



Cyberspace Outlaws – Coding the Online World

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Abstract

Online gaming creates unique public spaces of interaction. These spaces are both highly controlled but also able to slip through the regulatory net, as domestic legislation struggles to respond to fast-changing interjurisdictional environments. Inter- and transdisciplinary research hold potential to respond to questions surrounding the regulation of these online spaces, by exploring multiple perspectives. The authors of this paper each come from a unique starting point in their exploration of these issues. The paper will examine three spaces of regulation in online game world environments. It will look at (1) rules and regulations that governs online interaction in virtual spaces, (2) the ‘code’ that controls behaviour through game architecture, and (3) the laws that are developed by players inside the game world. The first part will analyse whether domestic law can be adequate to regulate a space that is not geographically fixed. The second will discuss how the coding of the game and its architecture regulate behaviours within the space. The last is a “bottom-up” regulatory system, originating within the gaming community. Where do these three layers of regulation interact with each other? What are the unique languages of these spaces? This paper is a starting point for further investigation into the regulation of online behaviours through interwoven rule systems.

Keywords Avatar · Player · Virtual spaces · *Cyberconjunction* · Magic circle · Symbolic representation

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1 Introduction

The internet has created new zones for interaction. Online spaces have increased exponentially in terms of number, complexity, and sophistication as data processing and transfer speeds increase, and uptake becomes ubiquitous – meaning that nearly everyone on the planet, even in the Global South, now has access to a connected device. Legal systems struggle to keep up as technology rapidly advances, and action takes place across traditional jurisdictional boundaries. This has led some to see online spaces as ungovernable spaces of anarchy where anything is possible [1]. While this might be true in contexts such as the ‘dark web’, the ubiquity of connected devices also leads to heightened regulation, where every action is potentially traceable [2]. Mobile devices allow a kind of surveillance beyond George Orwell’s wildest imaginings [3] as people sign up to apps that allow their lives to be traced, tracked, and located in time and space.

This paper will ground a discussion of online spaces in theories about public space and law, to explore the ways that these spaces may be regulated both from the ‘outside’ and ‘within’. The paper will be particularly interested in the spaces where these regulations bleed, blend, and interact, also known as *interreality*, a term coined by J. van Kokswijk [4], which captures the point of convergence where the virtual and real worlds intersect.

It uses a combination of methods to do so. Material from the existing literature on the subject informs a critical ethnographic research methodology where the researchers convey their experiences of online spaces as active members of the online communities examined [5]. From this perspective, the researchers provide a unique examination of online gaming spaces [6] and the interaction and regulation that takes place there. Critical ethnography weaves the voices of the researcher with the topic to be researched to break down traditional research boundaries [7]. This has the effect of ‘repopulating the text’ with the voices and bodies of research subjects, to create a ‘multivocal text.’ [8].

A starting point for this conversation is the work of Henri Lefebvre. Lefebvre wrote extensively on city spaces during the 1960s. Lefebvre proposed that different societies produce their own spaces. His ideas draw on Marxist theories of production and envisage an active role for human populations in producing spaces [9]. The everyday activities that people take part in within the architecture of the city play a key role in what the city becomes and how it is experienced [9]. The importance of this social production of space led Lefebvre to theorise that the failure of socialism was caused by society’s inability to produce a truly socialist space [9].

While Lefebvre is still a useful starting point, theoretical discussions of the city now need to incorporate its global connectedness and the ubiquity of augmented and digital spaces. Manuel Castells early work on the ‘Space of Flows’ imagines cities as nodes in a network, where the physical spaces of the city are transformed by their importance as hubs in global networks [10]. Castells writes that the space of flows is ‘the material organisation of time-sharing social practices that work through flows.’ [10] This is not a placeless space, but one where interactions between actors are ‘physically disjointed’ but can be simultaneous [10].

In this physically disjointed but connected space, it can be more difficult to define boundaries, and thus create effective laws which traditionally rely on physicality and jurisdiction for enforcement. Online spaces transgress physical notions of space where disembodied avatars can interact while ‘in real life’ (IRL) they are oceans apart.

Online spaces create further complexities in the ways that people can relate and socialise, and in how behaviours are managed and regulated. Mobile technologies mean that people are almost always on internet-connected devices, wherever they go. These devices also augment our experiences of the offline world by providing real time reviews and information about the IRL spaces around us.

These are just some of the challenges when it comes to regulating online spaces. The complexity of the online world and how it overlaps and interacts with offline or ‘real’ spaces adds another layer of human experience that the legal system has yet to catch up with.

This paper will discuss interactions in the online world of gaming, to consider how behaviours are regulated there. It will do so through a discussion of how these spaces are created by the players and how each game world develops its own cultural practices, which govern how people regulate themselves within them. As the legal system struggles to control the users through mechanisms such as End User Licence Agreements (EULAs), can we look inside the gaming societies themselves for solutions to undesirable behaviour? Some limits can be placed on the citizens of these communities through the design of the code, which forms the architecture of the game. However, even this coding can be ‘hacked’ by users of the space, leading the authors to conclude that successful regulation of the game space must come from the ground up, in the form of user created rules.

2 Game and Game Related Theory

In *Homo Ludens*, Johan Huizinga argues that play serves a much greater purpose in society than simply a leisure activity. For Huizinga, play is a voluntary yet crucial part of cultural life [11]. Play creates its own space, both temporally and spatially. ‘Play is distinct from “ordinary” life in both locality and duration. It is “played out” within certain limits of time and place. It contains its own course and meaning.’ [11] Play creates a ‘magic circle’, within which the rules of the game are law. However, worse than breaking the rules of the game is the ‘spoil sport’ or person who breaks the magic circle of gameplay.

Rules and codes of gameplay can be those that are written down or agreed to prior to starting play, and there are those that develop during gameplay, created by the players themselves.

‘All play has its rules. They determine what “holds” in the temporary world circumscribed by play. The rules of a game are absolutely binding and allow no doubt....Indeed, as soon as the rules are transgressed the whole play-world collapses. The game is over.... the spoil-sport shatters the play world itself. By withdrawing from the game he reveals the fragility of the play-world in which

he had temporarily shut himself with others. He robs play of its illusion – a pregnant word which literally means “in play”...’ [11].

2.1 Interreality

As stated in the introduction, this paper is particularly interested in the spaces where different forms of regulations bleed, blend, and interact. This form of *cyberconjunction* can use the term coined by J. van Kokswijk [4, 12], interreality, to capture the point of convergence where the virtual and real worlds intersect. The interaction of real-life and virtual rules in public spaces of Massively Multiplayer Online game (MMO) creates a symbiotic relationship where each influences and adapts to the other. Players bring with them their values, which are based on real life (RL) rules, ethics, and morals unless they consciously choose not to. Avatars in virtual public spaces act accordingly [12]. Within these digital spaces, the negotiation and interpretation of real-life values and virtual rules are crucial for establishing a shared understanding and constructing meaning. Communication methods within public spaces in virtual worlds consist of various elements:

- Textual and verbal communication (chat systems and forums).
- Visual representations, such as avatars and virtual objects, serve as symbolic entities that convey personal identity, social status, or affiliations.
- Avatar behaviours, such as gestures or animations, enable non-verbal communication and expression.
- Forming communities and social networks based on shared interests and values.

Interreality has been discussed from the viewpoint of several sciences and topics, such as – health [13, 14], education [15] and computer games [16].

2.2 Ethnography Perspective

Alan Bryman categorizes the researcher’s role into four levels of participation: (i) participating, (ii) partially participating, (iii) minimally participating, and (iv) non-participating [17]. Of the three authors of this study, two have extensive experience playing MMOs for over two decades.¹ They would be classified by Bryman as ‘participating.’ They have dedicated significant time to playing one or both chosen games. The authors who participated in the study have spent up to 15–20 hours per week on the chosen online games for this paper, depending on their real-life activities and commitments. By some gaming communities they would be classified as “casual players,” as there are others who commit to joining the top 10% of guilds that require daily login and participation which would require even more extensive involvement in the virtual world. The two games covered by this study are Final Fantasy XXIV™ and EVE online™.

¹ Games such as Everquest (launched in 1999), Final Fantasy XI launched 2002, EVE Online and Star Wars Galaxies released in 2003 and City of Heroes and War of Warcraft (released in 2004) and FFXIV. For release dates of games see <https://www.pcgamer.com/a-brief-history-of-mmo-games/>.

2.2.1 The World – Environment, Language, and Philosophy

The flavour of the world contrasts from the aspect of linguistics and legal philosophy (inclusive or competitive, ecological, or exploitative). EVE Online and FFXIV offer distinct features that cater to different player preferences. EVE Online stands out for its unique gameplay mechanics, intense player-against-player (PvP) interactions, and cutthroat environment. Meanwhile, FFXIV focuses more on cooperative gameplay, a rich ecolinguistics² narrative, and a robust player-versus-environment (PvE) experience.³ Therefore, these virtual worlds are fundamentally different from each other.

George Boole, a 19th-century English professor of mathematics, philosopher, and logician, argued that algebra is a symbolic language capable of expressing and constructing arguments.⁴ Computer code has its roots in algebra, while in MMO's rules for interaction are codes of/for conduct. Therefore, when codes of conduct are enforced by computer code in an avatar interaction environment, that code becomes the law – *Code as Law*. [18] There is also the possibility of informal, as in uncoded, agreed-upon, rules of interaction affecting the behaviour and actions between humans utilizing their avatars in different cyberspace settings, here called *cyberconjunctions*.

Our two rule-based cyberspace environments that are the focus of our research, Final Fantasy XIV® and EVE Online® are known as Massively Multiplayer Online Role-Playing games (MMORPG). That is, they are to a varied degree "...story-driven online video games in which a player, taking on the persona of a character in a virtual or fantasy world, interacts with a large number of other players." [19] This means that they contain "bots", that is, hardcoded Non-Player Characters (NPC) that provide plots and storylines, quests, allies, and enemies.

2.2.2 Type of Play PVP vs. PVE

One of the authors prefers inclusive and friendly gaming environments and, as such, plays only games with a Player against environment (PVE) focus, preferably where the Player against Player (PVP) element is by 'opting in'. The other author, on the other hand, plays in virtual worlds the author finds the concept and environment interesting regardless of the level of ruthlessness in the gameplay. Both gamers enjoy team play.

2.2.2.1 Final Fantasy XIV® FFXIV has a *Person-versus-Environment (PvE)* focused approach to the avatar's in-game activities. The game is mission-based, within a fantasy environment setting. It has relatively strict preprogrammed rules

² Ecolinguistics is a subfield of critical discourse analysis that examines how language affects interactions between humans, other species, and the physical environment, in order to sustain life. See <https://www.ecolinguistics-association.org/>.

³ I.e., players do not compete against other players but against monsters, non-playable characters (NPCs) or other types of challenges created by the computer code.

⁴ George Boole, *The Laws of Thought* Chap. 1 (1854).

for *People-vs.-People (PvP)* confrontations such as combat in comparison to many other MMOs, i.e., - “PvP allows players to compete against one another in one of several unique instanced arenas.” [20] That is players cannot attack each other in-game except in special locations and/or *instances*⁵. This is strictly hardcoded into the game mechanics.

The PvE part is more flexible, but still controlled by the level of experience that your avatar has achieved. The more experienced, the more areas of the *cyberconjunction* are made available for the avatar to explore. This is also driven by the hardcoded, in-game storylines within the environment. Certain missions or storylines open up different sections of the environment for the avatar.

2.2.2.2 EVE Online® EVE is based on space exploration and has an advanced economy. Players are free to fly throughout the entire game space. EVE is unique in that *People vs. People (PvP)*⁶ in-game conflict is possible between their avatars at any location outside starbases.

Each area in the game has a specific security level, providing a preprogrammed (hard coded) and specified amount of NPC protection. For example, if a “pirate” pilot decides to shoot up your mining spaceship at the higher security level, the faster and more powerful the game generates NPC ships to come to your rescue. This means that EVE provides for hardcoded enforcement of rules for behaviour, though, as noted before, EVE is highly PvP oriented.

2.2.3 Avatars and Simulation - Symbolic Representation in Cyberspace

‘The mirror is. . . a utopia, since it is a placeless place. In the mirror, I see myself there where I am not, in an unreal, virtual space that opens up behind the surface; I am over there, there where I am not, a sort of shadow that gives my own visibility to myself, that enables me to see myself there where I am absent: such is the utopia of the mirror.’ [21].

The focus of our paper is on what are known by gamers as MMOs. Generally, a game presents a “persistent world” residing on remote servers, that is, in cyberspace. Players create an avatar (which is a symbolic representation of themselves). In some sense, the created space is like Foucault’s mirror, a utopian, placeless place. Reflections of the self can then interact with other gamers in real time in this space. However, unlike the mirror, even when the player turns the game off, the game keeps running indefinitely.

All MMO players connect in cyberspace. Cyberspace refers to an ‘amorphous, supposedly “virtual” world created by links between computers, Internet-enabled

⁵ NOTE! *Instances* are a separate part of a multiplayer game created specifically for a player or small party. It is meant to create a temporary private or small group-specific experience.

⁶ NOTE! *PvP* is when players via their avatars engage in in-game conflict between each other. *PvE* or *People vs. the Environment*, is when players avatars engage preprogrammed entities such as NPCs or ‘monsters’ in in-game conflicts.

devices, servers, routers, and other components of the Internet’s infrastructure. As opposed to the Internet itself, however, cyberspace is the place produced by these links.’ [22].

We use the term *cyberconjunction*⁷ to refer to the preprogrammed, internet based, delimited, and rule-based spaces within cyberspace where individuals can meet up and interact through gaming. These are multiplayer environments where the individual utilizes a symbolic representation known as an avatar. Cyberconjunction refers to a specific preprogrammed, internet based and delimited locations where individuals can meet up and conduct interaction in cyberspace [23]. These provide both hard-coded and soft-coded rules for interaction.

For this article, these are multiplayer environments where the individual utilizes a symbolic representation, that is, an avatar. The avatar is an in-game, computer-generated graphical construct – a symbolic representation of a real-life person. Binary in its most basic form, it is built up 1’s and 0’s. The avatar was created for participation in a specific coded environment, a *cyberconjunction*, that is usually partially hardcoded via choices and selections made during its creation.

What is an avatar and why is it important? The answer to the first part - *what* – is that it has different meanings in different settings. Cambridge’s online dictionary tells us that in religion, the term has its origin in a Sanskrit word meaning “descent” as in referring to the descent of a deity to the earth, a form of divine incarnation [24]. In its original meaning, avatar can mean “a god who appears on earth as a person.” In today’s computer game setting environment, it generally means “an image that represents you in online games, chat rooms, etc. and that you can move around the screen” or alternatively, “a character or creature that you create to represent yourself in a computer game, on the internet, etc.:[24]. The second part - *why* - is important because it is a symbolic⁸ representation online of a real physical person (player). The importance of this is in that the avatar is the *chosen* symbolic projection of and by a real physical person in cyberspace.

In a virtual environment a player can choose what to project. No player-related religion, skin colour or even location-based cultural assumption can be made, unless the player so chooses. However, there are, in many cases, built-in (hardcoded) limitations in avatar creation imposed by the design of the MMO in question. So, while a lot of the avatar’s characteristics are defined by the human player behind it, that is, chosen by the player at the time of the avatar creation, there may still be hardcoded constraints in the creation process parameters, such as ‘skins’, preprogrammed and/ or player created options for the look of the avatar.

2.2.3.1 FFXI® Avatars In FFXIV, the player can choose race, clan affiliation and gender for the avatar. There are eight (8) races to choose from [25]. The game pro-

⁷ Conjunction used as in “the situation in which events or conditions combine or happen together”, that occurs within Cyberspace.

⁸ Symbolism is the use of an object to represent something else. The symbol (object) can be used to refer to a person, ideology/religion, a specific event or anything else from a broad range of things.

vides several playable avatar models with combinations of facial features and hair colour [26].

The player must also select a job for the avatar. FFXIV provides a base of six standard jobs at avatar creation [27]. The initial job choice can later be changed [28]. This provides for the same avatar appearing in different settings looking different and with different capabilities.

The playable character classes, or jobs, are different variations of the four major classical character player categories associated with fantasy games: warriors, arcane casters, divine casters, and rogues. Warriors can wear heavy metal armour and use martial melee weapons. Some of the warrior types also use shields. Both types of casters have various types of outfits made from fabric available that has protective qualities because they cannot don any armour, and the weapons available for casters are staves and wands. The rogue types rely on their cunning and agility, wear leather armour and use bows and daggers as weapons. However, physical size and gender are cosmetic only; the avatar's base stats will remain static [28]. There is some avatar appearance customization (Fig. 1), and a choice of birthday and patron deity. However, the birthday and patron deity choice lacks any in-game effect and are also entirely cosmetic.

2.2.3.2 EVE® Avatars EVE's character, or avatar, creation tool has surprisingly detailed customization for the physical attributes of the avatar. But it is limited in options on race – human only, and there are no background options except 'Bloodline' which only affects the look of the avatar. The 'race' options are restricted to four different human factions - Amarr, Minmatar, Caldari and Gallente [29]. Originally the more developed avatar creation was created to expand the space travel environment to more in-station and similar player/avatar interaction, this was scrapped after



Fig. 1 FFXIV Avatar creation screenshot [28]

exceptionally negative player community feedback [30]. Currently there are only two (2) different options for viewing the entire avatar.

First, during character creation, you can see the entire character, including menus for changes and additions.

Second, you can click on the portrait to see the whole character (Fig. 2). However, in general, 98% of the time, both you and other players will only ever see your portrait (Fig. 3).

Most of the time in EVE, you will spend inside your spaceship, which lacks any inside view. These are built, bought, sold, and shot to pieces as part of the EVE avatar PvP interaction in space.

2.2.4 Skill Level Required to Play

After development and broad adoption of Combat Tracking add-ons which enable individual players to measure performance in dungeon and raid parties of every individual player in the party, these parties often became toxic and ruined the teampay element for many.⁹ Given that in some MMOs the story line is linear and cannot be unlocked until all required elements are in place, this effectively stops a player from developing their avatars. Even if this is not the case, much of the items required to be ‘good enough’ are ‘looted’ from team elements, thus disabling the casual player from developing their avatar at their own pace. The online ‘performance’ stress, both for the avatars and the players (as it is a question of dexterity and routine for the timing to

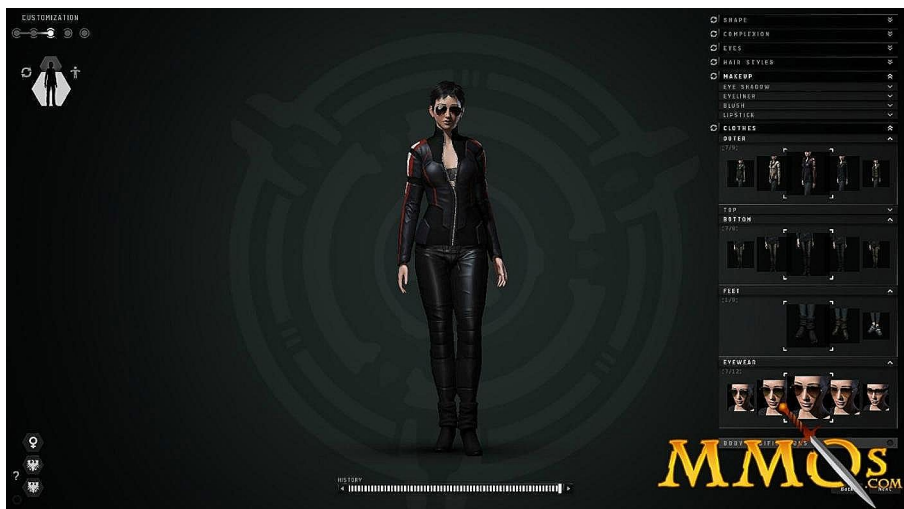


Fig. 2 EVE Avatar creation screenshot [32]

⁹ As an example, in a 25-player raiding WOW party, the 10 least performing were kicked out after every encounter and replaced by better-performing ones. Both authors stopped participating in these elements after being bullied several times for having a low output of either damage per second (DPS) or healing.

Fig. 3 EVE Avatar portrait [33]

tap various combinations on a keyboard in a correct sequence), started reflecting and reinforcing real-life performance stress instead of counterbalancing it. Being casual players, both authors no longer found these virtual worlds relaxing and enjoyable and emigrated in search of a friendlier world with a more tolerant community and well-mannered players. FFXIV had the reputation of being that. Then again, EVE does not have these types of elements even though, based on experience, it does not require a high level of manual dexterity to perform at a reasonable level.

2.2.4.1 FFXIV® Avatar Interaction When a player chooses a class for the avatar, it automatically becomes a member of an NPC Guild, which is led by an NPC Guild-master. These hard-coded Guilds assist the avatar with fundamental knowledge and equipment to start their in-game career. Every major city in the environment has several different guilds related to specific classes. Over time, a player's avatar can join other guilds as they progress into classes other than their starting class [31].

FFXIV also provides for adventurer (avatar) run organisations in the form of Free Companies. These allow for the members to pool their resources in the form of items and *gil* (the in-game currency). And most importantly, to team up and solve instances and quests. To form a Free Company a player must find three additional avatars to sign off on a petition to be submitted. The submitting avatar becomes the leader of the new Free Company and may invite others to join.

The Free Company has a company chest for storing items that can be shared. As the Free Company develops, it can create its own crest and get additional benefits for its members. The game also allows Free Companies to try to purchase lots of 'land' or 'estates' where they can establish a headquarters. The Free Company can also participate in large-scale PvP activities in specifically created areas and instances [32].

2.2.4.2 EVE® Avatar Interaction EVE Corporations are specific gatherings or *cyberconjunctions* within the larger EVE MMO universe. There are two basic types of corporations; first are NPC corporations that are hardcoded and available for player avatars to join. An avatar can become a member of an NPC corporation in three different ways [33];

Depending on the background education chosen, a new avatar is automatically placed in one.

When leaving a player corporation, the avatar is placed in an NPC corporation based on its bloodline.

There is also the situation of an avatar joining Faction Warfare, which places the avatar in a specific NPC faction warfare corporation.

Most NPC corporations have NPC agents in different locations that offer missions to avatars [33].

However, the most numerous are the player corporations. These are groups for in-game cooperation created by one or more player avatar(s). These groups have their own specific purpose, and internal actions are largely controlled by the members themselves. The hardcoded parts are the rules for forming a corporation [34]. There is no minimum number of avatars required except for the founder. The interaction between avatars within the corporation is then player controlled [35]. Corporations may declare war on each other, meaning that they can shoot each other's spaceships wherever and whenever they are in the same section of EVE space.

EVE alliances are the joining of several player corporations for mutual support and gain. The creation of a new alliance is just like corporations hardcoded into the system and demands a player's avatar to have the relevant skills, being the CEO of a player corporation outside any alliances, access to sufficient amount of in-game funds etc. [36, 37]. Just like with the corporations the internal interaction between avatars within the corporation is then player controlled.

'War is a game mechanic which allows corporations and/or alliances to fight in high or low security space without CONCORD, NPC policing organization, intervention or security status loss.' [38] CONCORD's purpose in-game "...was to ease the tension and create a foundation for peaceful cooperation between the empires." - [39] In EVE, a corporation or an alliance may be War Eligible. If it is then it may be involved in a formal war, and either declare war on another corporation or alliance, or have a war declared against it [40]. To be eligible for war participation the corporation must own either a structure [41] or a customs office [40, 42]. Since NPC corporations do not own any of these, they are automatically excluded from wars. In addition, the corporation or alliance must pay a fee to CONCORD. The declaration of war has to be made by the player holding the CEO role in their current corporation [43]. As long as war is kept active a player's ship avatar is a legal target for the opposing side anywhere in EVE space. In addition, every member corporation of an alliance that is involved in a war automatically becomes a part of the war [40]. Many EVE corporations and alliances also create out-of-game *cyberconjunctions*, such as Discord™ channels, Facebook™ groups and even their own websites for cooperation and planning of activities including wars.

2.2.4.3 Skill Levels for Avatar Development Most of the games powerful items are ‘looted’ from game content that can be accessed only by teams. This is also true for FFXIV because of its linear story-based nature that required unlocking content by participating in key raids and dungeons, but not for EVE, which is an open-ended world. FFXIV has banned Combat Tracking add-ons and actively enforces the ban by penalising players who use them. The parties are friendlier and supportive. For some multiplayer elements the game also provided an option of a non-player character (NPC) party, where the AI instead of humans control the other party members. EVE is highly combat oriented, with in-game resourcing such as mining, industry and trade are built around interstellar conflict. Avatars in EVE do have skill training as a key component for development. These include all aspects of the key in-game specific environment, for instance piloting, resource management, construction, and corporation management. Just like in FFXIV your corporation and its allies are your friends and support, but as the MMO is PVP oriented you can always be attacked by other players ships when out in space. EVE NPCs rarely, if ever, provide any useful support.

2.3 Summary

The avatar in the two cyberspace environments (Figs. 1–3) discussed in this article are representations of a player, a real person. This means that they are an important form of self-expression. These environments demand the creation of an avatar to enable participation, and this is often a person’s first interaction with the *cyberconjunction*, a form of rite of passage to enter. This makes the avatar a manifestation of what the person behind it wants to project to other gamers.

These cyberspace environments present options for customization, based on their hardcoded setting and purpose, the chosen look, and other related more immersive parts such as race, allegiance, and jobs. The avatar creation process helps a player define their own expression of self within the cyberspace setting. It will affect how other avatars respond and react to the player but also control how the environment, such as NPC’s or monsters, will interact with the avatar. The *cyberconjunctions* discussed in this article all offer varied public access to their cyberspace locations for interaction via avatars, usually based on subscriptions. They share the capacity for their hardcoded base environment to be added to by the players via their avatars, but the social interaction differs profoundly.

FFXIV is primarily a PvE setting. It is extensively hardcoded for players to interact in a cooperative manner, missions and objectives are largely set by the computer code. Any PvP is highly limited and set in specific locations or instances.

EVE meanwhile is highly, almost entirely, PvP oriented, except for resource gathering, which is PvE, and a certain amount of NPC corporation agent missions. It has a hardcoded base environment, space with planets and moons for example, but offers players the opportunity to use their avatars to create their own constructs within this space.

This section used experience-based answers to some of the basic questions, such as how does a player experience the gaming environment? I.e., what occurs during

play? In what settings and how does the interaction take place? The next section of this paper moves into the regulatory components introduced in the introduction – 1) rules and regulations that govern online interaction in virtual spaces, 2) the code that controls behaviour through game architecture, and 3) the laws that are developed by players inside the game world.

3 Insides and Outsides in Law and Games

‘Go and organize a fake hold up. Be sure to check that your weapons are harmless, and take the most trustworthy hostage, so that no life is in danger (otherwise you risk committing an offence). Demand ransom, and arrange it so that the operation creates the greatest commotion possible. In brief, stay close to the “truth”, so as to test the reaction of the apparatus to a perfect simulation. But you won’t succeed: the web of artificial signs will be inextricably mixed up with real elements (a police officer will really shoot on sight; a bank customer will faint and die of a heart attack; they will really turn the phoney ransom over to you). In brief, you will unwittingly find yourself immediately in the real, one of whose functions is precisely to devour every attempt at simulation, to reduce everything to some reality: that’s exactly how the established order is, well before institutions and justice come into play.’ [44].

Virtual worlds within cyberspace provide sandboxes to observe how a rule-based society is formed. This section covers soft code which encompasses ‘hard rules’ enforced by public authorities like laws, end user license agreements (EULA), and ‘soft laws’ such as different methods of internal governance of the digital space. Based on a review of relevant literature, this section finds that much of the debate and complexity in relation to cyberspace and different forms of spaces stems from conflicting and, at times, arbitrary rules for online conduct. It argues and identifies that even inside cyberspace, there are rules that apply to the human behind the avatar, whether by machine code (hard coded) or codes of conduct (soft coded), but enforcement and effects vary depending on the game chosen and relevant regulatory space.

This section both upholds and challenges the notion of strict separation created by the cyberspace veil between these two dimensions. This section studies the intricate relationship between virtual worlds and real-world rules, highlighting their interaction and impact on one another within cyberconjunctions. This interaction phenomenon has been discussed through the concept of ‘interreality’, a term coined by J. van Kokswijk [45], that captures the point of convergence where the virtual and real worlds intersect. By delving into this relationship, this section examines the unique symbolism of the chosen games as a lens to comprehend how the rules of the virtual (VR) and real-life (RL) worlds act as signifiers influencing the choices of various players.

An analysis based on the findings emphasizes how these rules, rooted respectively in the internal governance systems of virtual worlds and the societal fabric of the real world, intersect and ultimately impact human-avatar interactions. This symbiotic relationship and rule adaptation may cause ‘bleeding’ both in and out of the game.

Furthermore, the discussion of the concept of the ‘avatar’ from a technical aspect in section two is shifted to focus on the non-technical aspect. For example, the avatar

is here perceived as a symbolic representation of the human as a player wants to be perceived by others as they interact with the other entities (NPC and PC) in the virtual world.

3.1 Hard Rules

Laws prohibiting specific behaviour are enforced by public authorities such as national police and courts. People are aware that breaking laws in the physical world has consequences that differ based on the type of law broken (civil or criminal) and the severity of the violation. However, once a physical person creates an avatar in digital space, apart from the hard-coded rules, it may be unclear which rules apply to avatars' actions in cyber conjunctions and who enforces these rules. Virtual worlds and the avatars that roam in these spaces unequivocally create a distinct separation from reality, characterised by anonymity and a sense of artificiality [46, 47]. Within these virtual spaces, most real-life rules and their enforcement governing player interactions appear to cease to exist.

However, the lack of regulations governing player interactions can lead to lawlessness and unpredictability. To start with, the virtual worlds do not have national borders. When players interact through their avatars, conflicts leading to actions that would be illegal in the physical world can arise [48]. These incidents could potentially violate both RL civil¹⁰ and criminal national laws. Yet, avatars and the players controlling them may not be fully protected by national laws, as virtual worlds are not confined to national borders. It is, therefore, important to identify the public authorities that can and will enforce these protections to create a safe and fair virtual world for all users. A player can log in from any country with internet access.¹¹ Ensuring privacy protection and preventing harm and human rights violations in virtual worlds is a critical concern, especially when considering the freedom of access to the virtual environment provided by cyberspace access via the internet. However, establishing accountability for avatars or the player behind the avatar and their actions within these environments presents a complex challenge.

Various approaches have been suggested by authors to address the challenges surrounding accountability for actions in virtual environments [49]. These include exposing the true identity of the player behind the avatar concerning certain crimes such as cyberbullying and fraud and even attributing legal personhood to avatars themselves [49–51]. The latter approach involves granting legal identities, rights, and obligations to avatars within a legal framework, which allows them to initiate legal actions or be subject to them.

¹⁰ For example, contractual or torturous obligations under common law or statutory laws such as the ACL COMPETITION AND CONSUMER ACT 2010 - SCHEDULE 2 or Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (The EU's Digital Services Act) ELI:<http://data.europa.eu/eli/reg/2022/2065/oj>.

¹¹ The same issue is present for cybercrime and scams operated from another jurisdiction than where the victim resides. A law enforcement body or court possesses legal authority solely within its geographical boundaries. This encompasses the site of the wrongdoer, the victim, or the actual location of the crime.

Depending on the violation and the situation, both approaches would be challenging but beneficial; however, for other situations, it would be undesirable. Due to the intangible nature of virtual worlds, it is nearly impossible to establish physical harm caused by one avatar to another, which is typically required for crimes such as assault and manslaughter, punishable under national criminal laws in RL. Physical violence, for example, fighting and killing in either a PVP or a PVE setting, is a key component of many cyberconjunctions. Many cyberconjunctions, like EVE(PVP) and FFIVX(PVE), allow and even reward such actions as part of the game. For other types of crimes that cause financial or psychological harm and potential trauma, it is desirable or even necessary to pierce the “cyber veil” and allow RL laws to punish players.

Salminen, Almerexhi, Milenković, Jung, An, Kwak, et al. (2018) [52] define toxicity as rude, disrespectful, or unreasonable behaviour likely to make one leave a discussion. Other research on this topic shows that the effect is wider than this, causing players to enjoy the game less and leave the game. Some players avoid cyberconjunctions known for toxic behaviour and prefer joining friendlier worlds like FFIVX. One such example is the utilisation of avatars as proxies to inflict harm on other players, which falls under the umbrella concept of toxicity.

It is important for the virtual rules and the game design itself as signifiers to explore how game design affects culture and race-based toxicity in player communities [12, 53, 54]. Toxic behaviours such as cheating [55], griefing [56, 57], bullying [57], sexual harassment,¹² and discrimination are all too common in certain cyberconjunctions. Because this type of behaviour has become normalized in some virtual world environments as part of the “spirit of the game” [11], it is worth questioning whether current legal frameworks adequately address such issues.¹³

In cyberconjunctions, it is increasingly important to prioritize user safety during online interactions. The perception of being protected from any potential consequences can lead to a sense of impunity and encourage negative behaviour. Taking steps to ensure a safe and secure online environment is essential for maintaining an enjoyable and respectful online presence and has led to the emergence of legislation aiming to protect people interacting in cyberconjunctions.¹⁴

Undoubtedly, harmful conduct and toxicity by malicious players are common as they perceive the virtual domain as legally ambiguous and the environment as unregulated. Hence, game platform providers establish their own codes of conduct, which reflect real-world rules to varying degrees within the virtual world. These codes of conduct are enforced through End User License Agreements (EULAs) and other rules that convey cultural norms and desired levels of social control over disrup-

¹² Sexual predators in metaverses and MMOs exploit avatars to conceal their real-world identities. Instances of inappropriate and violent behaviour, such as groping and rape, have already been observed in worlds that enable augmented reality gear (ARG). See <https://crucible.law/insights/crime-in-a-digital-world-sexual-misconduct-in-the-metaverse>, <https://www.technologyreview.com/2021/12/16/https://doi.org/10.42516/the-metaverse-has-a-groping-problem/>, https://www.eko.org/images/Metaverse_report_May_2022.pdf. Sexual harassment laws do not always necessitate physical contact to qualify as harassment. However, it's worth questioning whether current legal frameworks adequately address such issues.

¹³ For example, under Section 61HB of the Crimes Act 1900 (NSW), sexual touching.

¹⁴ For example, the Australian Online Safety Act 2021.

tive or harmful behaviour by digital communities and their governing intermediaries, such as content moderators. Indeed, the internal rules and codes of social conduct within cyberconjunctions are often unlike those in real life. As mentioned above, many game environments provide the opportunity or even encourage actions that would be considered criminal and punishable by real-life laws. Yet, many current game environments aim to regulate the dissemination of harmful content and/or disruptive and harmful behaviour.¹⁵

Avatars, while not digital twins, are ‘homo digitalis’, that is, digital representations of people in cyberspace. Therefore, they are bound by rules and accountable for their actions to the terms of the service agreement and the real real-life laws capable of piercing the ‘cyberspace veil’. However, enforcement of provisions in end-user licence agreements (EULA) that restrict player conduct varies, and research shows that enforcement of these agreements varies from insufficient to robust [53, 58–60]. Some game providers, such as Crowd Control Production’s (CCP) EVE, focus mostly on protecting gaming companies’ assets by prohibiting all cheating and exploitation of the game itself and the related IP. Other games, such as FFXIV’s service agreement, include a substantial list of codes of conduct for player-to-player interaction and, in case of a breach, have enforceable repercussions both in and out of the game. Indeed, establishing accountability for avatars and ensuring their responsibility for actions within a virtual world poses a multifaceted dilemma.

3.1.1 The Importance of the EULA

The EULA is entered between the game platform providers and the individual players. Therefore, based on contractual principles, players cannot directly enforce it against other players because there is no contract between the players. This requires the platform provider to be prepared to become involved in player-to-player disputes and to enforce the EULA directly against the player it determines to be in breach of the contract. In most game worlds, platform providers have neither the resources nor the inclination to become involved in such disputes. Furthermore, the scope and specificity of accepted conduct between players specified by an EULA vary depending on the type of virtual world [59]. Most people do not read the EULA but push the button declaring they have. And if they do, they do not necessarily care about anything else other than hardcoded rules that affect the game itself.

In-game, players are given limited moderation powers by being able to choose their gaming settings, for example, to mute or block other players that they find offensive and limit the environment around the player avatar by emergency transferring to a safe location, being able to locate objects used to grief the player, the ability to stop other players from forcefully animating someone else’s avatar, and if the player owns land, to choose who can enter that land [61].

The terms of the EULA terms will be moderated only if the game policy provides for moderation. The enforcement of EULA by game platform providers and moderators varies, depending on how much effort is spent. Enforcement of the terms of the

¹⁵ See e.g., FFXIV and of PVP, LOL.

EULA depends on the accessibility, activity level and response time of the moderators and the scope is limited to the terms of the EULA.

As an example, Second Life's Terms of Service specifically state that Linden Lab is a service provider and, as such, is neither responsible nor liable for 'Content, conduct, or services of users or third parties.' [61] In addition, they state that they perform no verifications or enforcements in regard to any contracts or deals between its Residents [61]. They encourage the Residents to solve it directly with those Residents involved. Griefing is defined by SL as abuse such as 'when someone or something intentionally harasses or bothers you in violation of the Second Life Terms of Service (ToS) or the Community Standards (CS).' [62], SL refers to the players own control of a substantial amount of their environment. This provides opportunities to also control who can interact with you.

Consequently, in some virtual world cyberconjunctions, players might act as they please, believing themselves free of RL social and legal restraints to the extent the code permits their avatar's interactions with other players' avatars, NPCs, and other content. Some players care only about hard-coded rules. Suler calls this the *online disinhibition effect*, where the combination of anonymity, the absence of nonverbal cues, and the diminished influence of authority in online interactions result in reduced adherence to social norms compared to face-to-face encounters [63]. Virtual worlds purposefully create another dimension where rules that apply and are enforced in real life mostly cease to exist [46]. Many cyberconjunctions are built on concepts, such as robbing or killing NPCs and/or other players' avatars, actions that are unlawful and would carry severe penalties for the offender in an RL situation. Indeed, the very purpose of avatars is to create a separation between the actual human player and the virtual embodiment [64].

In cyberspace and its virtual worlds, the code is the law. AI algorithms become the judge and jury, verifying, and enforcing rule compliance. However, AI algorithms may not enforce compliance with the EULA or other RL laws that apply to persons who inhabit the virtual world's behaviour. Program designs might also have some gaps [46]. Hence, other types of governance mechanisms have been put in place or developed internally to fill those gaps. Internal governance of MMOs consists of two main elements: (1) the service provider employs moderators who enforce player codes of conduct, and (2) the player community itself defines, applies, and enforces a set of normative rules for behaviour.

Guilds have goals based on their group values. While these can vary from competitive, for example, gaining achievements towards guild perks, such as enhanced XP for a certain period or better stats, also for a certain period, the goals in FFIVX can also be purely social. Most guilds however have one thing in common, login requirements. A group needs at least semiactive members to keep it going. 'Dead guild where there is no one to interact fade away. players to develop a gaming identity.

A "bottom-up" regulatory system originating within the gaming community consists of players, guilds, free companies, and warlords. Unwritten rules exist that are similar yet different from legal principles that apply universally in RL. However, these vary significantly depending on the MMOs' 'flavour' set by the game narrative [46]. The classical question of what comes first, the chicken or the egg, finds relevance in MMOs' interaction between internal and external rules. A specific virtual

world's internal values and rules attract players who enjoy that type of gameplay. Game designers then support these internal rules and ethics to create an enjoyable gaming experience and attract more players. Thus, the interplay between internal and external rules has a reciprocal impact on the virtual and real worlds. According to Humphrey, game developers often encourage players to self-regulate within the gaming world. They design games that train and incentivise players to adopt certain behaviours [65].

We can consider the rules that develop inside the game through an analysis of Hart's The Concept of Law's 'internal view', for example, those rules of conduct that groups of players have developed for interaction between members, though not necessarily approved outside of these voluntary groupings. Consequently, these rules affect the players' interactions in MMOs and other game related cyberconjunctions. As Hart points out, players or admins in the game only coercively enforce some of these rules, which is typical for all real-life (RL) legal systems. Not all rules constitute a legal system corresponding to internal behaviour codes applicable to most online games. However, because several MMOs offer a multitude of actions and transactions that need regulation and enforcement, some internal rules inside the MMOs may already be or are in the process of becoming legal systems. In these large online social societies, established and ongoing player associations that are hierarchically structured (guilds, free companies, alliances) are the internal organs that can create, alter, and enforce some of their rules¹⁶ besides the administrators.

3.1.2 EULA and the Magic Circle

"The magic circle" as a symbolic border, delineating the boundaries between a game and reality was first coined by the Dutch historian Johann Huizinga in 1955. Within the magic circle, unique rules apply that allow the game to take place [66].

The Mittani case in the EVE situation discussed in this context highlights the fact that governance based solely on code will not meet the expectations of either players or providers. It shows that the magic circle analysis, where in-game activities do not interact with real life, does not always hold up due to the complexities of different levels of soft coded regulation. In response to a player query on the EVE discussion forum about whether targeting other players, especially when they threaten to harm themselves, would violate the EULA, CCP clarified the matter by invoking the concept of the "magic circle" [59]. According to the CCP, actions that occur within the Magic Circle are permissible only as long as they comply with its rules. For example, in a boxing match, hitting someone is allowed, but only within the ring. However, if an action extends beyond the Magic Circle and threatens harm to anyone in real life or incites others to do so, the EULA/Terms of Service is breached. Stating intentions alone can have repercussions. Any attempt to manipulate an in-game situation within the Magic Circle to evade in-game consequences is not allowed. In accordance with CCP guidelines, the GM department will report such behaviour to law enforcement agencies if real-life is endangered. Regardless of the circumstances, making threats is never acceptable.

¹⁶ As such, guilds function as social networks crucial to the ecosystem of virtual worlds.

3.2 Symbolism, Signifiers & the Cyberspace Veil

3.2.1 Virtual Rules as Signifiers

Virtual rules within MMOs act as signifiers, representing the internal governance systems and frameworks established by the creators and administrators of the virtual world. These rules are designed to regulate behaviour, maintain order, and ensure a cohesive experience for the participants. Virtual rules encompass avatars' abilities and limitations, gameplay mechanics, and community guidelines.

The variety of virtual worlds allows players to do something that is not possible in real life, to choose which type of world they want to live in. Hence, the player responds first to virtual signifiers when the player chooses their virtual world. Lessig (1999) argues that this choice is constituted through the narrative of the MMOs [2], the game design [2], the content and graphics, independent reviews, or recommendations from real-life friends (already sharing similar values and ethics) that play the game. Moreover, Lessig (1999) finds that even the virtual space's architecture and community are aspects that shapes users' behaviour [2].

3.2.2 Real-Life Rules as Signifiers in the Virtual Worlds

Cyberspace, being a borderless and complex entity lacks physical constraints which creates challenges in enforcing traditional legal frameworks. However, these RL frameworks do not become obsolete; rather, they undergo a process of adaptation and reinterpretation to accommodate the virtual context. This adaptation process is often guided by legal principles such as jurisdiction, which determine the applicability of laws based on factors like the location of servers, the nationality of the parties involved, and the locus of harm. In virtual interactions, the rules people bring from real life provide order and legitimacy. Player behaviour and conduct within the virtual environment are influenced by norms derived from their societal, cultural, and ethical considerations, and other relevant social conventions.

The signification of laws in cyberspace extends to the establishment of virtual governance structures. As discussed above in Sect. 3.1 online platform EULA's, official and unofficial websites of the virtual world and community guidelines echo legal concepts of rights, responsibilities, and prohibited conduct. These documents, while not always legally binding in the traditional sense, create a rule-based environment that reflects broader societal norms. Users, aware of the potential consequences of violating these rules, adjust their behaviour accordingly, illustrating how real-life legal signifiers shape virtual interactions.

What does it mean for the player? [2] The rules they bring with them often affect their playstyle; different types of players are comfortable in different types of worlds. A player may also choose a world that specifically allows them to break the physical world rules (PVE) etc. and has minimal moderation. The dynamic interplay between RL laws and cyberspace highlights the significance of legal measures in upholding accord within the digital realm as it integrates with the physical world.

3.3 The Unique Symbolism of Specific Virtual Worlds

The legal framework of real-life jurisdictions and cyberspace interact intricately, highlighting the importance of law in maintaining harmony in the digital sphere. This is especially important as the digital world becomes increasingly intertwined with the physical world. The significance of legal measures is further demonstrated by the symbolic language used in specific virtual environments. Each virtual realm's unique symbolism is derived from the content of the specific world within online communities. Individuals are organized into social groups such as guilds and corporations, each having its own internal rules set.

These examples emphasize the need for comprehensive legal measures to navigate this complex digital environment. MMOs provide a rich tapestry of symbolic language that facilitates communication and expression. This symbolic language encompasses textual communication, visual representations, and avatar behaviours. Textual communication through chat systems or forums allows individuals to exchange ideas, form alliances, or engage in debates. Visual representations, such as avatars and virtual objects, serve as symbolic entities that convey personal identity, social status, or affiliations. Avatar behaviours, gestures, or animations contribute to the semiotic landscape of MMOs, enabling non-verbal communication and expression.

Henri Lefebvre's theory of *The Production of Space* suggests that space is a social construct shaped by the values and beliefs of the society that creates it. MMOs provide a unique opportunity to observe how these societies are created and maintain this social space.

Our research analyses social interactions among players in various MMOs and gathers relevant data for comparative analysis. We have chosen two distinct persistent worlds for qualitative study, where the researchers will create avatars and actively participate in the games to collect data through virtual ethnography [67].

EVE Online® (EVE) and Final Fantasy XIV® (FFXIV) cyber junctions are known for their high in-game interaction which generates thriving online communities. We have purposefully left out of our discussion multiplayer online battle arena (MOBA) games such as League of Legends (LoL), Heroes of the Storm and Arena of Valor, as these are pure PvP (player against player) universes. EVE has a strong PvP element but also offers a much richer world to explore, as players can engage in activities other than battle.

3.3.1 EVE Online®

EVE Online is a virtual universe that offers a unique narrative and player interactions. The game's distinctive symbolism creates a rich tapestry that makes EVE Online a distinctive and intriguing world to explore. This symbolism is identifiable in its images, art, narrative [68] and the EULA [69]. The symbolic language is evident in the online chat functions,¹⁷ player forums¹⁸ [59], and in EVE's reputation within and

¹⁷ Both in-game and out of game, such as Discord.

¹⁸ For example, the Alliance Panel of the EVE Fanfest in March 2012, where Mitanni, as the leader of the Goonswarm Alliance, made a presentation that was streamed live on the internet where he referenced

outside of the gaming community [59], [57, 70]. Understanding these symbols provides a valuable framework for unravelling the layers of internal governance systems in EVE Online and offers insights into how players engage.

EVE has attracted a number of scams that have been discussed by both the CCP EVE Help Center [71] and specialised gaming magazines. Scandals such as - EVE Online’s \$5,000 gank [72], EVE Players Pulled Off The Biggest Betrayal [73] and MMO Players Take Over Company, Loot \$20,000 Worth Of Stuff [74].

3.3.1.1 Images and Art The EVE homepage is adorned with striking visuals of dark-hued spaceships and uniformed avatars set amidst the vast expanse of space. This clearly establishes space as the focal point, occupying a substantial portion of the imagery. For gamers, this conveys a sense of boundless potential, as space is considered the ultimate frontier.¹⁹ The void of space symbolises the thrill of discovery as well as the perils of uncharted territory. Space is also often perceived as the “lawless frontier” despite the existence of international legal frameworks such as the Outer Space Treaty,²⁰ which governs the exploration and use of outer space and celestial bodies.

The vast expanse of space serves as the canvas upon which players can paint their stories. The human avatars in the images are depicted as stern and focused, looking out into space (Fig. 4). In front of them, outbound spaceships emerge, while behind them lies a planet, symbolising the humans’ control over the planet, all its resources

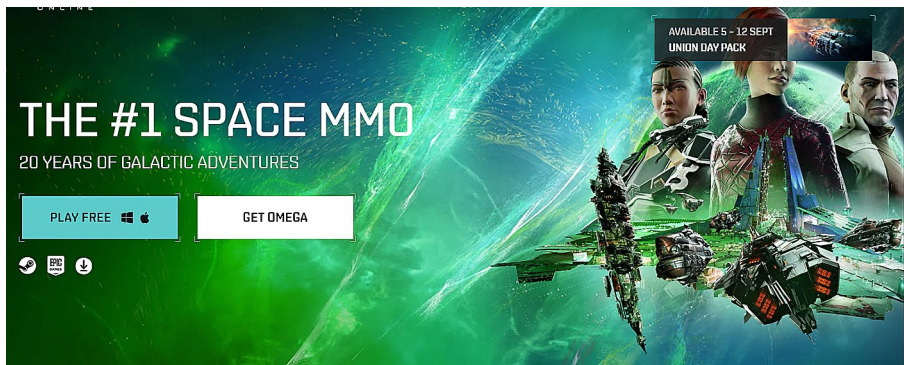


Fig. 4 A screenshot of the first image on the EVE Online Homepage [71]

various in-game chat excerpts and player posts pertaining to incidents involving the Goonswarm alliance where they had defrauded or defeated other players, ridiculed these players and even made several remarks identifying one of these players.

¹⁹ The opening voice-over in the iconic sci-fi television series *Star Trek* is “Space... the final frontier. These are the voyages of the Starship Enterprise, its five-year mission... to explore strange new worlds... to seek out new life and new civilizations... to boldly go where no man has gone before.”

²⁰ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, UN GA Res 222 (XX), entered into force 10 October 1967.

and their ability to command the spaceships (Fig. 4). Star systems, planets, and celestial bodies project diverse symbolic meanings, reflecting player-driven narratives.

EVE Online features player-run corporations and alliances, each with its unique logos, banners, and names. These symbols serve as markers of identity and power, representing the intricate web of political and economic interactions that define the game's universe. The rise and fall of these entities embody the dynamic nature of in-game symbols. An approach that invites the players to create their own storylines that align with their chosen faction, adding to the depth and complexity of the game.

Another snapshot from the EVE homepage introduces four solitary figures displayed against the background of their faction's symbols (Fig. 5). These are the four major empires in New Eden, a star cluster connected by stargates, also known as the 'factions' engaged in continuous warfare to establish dominance over regions in Low Security space. The artwork displays the opposing sides in conflict. It features a sword and shield that are placed in the midst of the Amarr versus Minmatar and Caldari versus Gallente factions. The striking colours, symbolism, and posture of the figures all come together to create a powerful visual representation of the battle between these opposing forces in a battle of ideals, power, and resources.

The text on the page shows the universe as a warzone where factions combat for glorious victory. Indeed, the virtual world of EVE Online is substantial and has complex social dynamics. It is well-known as a ruthless PVP world where scammers, pirates and griefers thrive.

3.3.1.2 The Economy as a Symbolic Ecosystem Related to Internal Governance The in-game economy of EVE Online is a complex, player-driven system where virtual goods have real-world value. Economic transactions, market fluctuations, and resource extraction are rich sources of symbolic language, reflecting real-world economic principles and player strategies.

The game engages its players by providing a competitive environment where acquiring resources, such as in-game money, territory, and status, are a central part of the game. Conflict and violence are pivotal to the player experience, leading to the



Fig. 5 EVE Online's Empire symbolism [71]

emergence of large associations with thousands of players. To enhance their ability to gain access to these players, they join different factions and alliances overseen by Warlords on top of the complex hierarchical ‘food chain’. These groups engage in player-driven skirmishes for in-game resources in EVE’s cyberconjunctions.

EVE is a player-run virtual world. The internal governance of EVE depends on which alliance reigns. The game’s competitive environment and capitalistic nature, combined with a weak regulatory framework and enforcement, have resulted in a virtual universe in the likeness to a “Wild West” space scenario dominated by powerful alliances.

This type of Universe was depicted in, for example, *Firefly* and *Serenity*. *Firefly*, an American space Western TV series written and directed by Joss Whedon is set in the year 2517, after the arrival of humans in a new star system and follows the adventures of the renegade crew of *Serenity*, a “*Firefly* -class” spaceship. A few years after it was cancelled, Whedon wrote and directed the movie ‘*Serenity*’ as a continuation. Analogues can also be found in the *Star Trek* mirror universe, which was a parallel universe to the *Star Trek* Prime Universe, ruled by the ruthless and violent Terran Empire [75].

Decisions made by the CCP impact tens of thousands of players simultaneously, resulting in long-lasting trade agreements or territorial conflicts. The players have a forum to address the impact of these decisions. The Council of Stellar Management (CSM) consists of representatives elected by the players. Their role is to articulate player concerns and participate in substantive deliberations regarding changes to game mechanics. This symbolises a democratic element.

3.3.1.3 Social Space in-Game Symbolism Communication in EVE Online is primarily text-based, with players using in-game chat and other channels to negotiate, form alliances and wage wars. The language and symbols used in player interactions convey not only information but also social hierarchies and norms. Individual player organisations, corporations, and alliances establish their own symbols. These are hard coded as a standard from pre-programmed selection by the game designers.

3.3.2 Final Fantasy XIV®

FFXIV is a high fantasy game that stands as a remarkable exemplar of semiotic richness within the realm of virtual worlds. By employing iconic, indexical, and symbolic signs, the game constructs a symbolic language that transcends the boundaries of traditional storytelling. FFXIV draws inspiration from various real-world cultures and mythologies, mainly of European and Asian origins and ecological philosophy. This interplay between the real and the virtual fantasy adds depth and resonance to both the regulatory and overall narrative.

FFXIV’s immersive use of semiotics creates a deep connection between players and the game world, offering a unique and culturally resonant narrative experience [76]. The game’s events provide players with many opportunities for engagement. Besides adventuring and saving the world from the conquest and corruption of the

environment,²¹ fashion takes centre stage as players adorn their characters with elaborate attires, transforming avatars into walking works of art. Crafting and gathering allow players to enjoy the tranquil beauty of the game's environments while collecting resources and crafting items essential for the in-game economy. Gambling enthusiasts can test their luck at the Gold Saucer. Parties come to life in ballrooms and taverns, creating a lively social hub.

The online chat²² and player forums, maintain an inclusive environment [77]. Players from more competitive virtual worlds are drawn to FFXIV by the friendly reputation of this world and choose to stay in this virtual space which provides a safe haven from the all-too-common online toxicity that they might have experienced in other, less friendly cyberconjunctions.

3.3.2.1 Images and Art Diverse and smiling images engaged in various activities greet visitors at the FFXIV homepage. The backgrounds consist of fantastical landscapes awaiting to be explored.

The FFXIV homepage showcases a diverse range of characters and races, symbolizing inclusivity and unity within the game's community (Fig. 6). It highlights cooperative activities, like battling foes and participating in events, emphasizing col-



Fig. 6 FFXIV introduction [81]

²¹ By one of the main antagonists, the Garlean Empire, an industrial and high-tech nation hungry for resources and aiming for world dominion. The other nations in Hadelyn are low-tech and magic-heavy, with population centres having minimal ecological imprint.

²² Both in-game and out of game, such as Discord.

laboration as a central theme of FFXIV. The vibrant art style inspires a sense of exploration and camaraderie, while fantastical creatures and magnificent architecture serve as reminders of the vast interconnected world, motivating players to work together to overcome challenges. A happy and inviting colour scheme of blues, greens, and gold fosters a friendly atmosphere and reduces online toxicity.

The homepage's content aligns with the game's governance model, encouraging players to form bonds, join free companies, and work together to achieve common goals. Moreover, FFXIV's commitment to fostering a safe and friendly gaming environment is reinforced by avoiding aggressive imagery. It incorporates elements from the game's lore, strengthening players' sense of belonging.

The inclusion of fan art and player-shared screenshots highlights the player-centric approach, valuing every player's contribution to the game's world. FFXIV's world-building utilizes iconic signs, meticulously designed pristine landscapes, and creature models that immerse players in the game's narrative, emphasizing quality and attention to detail. This approach prioritises player satisfaction and balance.

FFXIV's use of symbolism goes beyond mere surface decoration; it fosters a sense of syncretism [78, 79] among players. Syncretism is the blending of different cultural symbols and codes to create a unique narrative experience [78]. FFXIV amalgamates elements from various mythologies, religions, and cultural traditions to craft a world that feels both familiar and distinct. This syncretic approach enables players to engage with the game's narrative on a deeper, more culturally resonant level.

3.3.2.2 The Economy In Final Fantasy XIV, the game's economy is primarily driven by players. They can sell and purchase items they have crafted, gathered, or received as rewards for completing various in-game tasks. The virtual economy mirrors the regulatory hurdles that virtual worlds face. It simulates real-world economic principles and demonstrates the importance of regulation to prevent inflation, market manipulation, and inequalities in wealth. The game's regulated markets and currency systems emphasize the significance of maintaining balance and fairness in virtual economies. Players can also purchase private housing individually or as guild headquarters, and these properties can be customised. Properties are highly sought after and cost millions in in-game currency, mirroring the real estate of the RL.

3.3.2.3 The Regulatory Environment FFXIV is a highly regulated MMO where disturbing player conduct is frowned upon and even punished. FFXIV stands out for its commitment to maintaining a safe and respectful gaming environment. The game employs a robust system of content moderation, reporting tools, and a dedicated support team to combat toxic behaviour, fostering a welcoming community. This regulatory approach mirrors the game's ethos of inclusivity and fairness.

The type of game playing varies from server to server based on its population. Once a player has chosen a server to their liking, they then select a race, birthdate, gender, and character class for their Avatar. The seven playable races in Final Fantasy FFXIV represent mythical themes and motifs through symbolic archetypes. In addition to basic humans, players can choose humanoids with feline or dragon-like

traits or with bunny ears and tails. There are also humanoids that resemble tall elves, children, or massive, muscular, and tall versions of dwarves from Norse myths.

3.4 Interaction, Symbiotic Relationship, Rule Adaptation and Bleeding

Even though virtual worlds are distinct from the real world due to their pocket-dimensional nature, these two are not fully isolated. In fact, they interact to a large extent. As such, the boundaries of the physical world and the virtual world become blurred. The area where the virtual world touches upon the real world can best be described as interreality in action.

The interaction of real-life and virtual rules in MMOs creates a symbiotic relationship where each influence and adapts to the other. Players bring with them their values, which are based on RL rules, ethics, and morals, unless they consciously choose not to. Avatars in virtual public spaces act accordingly [12]. Virtual behaviour may also shape and redefine the interpretation of real-life rules within the MMO or create more soft code into the EULA. This dynamic interplay between real-life and virtual rules contributes to the evolution of public spaces within virtual worlds.

Within digital spaces such as MMOs, the negotiation and interpretation of real-life values and virtual rules are crucial for establishing a shared understanding and constructing meaning.

3.5 Summary

Virtual worlds function as sandboxes. The interaction of real-life rules and virtual rules rely heavily on the interpretation and understanding of signs and symbols. By delving into the semiotics of these interactions, we can unravel the intricate relationship between real-life rules (and values) and virtual rules in different spaces. What does this say in the context of different types of worlds?

3.5.1 Why do People Stay in or Leave a Virtual World?

In the context of MMOs, by forming communities and social networks based on shared interests and values, the player's avatars, digitally representing the humans in control, create their own rules for public spaces based on their values and beliefs. These are effective because they originate from the social contract developed and enforced by the community itself. Such regulations can also exist within sub-groups within the game.

Some avatar interactions between individual avatars, accepted in the virtual space, could be deemed unlawful if they took place in the physical world, such as negligence, sexual harassment, murder, or burglary. The rules are not arbitrary impositions from external authorities but rather are developed through a shared understanding and agreement among community members. Thus, members are more likely to comply with these rules because they feel a sense of ownership over them. This method of governance fosters a sense of community cohesion and solidarity as members collectively work towards maintaining a shared set of norms and values.

Comprehension of acceptable conduct in the virtual world is embodied by rules. Social exclusion is employed collectively to ensure that these rules are enforced [11, 80, 81]. Exclusion maintains power and control over the public space of the MMO. A player who does not wish to abide by the rules might choose to leave the digital world. However, how easy it is to ‘pack your bags and go’ depends on the social capital, real time spent in the MMO, and prospects for a soft exit (as in changing server) or hard exit (wholly leaving the game). The more real-time spent in the game developing tools and fortune for your character and engaging with the community, the harder it is to leave it all behind.

4 Conclusion

The increasing complexity of the online world creates challenges for regulators. Originally perceived as a lawless space, cyberspace is now more controlled and surveilled than the offline world. Online spaces are regulated through external laws, the architecture of the game through its programming, and finally, by the players themselves. To consider how this regulation impacts the users of these spaces, two virtual environments were selected: Final Fantasy and EVE Online. They were chosen specifically because two of the authors are academics who have also played these games extensively and identify as ‘gamers’.

Lefebvre proposed that different societies produce their own spaces [9]. He proposed that peoples activities within a given space is key to what it becomes and how it is experienced [9]. This social production of a space is key for its development [9]. The examples discussed in this paper show how two similar types of interactive internet based cyberenvironments are shaped by their pre-programmed construction, but also by the interaction of the participants.

We conclude, based on the experiences of active participation, that this holds true for virtual, online worlds that did not exist at the time of Lefebvre’s *Production of Space*. Analogous to the appearance of cyberconjunctions within the structure of the internet, Lefebvre imagines cities as nodes in global networks [10]. This paper lifts the concept of physicality out of the equation and applies the theory of societal development.

The research presented here on the development of laws and rules in public spaces in the real world vs. rules in similar environments in the virtual world posits that there is a growing bleeding between virtual world rules and real-world rules as with ‘cryptocurrency’, ‘social behaviour patterns’, ‘privacy’, ‘liability’, and ‘accountability’. Arguably a key reflection, based on the material presented as part of this article, is that the bleeding between the real world and the virtual world is slowly changing the ‘magic circle’ by creating more and more overlap. It raises the question of - what happens when an individual’s rules for social interaction, friends, companions, and such are entirely driven by online parameters provided via avatars in *cyberconjunctions*, and the individual interacts in real world public spaces?

In the MMOs explored, users adopt avatars, which are symbolic representations of themselves. Avatars allow users to create a virtual reality that, in many ways, mirrors RL. This includes the creation of laws and rules by the users. This is an

under researched area, which this paper contributes to. The experiences of two of the authors have provided ethnographic insights which explore the internal regulation of game spaces by user created rules. This area needs further examination to understand how the virtual and RL interact and impact on each other.

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Declarations

Competing interests Not applicable. No competing interests.

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