggars will eventually earn a bad reputation since gamers will gossip about this unwanted behaviour. It may be argued that this is addressed by Thernborns distributive norms.

Ninja looting

Ninja looting is another form of misconduct that most guilds have rules against. When a gamer steals the loot from another gamer under certain conditions when playing as a group this is defined as ninja looting.

Both begging and ninja looting have a “High probability that an attempt will be made to apply a sanction when the act occurs”, ostracism is the most probable action taken, but other actions may occur. The probability of sanctions including force is not very probable. Ninja looting can also be seen as a breach against Therborns distributive norms thus placing it outside the set of regulative norms.

Twinking

Twinking is when a high level gamer decides to help a low level character with money to buy better equipment or helping the low level gamer killing creatures above his/her skill level.

The last example is actually not a serious norm violation and most gamers do not care about it and thus it would fit in the first category of Gibbs’ typology (1965) where no sanction would appear. It would also fit in under Therborns distributive norms.

Norms regulating the use of tools

Most MMORPG:s today are highly complex and sometimes a player can find that it is hard to keep track of the situation in game. Most games with a certain degree of complexity will eventually be subject to “add-ons”, where someone develops tools to highlight information in the game or perhaps give certain advantages for a player with the add-on installed.

Add-ons range from small “cheating” applications in games such as “Counter strike” where “auto aiming” and the possibility to see through walls were used by some players. In WoW the most common add-ons are used for co-ordinating raid groups and displaying statistics for all characters in an instance (both players and Mob). This gives all players in the group an advantage that is not considered unfair, since most players use this kind of tools. But what is interesting is where to draw the line of what is considered enhancing the game and what is considered cheating. Norms are usually subject to constant change and there are interesting stories where new forms of norms are being created.

T L Taylor (2006) describes the use of a tool called CTRaidAssist during a raid. This tool monitors many statistics of the characters of a raid group and in this example someone in the group came a bit too close to a mob (a non-player character or NPC) and therefore the entire group was being attacked by the mob and nearly killed. The raid leader (using CTRaidAssist) could see that the amount of aggression (a measurement of how close or threatening a character is to a mob) had increased, which had triggered the attack. The interesting part about this story is that the raid leader told everyone in the raid group that if someone would do the same thing again, this would result in penalties. This shows that tools can be used to monitor the players’ behaviour and thus enable the possibility of sanctioning behaviour that previously could not be sanctioned. This involves

a move from one category in Gibbs framework to another. Without the tool there is no or a very low probability of a sanction since the action cannot be detected. The tool enables a special person (in this case the raid leader) to issue a sanction. The message send by the leader leads to a collective expectation that players will refrain from this action and it is only the leader that can evaluate so there is no collective evaluation. So, introducing the tool moves the raid group from the logical null-class (non-normative situation) in Gibbs' typology to the situation labelled as "exogenous rules" (type N) even if the rules and sanctioning agent are mutually agreed upon in and part of the group.

Different levels of organisation where norms appear in MMORPG:S

WoW can be described at different organisational levels and as different types of norm systems, ranging from a high level perspective (the different types of servers, usually called realms in the game) down to the lowest level focusing on players and small groups. What seem to be characteristic about the higher levels such as the different gaming realms and factions is that the norms are of a wider scope, and communicate the spirit of the game without much attention to detail. On the middle level (Guilds) there seems to be a stricter way of communicating, creating, and changing norms. It is apparent that a large group needs some form of organisation to work properly. On the lowest level (groups) there seems to be a mutual respect for the group and the norms are close to what could be considered common sense. The difference between the highest level and all levels below is that sanctions are more easily distributed on the lower levels, perhaps because they are agreed upon within a group with a finite number of players in a way similar to the proper social norms discussed by Tuomela (1995).

Game servers

The different types of game servers give rise to different sets of norms for the type of interaction that takes place on the server. Three different kinds of servers will be mentioned here, since they are the most common:

1. Normal servers (No special rules applied),
2. PvP servers (Player versus Player), and
3. RP servers (Role Playing Servers).

There are combinations of these types of servers, but they will not be discussed here since these combinations do not interfere with our analysis of the basic types.

For our purpose the most interesting types of servers are the fairly restricted RP servers where all players are to stay in character when playing. This means that the player has to play along and make decisions according to what would be most likely for the character in the game. For instance, discussing game functionality or other meta-gaming issues is not

allowed on these servers, since it would interfere with the overall gaming experience.

Normal servers are servers where no explicit rules are applied. This gives players a freedom from the strict rules of the RP servers which could possibly lead to a different kind of interaction. The special rules on the level of game servers are an example of the constitutive norms as described by Therborn.

Factions

All MMORPG:s have some kind of history and a world with resources that are being shared between its inhabitants in one way or the other. For the sake of making this history interesting a player belong to a faction. In WoW one is associated with either the Horde faction or the Alliance faction depending upon the race choosen during the character creation process. On all types of servers it would be fair to kill a character from the opposing faction. But there are specific norms on what is acceptable and what is not. For instance, a high level player who kills someone from the opposing faction who does not stand a chance of defending him/herself would be regarded as playing unfair, or even as a performing grief play, and may, if repeated, lead to a stressful disadvantage for the target.

Groups (Guilds and small groups)

Groups in WoW may lead to observable behaviour and sometimes conflicts. Guilds usually have a forum page where all issues concerning in game tactics are being discussed. Rules are usually available in the forum pages of guilds, to inform all players of the norms that all players should stick to.

Large groups/Guilds

Guilds are large group of players that play together often aiming at co-operating in so called raid groups. A raid group consists of as many as 25 players co-operating to overcome Non player characters (NPC) in special instances of the game.

Small groups

Small groups can consist of 2 or more players co-operating on small missions in game, called quests. In WoW, it's sometimes apparent that the quests are too hard for a single player and that joining a group is the only solution to solve the quest.

		Low probability of a possible sanction when the act occurs	High probability of a possible sanction when the act occurs			
			By anyone (i.e., without regard to status)		Only by a person or persons in a particular status or statuses	
<i>evaluation of the act</i>	<i>expectation concerning the act</i>		By means that exclude the use of force	By means that may include the use of force	By means that exclude the use of force	By means that may include the use of force
Collective evaluation	Collective expectation	Elster conventions	Tuomela s-norms interaction in small groups and in guilds, cheating, and local norm violation	Tuomela s-norms interaction in small groups and in guilds, cheating, and local norm violation	Tuomela r-norms	Tuomela r-norms/ Elster legal norms
	No collective expectation	Type B. Problematic conventions Grief play	Tuomela s-norms cheating, and local norm violation	Tuomela s-norms cheating, and local norm violation	Tuomela r-norms	Tuomela r-norms/ Elster legal norms
No collective evaluation	Collective expectation	Type C: Customs	Type F: <u>empty class</u>	Type J: <u>empty class</u>	Type N: Exogenous rules Guildleader using CTRaid Assist	Type R: Exogenous laws
	No collective expectation	Logical null class, i.e., non-normative	Type G: <u>empty class</u>	Type K: <u>empty class</u>	Elster quasi-moral norms	Elster quasi-moral norms

Table 3. Categorization of the examples given our adapted version of Gibbs' norm typology.

Related research

In Boella et al. (2008a) the EverQuest example described above is used as a running example in an analysis of norm negotiation in online multi-player games. The authors describe a two step negotiation process where the first step consists of negotiating a social goal and the second step is negotiating the norms and sanctions. Thus the setting is an argumentative one. However the norms are statements over goals rather than acts. Since this gives the agent freedom on how to obtain a goal there is no expectation concerning acts, only with regard to obtaining a goal. The authors also accept norms not connected to sanctions. If we put this research into Gibbs typology of norms then it would fit into the category “Logical null: i.e., non-normative.” Since we base our research on Gibbs and other social science theories on norms, the definition of norms (Boella et al. 2008a) use is not compliant with our definition because we include only norms connected to possible sanctions and as evaluations of acts rather than goals. A problem with goals is of course that one never knows if a goal will be obtained thus without the concept of time sanctioning is impossible. If norms instead are seen as addressing acts as they occur the evaluation is independent of any projections into the future. The tools proposed in (Boella et al. 2008a) address the issue of communication between agents at the level of goals.

Conclusions and discussion

We have introduced the reader to an extended version of the norm categorisation scheme developed by Gibbs (1965). In our examples we have shown that this framework enhances our understanding of human MMORPG gamer behaviour and that we can include the norms of agents external to the normative multiagent systems in the framework. Whatever the true explanation for the Sleeper example may be, be it an extreme form of collaboration or a consequence of a software glitch, it illustrates the point of the importance of the norms imposed from outside the agent system, namely the norms of the designers. If the software glitch explanation is true we may see this as move from the situation in L/P in Gibbs typology (i.e., only persons with a particular status may sanction the outcome of an action given the collective evaluation of the act and the collective expectation towards the act, also presuming Sony and the players to form one shared system) to either situations O/S (i.e., only persons with a particular status may sanction the outcome of an action given there is no collective evaluation of the act and no collective expectation towards the act, thus presuming Sony and the players do not form one shared system) or even to the logical null class (same as previous categorisation only with a low probability there will be a sanction).

The framework itself suggests that tools for normative multiagent systems should include possibilities to monitor behaviour, moving the whole system to another part of the categorisation matrix by enabling sanctioning. We propose that the extended

framework needs to be developed further to a finer grained categorisation to deal with the (close to) real world phenomena encountered in MMORPG.

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