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War as a game: strategic 'gamification' in contemporary armed conflicts

Abstract

This article analyses how various armed actors implement video game logic—'gamification'—in current armed conflicts. Using a comparative methodological design of case studies (the Russian-Ukrainian war, jihadist extremism and Latin American organised crime), an operational indicator rubric is applied to assess the degree of formalisation of these practices. The forms, functions and strategic objectives of gamification are identified and its operational, psychological and communicative effects on combatants and civilian audiences are assessed. The results show that 'gamification' acts as a strategic multiplier, enhancing propaganda and recruitment. It is observed that each case presents a different level (structured in Ukraine, symbolic in jihadism and informal in organised crime) and that these dynamics contribute to the transnationalisation of war narratives, trivialising violence and attracting young audiences in particular.

Keywords

Digital propaganda, Jihadism, Organised crime, Video games, Ukraine.

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I Introduction

War has never been limited to the physical and crude realm; historically, it has also been shaped by informational, symbolic and visual dimensions in which actors construct their own narratives of combat (Huizinga, 2000). This process has evolved over time and, today, a point has been reached where state and non-state actors resort to elements characteristic of video game design and interactive digital culture—such as the assignment of scores, levels, symbols, rewards or missions—to encourage behaviour, reinforce cohesion or maximise communicative impact (Lakhani *et al.*, 2022). This phenomenon is known as ‘gamification’ and should not be understood as the simple use of games for training, but rather as the systematic adoption of game rules and incentive systems in contexts outside of leisure; in this case, armed conflict. In this article, we take this definition in an operational sense and develop it in greater detail in the theoretical framework, where we reconstruct the academic genealogy of the concept and its transfer from video game design and reinforcement psychology to strategic communication and security studies.

The last two decades have seen exponential growth in the use of globally connected technologies such as smartphones, social media, audiovisual platforms and online video games. Various armed actors have taken advantage of these digital environments to create interactive, visually appealing, easily shareable content structured according to the logic of video game design: rankings of enemies killed, virtual rewards, and narrative episodes organised by levels, among other elements (Hassan and Hamari, 2020; Lakhani *et al.*, 2022; NATO StratCom COE, 2021). This ‘gamification’ of conflict has enhanced propaganda dissemination capabilities, facilitated recruitment, and boosted combatant morale, enabling competition for digital attention in the context of contemporary hybrid conflicts (Bachmann and Gunneriusson, 2015).

With its advantages and disadvantages, gamification substantially alters the social perception of armed conflict, transforming it into a visual and interactive experience that can contribute to the conversion of violence into spectacle and its trivialisation (Winkler and Dauber, 2014; Pötzsch, 2015). It thus becomes a tool that allows combatants to mobilise emotional support, construct heroic narratives, reinforce collective identities and generate dynamics of involvement similar to those of video games, especially among young people accustomed to such logic (Lakhani *et al.*, 2022; Hassan and Hamari, 2020).

At the same time, its strategic use poses ethical risks related to the glorification and aestheticisation of violence, as well as the possible desensitisation of audiences, whose production mechanisms are analysed in depth in the methodological section and fall within the ethical limitations of this study.

In this sense, ‘gamification’ is analysed here as a genuine strategic multiplier within the cybernetic and media dimensions of contemporary hybrid conflicts.

The application of video game logic to everyday life—and also to the realm of conflict—has been gradually incorporated, without the world having yet paused to reflect on its implications. Thus, fundamental questions such as what forms

'gamification' takes in contemporary armed conflicts, what strategic objectives armed actors implement it for, or what effects it may have on combatants and civilian audiences, remain largely unaddressed in strategic and security studies.

Addressing the above questions, this article aims to analyse how different armed actors apply gamification logic in the development of current and recent armed conflicts. To this end, the forms, functions and strategic objectives of these practices are identified and an operational rubric of 'gamification' indicators is applied to three case studies—the Russian-Ukrainian war, jihadist extremism and Latin American organised crime—assessing their operational, psychological and communicative effects on combatants and civilian audiences.

The article is structured in five distinct sections. First, a theoretical framework is presented that defines and distinguishes the main concepts of interest in the security context. Next, the methodological approach of the study is outlined. Subsequently, the three case studies are analysed in succession and a systematic comparison is presented. A discussion section links the findings to the specialised literature and public policy implications. Finally, the conclusions of the study are presented and possible lines of future research are proposed.

2 Theoretical Framework

2.1 *Conceptual framework on 'gamification'*

'Gamification' can be defined as the incorporation of elements of video game design into non-playful contexts in order to induce behaviour, generate engagement or alter the perception of reality. It should not be confused with the simple use of video games for training or simulation, as it involves introducing game structures into a real, non-recreational context, in this case, armed conflict.

The genealogy of the concept of 'gamification' dates back to its initial adoption in the business world in the late 2000s, when it began to be applied in marketing and human resources strategies to boost motivation through game mechanics. From then on, the playful approach quickly spread to sectors such as education, health and experience design, consolidating around 2010 as a wide-ranging strategy. Pioneering authors such as Werbach and Hunter (2012), Deterding *et al.* (2011) and Huotari and Hamari (2012) laid the conceptual foundations for 'gamification', demonstrating its usefulness in increasing participation in non-playful contexts and emphasising that it is not just a matter of adding superficial 'layers' of play, but of designing experiences that take advantage of the motivational potential of play in a structured way.

It is also necessary to distinguish 'gamification' from related concepts such as playification and serious games, as they are often used interchangeably despite referring to different phenomena. Playfulness refers to an attitude or disposition towards reality, usually for expressive, creative or recreational purposes, but without the intention of inducing specific behaviours or the presence of structured rules (Sicart, 2014). In contrast, 'gamification' involves the deliberate and structured adoption of game

mechanics—points, rewards, levels, missions, immediate feedback—within a real-world environment that is not a game, with the explicit purpose of motivating or directing the behaviour of participants (Deterding *et al.*, 2011). Thus, while a drone pilot who plays basketball for entertainment between missions would simply be introducing play into his routine, the score he is assigned for neutralising an enemy tank and which is recorded on a scoreboard is an example of ‘gamification’ of his warfare, by converting operational effectiveness into a quantified and comparable achievement.

Similarly, a serious game differs from ‘gamification’ in that it is a complete game created for educational, training or simulation purposes, rather than purely recreational objectives (Michael and Chen, 2006). In a serious game, the playful experience is at the core of the activity (e.g., a military video game designed to train recruits), while ‘gamification’ consists of inserting fragments or dynamics of play into an existing real activity. A mobile application that awards virtual medals for reporting enemy movements, or that ranks users in tables according to their contributions, constitutes gamification applied to conflict, insofar as it adds a layer of play to a real military practice, without becoming an independent game.

From a methodological perspective, it is important to define which practices will be considered ‘gamification’ in this study and which will not. Many traditional elements of military culture—insignia, ranks, rituals, honour systems—have existed for centuries and serve organisational, disciplinary, or symbolic functions, but they do not constitute a game in themselves (Frasca, 2007). Therefore, they are not interpreted here as ‘gamification’ unless there is a structured reinterpretation under a clearly designed game logic; that is, unless these elements are deliberately reused within a ‘gamified’ dynamic that turns them into components of a ‘game system’ with defined rules, objectives and rewards. Only under this condition of intentional design is ‘gamification’ considered to exist. Consequently, conventional military practices, such as awarding real medals for acts of bravery or using rank hierarchies, will not be classified as ‘gamification’ in our analysis unless they have been explicitly reconfigured as part of a system of ‘gamified’ points, levels or rewards.

Firstly, from the perspective of motivational psychology, ‘gamification’ relies heavily on extrinsic incentives that reinforce specific behaviours: points, rewards, rankings and other stimuli that act as ‘prizes’ for desired behaviour (Skinner, 1953). In this framework, scoring systems, medals, or rankings operate primarily as short-term reinforcements: they increase the likelihood that certain actions will be repeated as long as the incentive remains available and visible to participants. Self-determination theory suggests, however, that for gamification to have more lasting effects, it must also connect with intrinsic motivations, addressing individuals’ needs for autonomy, competence, and social belonging (Deci and Ryan, 2000). When this occurs, game mechanics not only ‘push’ specific behaviours, but also contribute to consolidating a more stable sense of efficacy and belonging.

Secondly, from the perspective of the aesthetics of violence in the media, it should be noted that presenting war in a playful way can trivialise the seriousness of the conflict. Winkler and Dauber (2014) point out that video game-like aesthetics applied to war tend to trivialise violence and turn it into spectacle, diluting the moral barriers

that normally contain it. Pötzsch (2015) adds that interactive media transform combat into a visual product similar to a game, blurring the distinction between reality and playful fiction. Consequently, the 'gamification' of war can contribute to the conversion of violence into spectacle and its trivialisation, both for combatants and spectators, by reframing acts of real violence as if they were surmountable 'challenges' or achievements within a playful progression.

Thirdly, in the field of strategic communication and digital recruitment, gamification is emerging as a contemporary tool for attracting and retaining audiences. Hassan and Hamari (2020) have shown that gamified dynamics can reinforce civic participation in situations of political crisis, suggesting a similar potential for mobilising supporters in extremist contexts. Recent security reports (Dauber *et al.*, 2019; Lakhani *et al.*, 2022) warn that both jihadist organisations and right-wing extremist movements are incorporating gamified elements into their propaganda and online radicalisation activities. The Islamic State, for example, has imitated video game aesthetics and mechanics in some of its materials, presenting missions and symbolic rewards in a narrative reminiscent of franchises such as *Call of Duty*, in order to recruit young people familiar with video game culture and mitigate the perception of cruelty of such actions. In this way, 'gamification' acts as a strategic multiplier for propaganda and recruitment in the digital sphere (NATO StratCom COE, 2021), broadening the reach of war narratives and facilitating the recruitment of new generations of sympathisers and potential combatants.

Finally, the conceptualisation developed here is aligned with the analysis criteria that will be used later in the comparative section of the article. These criteria will make it possible to evaluate the presence and degree of 'gamification' in each case study, systematically distinguishing between fully structured manifestations, predominantly symbolic uses and informal applications of game logic. In this way, the concepts defined in this section establish a common framework that ensures consistency between the theoretical basis and the empirical evaluation of 'gamification' in the conflicts analysed.

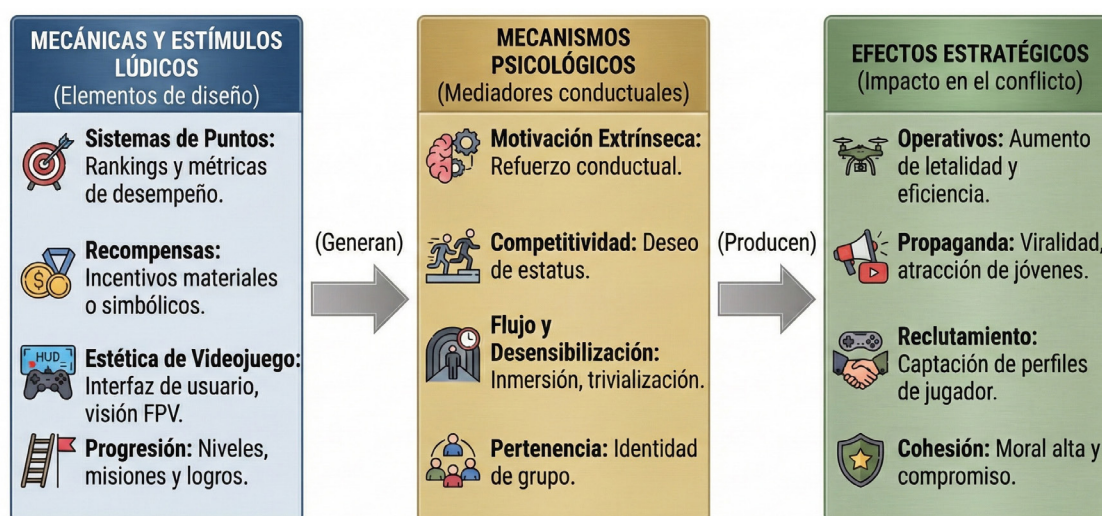


Figure 1. Model of the strategic cycle of gamification in armed conflict. Source: Own elaboration. Shows the relationship between mechanics, psychological mechanisms and effects

2.2 Common components

The elements that commonly make up a ‘gamified’ system—as defined in the previous section—include the assignment of scores as reinforcement of behaviour (e.g. counting enemies killed) (Skinner, 1953), passing levels (which reflect progression and hierarchy), achieving accomplishments or badges (which remain linked to a profile forever), inclusion in leaderboards (which promote competition between participants, even from opposing sides), receiving immediate feedback (made possible today by the hyperconnectivity of the battlefield), completing missions with clear objectives—individual or collective—and, in some cases, the use of avatars or symbolic profiles (Werbach and Hunter, 2012; Deterding *et al.*, 2011; Huotari and Hamari, 2012).

It should be noted that many of these elements—such as hierarchies, badges, missions, or personal emblems—have been present in the military sphere for centuries, fulfilling organisational, identity, or symbolic functions (Frasca, 2007). However, in this paper, they will only be considered indicators of ‘gamification’ when these components are integrated into an explicitly designed game system with clearly defined rules, objectives and rewards, and not when they function solely as traditional symbols of status or belonging. In this sense, their transposition into the language of video games and their subsequent reimportation into the contemporary battlefield—for example, through scoreboards, digital rewards, or public leaderboards—has given them a new strategic and aesthetic dimension, which will be discussed later in the comparative section applied to the case studies.

2.3 State of the literature and positioning of the article

Based on the conceptual framework outlined in section 2.1, this subsection reviews the existing literature on ‘gamification’ to situate the specific contribution of the article at the intersection of security studies, strategic communication and armed conflict analysis.

The concept of ‘gamification’ is neither new nor exclusive to the military sphere. In the first instance, authors such as Werbach and Hunter (2012) have explored it in business, educational and healthcare contexts, highlighting how game mechanics facilitate motivation and participation in non-playful environments (Werbach and Hunter, 2012). Deterding *et al.* (2011) approached it from the user experience, analysing how its elements generate playability (Deterding *et al.*, 2011). Huotari and Hamari (2012) have placed it from a user value creation perspective, highlighting the importance of understanding gamification not only as the addition of superficial elements, but as a design process that produces meaningful experiences (Huotari and Hamari, 2012).

Moving into the political and communication arena, Hassan and Hamari (2020) study how gamification reinforces civic participation during political crises; Lakhani *et al.* (2022) analyse it as a form of narrative weapon used by extremist movements online; and the NATO StratCom COE report (2021), while not offering an in-depth analysis, describes the use of video games as an instrument of digital influence and

strategic propaganda. Specialised security reports, such as those published by Dauber *et al.* (2019) and Lakhani *et al.* (2022), have warned about the use of gamified dynamics in recruitment and radicalisation processes, consolidating gamification as an emerging issue in policies for the prevention of violent extremism.

In the purely military sphere, Pötzsch (2015) argues that the media transform war into a visual product with an interactive structure, while Allenby and Garreau (2017) propose conceiving 'digital warfare' itself as a 'gamified' experience. Added to this are works that examine the 'gamified' aestheticisation of violence in jihadist propaganda (Dauber *et al.*, 2019) or in state strategic communication campaigns, as well as journalistic and technical analyses of the 'gamification' of rewards in the Russian-Ukrainian war—for example, point systems associated with the destruction of targets or platforms that advertise rankings of units and operators.

Despite this growing interest, the literature still has several gaps from the perspective of strategic studies. First, most studies focus on a single area (civic participation, online extremism, or video game culture), without developing systematic comparisons between armed actors of different natures. Secondly, studies addressing the 'gamification' of war tend to focus on isolated examples or qualitative descriptions, but rarely operationalise the concept using explicit analytical criteria that allow for case comparisons. Thirdly, the aesthetic and symbolic dimension of 'gamification' has been examined in greater detail than its operational and organisational effects on combatants and military structures.

This article seeks to partially fill these gaps through two main contributions: on the one hand, it proposes a comparative typology that distinguishes between formalised, symbolic and informal 'gamification', applied to three substantially different cases—a modern conventional conflict (the Russian-Ukrainian war), a transnational jihadist actor and Latin American organised crime—which allows patterns and variations in different strategic contexts to be identified; and, on the other, it operationalises 'gamification' through an analytical framework that translates the conceptual framework into concrete indicators (components, functions and strategic objectives), facilitating systematic comparison between cases and dialogue with previous literature on hybrid warfare, propaganda and radicalisation.

3 Methodology

3.1 Type of study and methodological design

This article investigates the phenomenon of 'gamification' in conflicts from a qualitative and exploratory perspective; it does not seek to validate a specific hypothesis, but rather to understand and systematise this emerging phenomenon by developing an analytical typology of 'gamification' and its comparative application to several cases. To this end, a comparative design based on multiple case studies has been chosen, selecting conflicts in which 'gamification' manifests itself in different ways: a modern conventional war such as the Russian-Ukrainian war, the conflict waged by a transnational ideological and irregular actor such as the jihadist, and also

conflicts originated by non-state criminal actors such as Latin American organised crime. This selection responds to the intention to cover a broad spectrum of strategic and operational scenarios. The aim is to analyse how gamification adapts to different strategic, technological and narrative frameworks, identifying both common patterns and relevant variations between them, which are then systematised using a comparative rubric of indicators (table 1) that allows cases to be classified according to a typology of gamification (formalised, symbolic or informal).

3.2 Sources and analysis techniques

This work is based on a combination of academic literature and materials from open sources produced by the armed actors themselves. Although it starts from an analysis of existing academic work on gamification, hybrid warfare, visual propaganda and digital media—such as the work of Allenby and Garreau (2017), who examine digital warfare as a gamified narrative; Lakhani *et al.* (2022), who analyse the use of playful dynamics in the online extremist ecosystem for recruitment and cohesion; Pötzsch (2015), who explores how the media turns war into an interactive visual experience with video game aesthetics; or Werbach and Hunter (2012), who systematise the key elements of ‘gamification’ and its application outside of gaming—this article seeks to go beyond what has been covered in the academic literature and apply these insights to the systematic comparison of armed actors of different natures.

From an empirical point of view, a distinction is made between primary and secondary sources. Primary sources are considered to be content generated or disseminated directly by armed actors or their support environments (propaganda videos, clips edited with video game aesthetics, social media posts, bots and channels on messaging platforms, mobile applications and other technological resources used in the field). Secondary sources include reports from research centres and specialised agencies, analyses from verification organisations, academic works, and press articles that document, contextualise, or analyse these practices. Where possible, statements based on primary material are cross-checked with at least one independent secondary source in order to mitigate the bias inherent in overtly propagandistic content.

To this end, audiovisual and narrative material disseminated directly by armed actors will be studied, such as propaganda videos, clips edited with video game aesthetics, and content shared on social networks and platforms such as Telegram, YouTube, and TikTok. Mobile applications and technological resources used in the field will also be analysed, such as those designed to report enemy positions in Ukraine or automated jihadist bots and channels. The selection of these materials is based on criteria of theoretical relevance (clear presence of ‘gamified’ elements), accessibility in open sources and ability to illustrate recurring patterns in each case study.

The thematic content analysis, carried out manually, will identify patterns, structures and recurring elements in these communication products, while a narrative and symbolic analysis will help reveal the origin, intention and projection of the phenomenon of ‘gamification’. Both types of analysis are guided by the typology and components defined in the theoretical framework, so that each piece of material can

be classified according to the predominant type of 'gamification' and the strategic functions it fulfils. In particular, the following are coded: (i) the 'gamified' components present (scores, levels, achievements, leaderboards, challenges, avatars, etc.); (ii) the functions they perform (motivational, promotional, organisational, recruitment or cohesion); and (iii) the degree of structuring of the system (formalised, symbolic or informal 'gamification'), which allows the degree and forms of 'gamification' observed to be evaluated in each case study.

To systematise the analysis, an evaluation rubric was designed comprising seven observable indicators corresponding to the main components of gamification (scoring systems, rewards, hierarchies, visual aesthetics, terminology, digital feedback and rankings). Each unit of analysis or fragment of the corpus was evaluated using these indicators on an ordinal scale (0: absence; 1: occasional/symbolic presence; 2: systematic/formalised presence).

This procedure made it possible to determine the degree of structuring of the system in each case (formalised, symbolic or informal) and to qualitatively identify the strategic functions performed by these elements (motivation, propaganda, recruitment or cohesion), the aggregate results of which are summarised in table 1.

Given that the corpus was coded by a single researcher, no inter-coder reliability tests were applied. Instead, to ensure internal consistency and validity of the analysis, an iterative process of category review and systematic triangulation of primary data with secondary sources was used.

3.3 Sampling procedure and delimitation of the corpus

The empirical corpus has been constructed through intentional sampling of materials that, according to previous literature and monitoring of open sources, are particularly relevant for illustrating the use of gamified dynamics in each case study (see the complete inventory in Annex 1). The aim is not to compile an exhaustive list of all the communications produced by the actors analysed, but rather to select a limited but significant set of pieces that clearly concentrate the analytical elements of interest.

In the case of the Russian-Ukrainian conflict, the sampling has focused on examples of platforms and campaigns that introduce scoring systems, rewards or leaderboards applied to military units, volunteers or citizens; as well as audiovisual pieces that present the destruction of enemy targets or participation in certain actions under an aesthetic typical of a video game. For jihadist actors, propaganda products and digital tools (videos, bots, social media channels, instant messaging applications and apps) have been selected that have been documented by specialised organisations and that explicitly incorporate mechanics or references typical of video game design. With regard to Latin American organised crime, the corpus includes videos, social media posts and viral challenges in which criminal organisations showcase their activities or their armed aesthetic in a particularly eye-catching and competitive way.

The selection of materials follows three main criteria: (i) clear presence of ‘gamified’ elements or playful aestheticisation applied to real conflict practices; (ii) observable relevance in terms of dissemination, repetition, or centrality in each actor’s communication campaigns; and (iii) ability to be coded using the analytical framework described in section 3.2 (components, functions, and degree of structuring). Sampling continued until a point of conceptual saturation was reached, at which point new examples added minimal variations to the patterns already identified. Thus, without aspiring to exhaustiveness, the corpus is sufficiently varied and dense to support the comparative analysis presented in the following sections.

3.4 Ethical considerations and limitations of the study

The analysis is based exclusively on material publicly available through open sources (audiovisual platforms, social networks, public reports and academic literature). No closed channels or private communications have been accessed, nor has there been any interaction with online communities linked to the armed or extremist actors under consideration. Likewise, the study has avoided reproducing excessively detailed descriptions of physical violence, focusing instead on gamified structures and their strategic implications.

Given that part of the corpus consists of propaganda material, the study adopts an explicitly critical and contextualising approach. The biases inherent in these pieces are highlighted, and emphasis is placed on the instrumental use of ‘gamified’ dynamics as a tool for influence, recruitment or legitimisation of violence. The purpose of the article is analytical and preventive: it aims to offer a conceptual framework and observation tools that allow these practices to be recognised and understood, not to provide models that can be replicated or perfected by the armed actors themselves.

As this is a qualitative study based on open sources and the interpretation of a single researcher, the study has clear limitations in terms of exhaustiveness and generalisation. The corpus does not claim to be representative of all the communication produced by the actors analysed, but rather illustrative of certain ‘gamified’ logics. The results should therefore be understood as typological and analytical proposals that need to be verified and refined, and which may be expanded upon in future research, ideally combining other methods and additional sources.

4 Case studies

Based on the conceptual framework and methodology outlined in the previous sections, this section applies the typology of ‘gamification’ developed in the article to the comparative analysis of three areas: the Russian-Ukrainian conflict, transnational jihadist actors, and Latin American organised crime. In each case, manifestations of ‘gamified’ dynamics are identified, distinguishing between more formalised forms (structured systems of scores, rewards and levels), predominantly symbolic expressions (aesthetics and narratives inspired by video games) and partial or unsystematic uses of playful elements, in which some game-specific resources are incorporated

without forming a fully coherent system of rules and rewards. This structure allows for systematic observation of both the specific components of 'gamification' and the strategic functions they fulfil in very different operational and organisational contexts.

4.1 Russian-Ukrainian conflict: gamification in a modern conventional conflict

One case that deserves detailed analysis is the Russian-Ukrainian war, where the Ukrainian Armed Forces have deployed unprecedented strategic digital sophistication. They have integrated various digital platforms, chatbots and FPV (First Person View) drones, incorporating elements typical of video game logic in the midst of a war zone. This technological synergy has made it possible to verify actions on the front line in real time and motivate troops in new ways (Brave1, 2025; Kabachynskyi, 2025).

4.1.1 Promoting competitiveness between units

One of the most innovative mechanisms has been the implementation of a scoring and reward system for drone units. Since August 2025, the 'Army of Drones: Bonus' programme has been awarding e-points for each confirmed enemy kill, emulating the mechanics of a video game (Brave1, 2025; Kabachynskyi, 2025; Shevko, 2025). For example, shooting down a target awards points based on its tactical value: six points for eliminating a Russian soldier, twenty points for damaging a tank or armoured vehicle, forty points for destroying a tank or armoured vehicle, and up to fifty points for neutralising a large-calibre mobile rocket system.

Each point accumulated can then be redeemed on the Brave1 Market platform for military equipment: FPV drones, electronic warfare systems, ammunition, and even autonomous kits¹ (Brave1, 2025). This 'store' integrates its orders with the DOT-Chain Defence logistics network and, crucially, with the Delta situational awareness system. The latter acts as the game's verification engine: by integrating data from drones, satellites and sensors into a digital map, Delta dispels the "fog of war" and allows for real-time validation of destroyed targets (Bondar, 2024). Thanks to this integration, high-performing units have their scores audited instantly and receive new equipment within days.

This points system has encouraged internal competition between units. For example, the Magyar's Birds drone brigade accumulated more than 16,000 points in a few weeks, leading the Brave1 Market leaderboard (Brave1, 2025). That figure is equivalent to redeeming hundreds of additional drones for the unit, demonstrating the effectiveness of the model as a tool for motivation and resource distribution.

As for the use of FPV drones, Ukraine has employed them with an aesthetic clearly typical of video games. Many of its pilots come from the world of video

¹ This refers to modules such as Auterion's Skynode, which equip commercial drones with autonomous flight capabilities and electronic warfare resistance through artificial intelligence. See Pokotylo (2025).

games, operating suicide drones equipped with GoPro or Insta360 cameras as if they were playing *Call of Duty*. The documentary *Lethal Crys* (2025) shows how these operators use video game terms such as ‘headshot’ or ‘kill streak’ to refer to headshots and consecutive enemy eliminations. They even compete to hit difficult targets, creating a competitive gaming atmosphere that boosts both morale and emotional commitment (Lovett and Hinshaw, 2024; *The Economist*, 2025).

The specific details of how it works and the rewards are reconstructed from public documentation on the Braver platform and reports in the specialised press, so they should be understood as approximations based on sources available until mid-2025.

4.1.2 Citizen collaboration

Another key component of this war ‘gamification’ has been citizen participation through playful dynamics. The government app Diia incorporated the chatbot e-Vorog (literally ‘e-enemy’) so that any citizen can report Russian troop movements. Each civilian report is integrated into collaborative maps of the intelligence system and, as a symbolic reward, the application rewards each report with a flexed arm icon (an emoji symbolising strength) or other emblems (O’Carroll, 2023). This simple gesture has reinforced the sense of civilian involvement in the war effort, turning citizens into ‘players’ who compete to provide intelligence from their phones (O’Carroll, 2023).

Taken together, the practices described above allow us to characterise the ‘gamification’ of the Ukrainian case as predominantly formalised, without excluding symbolic components and specific uses of playful elements. The points system applied to the destruction of targets, the associated material rewards, and the existence of specific platforms that record and display the results of units and remote operators are a clear example of formalised ‘gamification’: the rules, scoring criteria, and incentives are defined in advance and integrated into the operational logic of war. At the same time, the visual aesthetics associated with drone videos, montages reminiscent of a video game interface, and certain heroic narratives built around specific units reinforce a layer of symbolic ‘gamification’, which translates real violence into a playful and competitive language. Finally, there are also occasional and unstructured uses of playful elements—references to ‘kill streaks’, inside jokes, or challenge formats on social media—which do not in themselves constitute a coherent game system, but which contribute to reinforcing the perception of war as a partially ‘gamified’ experience for combatants and observers.

4.2 Jihadist actors: individualised transnational ‘gamification’

Global jihadism reached its peak of notoriety when the self-proclaimed Islamic State (ISIS or Daesh) managed to seize sufficient material resources and territory to combine classic state control with a model of decentralised insurgency. During its heyday between 2014 and 2019, Daesh controlled territories in Syria and Iraq, managed state institutions and, simultaneously, promoted scattered actions by lone wolves and autonomous cells on multiple continents (Winter, 2015).

The persistence of these groups demonstrates that contemporary jihadist warfare transcends physical borders and focuses on ideological conquest, strategically leveraging digital tools to recruit and retain followers. Audiovisual rhetoric plays a crucial role in this dynamic, using highly symbolic terms such as 'soldier of the caliphate', 'hero of the umma', 'sacred mission', or 'martyr level'—which equates death in combat with completing the final stage of a video game—carefully designed to generate aspirations of belonging, prestige, and symbolic status within the organisation (Lakhani *et al.*, 2022).

4.2.1 *The narrative of jihad as a process of progression*

The journey of the jihadist militant is structured as a path of personal improvement and reward, articulated in phases that are presented as achievable levels or achievements. The process begins with digital recruitment, followed by remote indoctrination, and culminates in various operational outcomes: joining local cells to carry out attacks; travelling to conflict zones to fight; martyrdom (suicide operations); or logistical or cyber defence activities (Lakhani *et al.*, 2022; Winter, 2015).

In all these itineraries, the narrative promotes the idea of overcoming stages until the maximum achievement is reached: personal sacrifice and eternal reward in paradise. Daesh has managed to systematise this journey with symbols, internal hierarchies and posthumous decorations that function as equivalents of achievements or insignia (Winter, 2015).

4.2.2 *Audiovisual production with a 'gamified' aesthetic*

The rise of Daesh coincided with unprecedented sophistication in its audiovisual propaganda, adopting visual and narrative techniques clearly inspired by video games, particularly those of the genre known as *First Person Shooter* (FPS, in which the weapon is seen in first person). Various academic studies have documented that ISIS propaganda videos reproduce elements such as superimposed scores, subjective perspectives similar to video game viewfinders, replays of highlights, and the use of dramatic music, creating a visual experience for the viewer comparable to that of a realistic combat video game (Dauber *et al.*, 2019).

These audiovisual resources are not merely aesthetic, but serve a crucial strategic function: they represent violence as a playful challenge, reduce empathy towards victims, exalt individual performance, and enhance feelings associated with competition and control (Andrews, 2023).

Jihadist actors have also developed specific digital tools that integrate gamified features to recruit, indoctrinate and retain followers. These include mobile applications and bots that use mechanisms typical of playful logic to encourage constant interaction and ideological adherence.

A clear example is the mobile application Salil al-Sawarim (Clash of Swords). Although not strictly a video game, it is an interactive propaganda product designed

with typical video game elements that seek to ideologically train future combatants and sympathisers (Hunt, 2016; Weimann, 2015).

In addition, jihadist groups have created numerous bots on Telegram that promote interaction through simple religious question-and-answer games, theological knowledge challenges, and virtual rewards that encourage regular participation (Prucha, 2016).

4.2.4 Strategic objectives of gamification in contemporary jihadism

The use of gamified elements by jihadist actors is a strategy designed to achieve specific objectives that strengthen their operational, ideological and communicative capacity:

Firstly, it encourages the recruitment of new followers, especially young people familiar with the dynamics of video games and digital platforms (Lakhani *et al.*, 2022). Secondly, it allows for effective desensitisation to violence, trivialising it by turning it into virtual achievements or challenges, which facilitates the transition to extreme acts (Pötzsch, 2015; Dauber *et al.*, 2019). A third objective is to strengthen internal cohesion by generating friendly competition that boosts morale, ideological adherence and commitment to the organisation (Winter, 2015; Prucha, 2016). Finally, it significantly enhances propaganda effectiveness, achieving greater virality and impact on social networks and audiovisual media, thus expanding its symbolic impact (Winkler and Dauber, 2014; Lakhani *et al.*, 2022).

Gamification is thus consolidating its position as a key multifunctional tool for maintaining the relevance and strategic operability of contemporary Islamist extremism.

Based on the typology proposed in this article, the ‘gamified’ practices of jihadism combine these strategic objectives with three levels of structuring: At the most formalised end of the spectrum are the applications, bots and platforms that assign ‘missions’, rewards and scores to sympathisers and combatants, configuring relatively coherent and persistent game systems over time. On a symbolic level, audiovisual production with video game aesthetics and the glorification of ‘heroes’ or martyrs functions as a ‘gamification’ of the narrative, turning jihad into a journey of progression and visible achievements. Finally, in a more specific and less structured way, the circulation of memes, inside jokes and playful references in informal channels reinforces the perception of violence as a challenge, without constituting a complete game system, but echoing the formalised and symbolic dynamics described above.

4.3 Latin American criminal violence: ‘gamification’ and violence as spectacle in illegal economies

4.3.1 Gamer aesthetics and the visual narrative of organised crime

Criminal gangs and groups in Latin America, with particular emphasis on Mexican cartels (Sinaloa, CJNG) and Colombian paramilitary structures (Autodefensas

Gaitanistas de Colombia, Autodefensas Conquistadores de la Sierra Nevada), use visual references and narratives typical of video games to construct their narrative and thus capture the attention of young audiences. These strategies are mainly disseminated on social networks popular among young people (TikTok, Instagram, YouTube, and Telegram). Unlike formalised gamification models with points or reward systems—such as those used in conventional military contexts or in jihadist propaganda—Latin American criminal groups opt for purely aesthetic gamification. There is no explicit scoring system or closed gaming environment; instead, they incorporate visual elements from the world of video games to embellish their messages and displays of power.

This visual approach is particularly effective among young audiences, who crave power, status and social recognition. As Carrillo, the 14-25 age group is particularly susceptible to these narratives, as they offer immediate access to prestige and notoriety that are normally unattainable in their native environment (Carrillo, 2021).

Among the aesthetic resources characteristic of this strategy are: fast-paced electronic music or remixed narco-corridos as the soundtrack to violent clips, graphic overlays in the style of video games such as *Grand Theft Auto* or *Call of Duty*, with superimposed texts such as 'mission accomplished' or 'target eliminated', rapid video cuts that eliminate pauses and focus solely on confrontations and displays of weaponry (this causes continuous cortisol generation in the viewer), and the use of visual symbols (emojis, video game iconography, or violent films such as *Scarface* or *The Inferno*).

In Mexico, the trend known as 'Narco-TikTok' shows young cartel members displaying weapons, armoured vehicles, luxury items and status symbols using filters and aesthetics inspired by video games (Carrillo, 2021; Bonello, 2022). Videos attributed to the Jalisco New Generation Cartel (CJNG) on TikTok show how this audiovisual style makes violence go viral (Bonello, 2022). Meanwhile, in Colombia, videos edited after attacks by the Clan del Golfo circulate on Telegram channels to flaunt their power with video game symbolism (Quevedo Delgado, 2025). These clips transcend the group's immediate circles and reach much wider audiences, normalising violence even among sectors of the population unrelated to crime.

The adoption of 'gamer' aesthetics not only embellishes the criminal narrative, but also trivialises violence, presents membership of the armed group as an attractive and aspirational experience, and projects an image of immediate success with easy recognition. This is a particularly seductive combination for young people with few socio-economic alternatives, as it presents criminal life as a fast track to prestige and gratification.

4.3.2 *Symbolic rewards, viral challenges and digital validation*

Although these groups do not develop formal 'gamified' applications or systems, they reproduce dynamics typical of video games both in their internal practices and in their online propaganda. These dynamics include public challenges, symbolic rewards and informal competition between members, all aimed at generating status and recognition within the organisation. Unlike traditional military rewards,

contemporary criminal ‘prizes’ are linked to the digital logic of instant validation, where the public display of achievements and their viralisation on social media are equivalent to ‘levels’ or ‘unlocked achievements’ in a game.

One of the most notable practices is the creation of personalised corridos for hitmen and leaders (Carrillo, 2021). Songs have been composed dedicated to figures such as ‘El Chino Ántrax’, ‘La Chapiza’ and another dedicated to Alias ‘Naín’ of the Autodefensas Conquistadores de la Sierra Nevada, broadcast on platforms such as Spotify and YouTube.

Viral challenges on TikTok or Telegram that encourage competition between criminal cells are also proliferating. Challenges to show off the largest convoy or to record oneself dancing with heavy weapons have become popular, generating content that reinforces the culture of violence and its symbolic appeal (Carrillo, 2021; Bonello, 2022).

In this context, violence is not the only way to climb the criminal hierarchy; digital success—measured in views, likes, and other reactions—becomes an additional indicator of status. Fame on social media reinforces criminal identity and fuels internal rivalry, as each member seeks to surpass the viral exploits of others.

4.3.3 Aspirational effects and state weakening

The dissemination of ‘gamified’ content on social media acts as an aspirational gateway for many young people by promising them quick access to status, luxury and recognition. This effect is particularly powerful among those facing severe socio-economic deprivation, for whom such forms of success were previously unattainable. The viralisation of these messages thus turns criminal activity into a viable and attractive path to social advancement.

The appeal of this playful-criminal narrative transcends the merely economic: criminal networks offer their recruits immediate social prestige, access to material goods and the opportunity to forge a respected identity in the community: the most outstanding members are rewarded with luxury vehicles, exclusive jewellery or ornate weapons, tangible rewards that consolidate individual prestige and highlight their progression in the criminal hierarchy. This encourages other members of the organisation to imitate such behaviour. This symbolic promise of ‘being someone’ is particularly seductive in environments where the state lacks legitimacy or effective presence (Carrillo, 2021; Marchini, 2023).

Another disturbing effect is the trivialisation of violence: brutal acts are transformed into mass-consumed digital content, which reduces the perceived seriousness of these events and raises the threshold of social tolerance. Constant exposure ends up normalising even the worst atrocities.

Ultimately, this criminal ‘gamification’ contributes to weakening the legitimacy of the state and poses new challenges for public safety and youth prevention policies, especially in communities exposed to institutional neglect and a lack of socio-economic alternatives.

Based on the typology proposed in this article, manifestations of 'gamification' associated with Latin American organised crime are generally less formalised than in the Ukrainian case, but this does not make them any less relevant. Firstly, forms of symbolic 'gamification' can be identified, in which the display of weapons, vehicles, territories and lifestyles is presented in a competitive aesthetic that invites comparison of the exploits, status and 'brands' of each organisation, bringing their image closer to the world of action video games. Secondly, there are specific and unstructured uses of playful elements, visible in certain viral challenges, internal jokes or informal recognition dynamics (who has participated in more confrontations, who has accumulated more 'feats'), which reinforce the perception of violence as a challenge or personal achievement without crystallising into a coherent game system. Although the degree of formalised 'gamification' observed in other contexts is rarely achieved here, these practices contribute to normalising violence, reinforcing internal hierarchies and maintaining group cohesion, especially among younger members who are familiar with video game culture.

5 Discussion

5.1 *'Gamification' as a multiplier in modern warfare*

The cases studied show that gamification acts as a multiplier of effectiveness in modern armed conflicts, generating cumulative effects on combatant morale, recruitment capacity, and propaganda, which ultimately has a cross-cutting impact on the different dimensions of the conflict.

Firstly, focusing on the effects on combatant morale, gamification can transform the area of operations into a motivational scenario, where each action becomes a challenge and an achievement if overcome. This increases individuals' psychological resilience and prolongs their commitment to the organisation. A clear example is the case of the Ukrainian conflict, where scores and real material rewards are used to incentivise drone operators; in the case of jihadist terrorism, progression follows an upward logic towards martyr status; and, finally, in Latin American organised crime, immediate recognition is sought, both within the group and in the wider social sphere, especially through social media.

Secondly, gamification builds strong collective identities, fuelled by internal symbols and recognition. Individual action is stimulated not only by the aim of living up to the group's standards, but also by informal competition between members, seeking to stand out or outperform other colleagues. The perceived ease of progressing within these structures also acts as a powerful incentive for recruiting new members.

Finally, 'gamification' helps to turn violence into attractive content for a digital audience. The posts are adapted to the patterns of short, fast-paced videos, similar to those used by social media influencers: vertical clips, less than a minute long, full of visual effects, fast-paced music and fragmented information to maximise their emotional impact. Thus, the target audience is less reluctant to consume this content, normalises it and, in some cases, perceives it as acceptable or even entertaining.

5.2 Differences in gamification models

It has been observed that each case studied presents a very different level of formalisation of gamification. The Ukrainian case is the most formalised, with scoring systems, real material rewards, official government applications and direct interaction between the state and combatants. The jihadist case follows a symbolic model, based on spiritual progression and the narrative of a transcendental mission, without the use of applications or tangible rewards. For its part, gamification in Latin American organised crime is presented as an informal model, geared towards receiving immediate rewards and social status, without a formalised structure or institutionalised systems.

These contrasts are supported by the systematic codification of several observable indicators of 'gamification'. Table 1 summarises the values assigned (0: absence; 1: occasional or symbolic presence; 2: systematic or formalised presence) to each indicator in the three cases analysed.

TABLE 1. CODIFICATION OF 'GAMIFICATION' INDICATORS IN THE THREE CASES ANALYSED

Observable indicator	Russian-Ukrainian conflict	Transnational jihadist actors	Latin American organised crime
1. Verifiable scoring system	2 – There is a relatively systematic count of destroyed targets and 'successes' (e.g., panels/statistics in programmes such as Army of Drones, count of targets hit by certain operators or units).	1 – Operations, attacks and 'feats' are mentioned in a quantified manner in propaganda, but without a stable points system or a scoring interface as such.	0 – There is no explicit scoring system: violence or 'reputation' is boasted about, but it is not articulated in the form of points, streaks or visible statistics.
2. Material or redeemable rewards linked to performance	2 – Equipment, drones, financial incentives and other resources are offered to particularly effective operators, in some cases linked to 'bonus' schemes or funding campaigns aimed at rewarding the most successful.	0-1 – Although salaries, loot or material compensation exist, these are not presented as 'gamified' rewards associated with points or achievements (when they do appear, they do so in a very indirect or generic way).	0 – The display of wealth (cars, weapons, parties) is not linked to an explicit 'if you do X, you get Y' system; rather, these are status symbols, not rewards within a structured game.
3. Ranks, levels and cumulative achievements	1 – There are forms of recognition ('star' operators, 'elite' units), but no open and formal system of levels or cumulative achievements equivalent to a video game progression tree.	2 – The militant path is presented as a trajectory of progress (from sympathiser to combatant to martyr), with clear symbolic achievements (status, prestige, promise of transcendent reward) that function as cumulative 'levels'.	1 – There are traditional hierarchies (leaders, hitmen, 'rookies'), and the accumulation of 'feats' reinforces status, but without an explicit 'gamified' level design.
4. Video game-like interface and aesthetics (<i>overlays</i>)	2 – Systematic use of FPV drone videos with GoPro/Insta360 cameras, peepholes, game video clip-style editing; the action clearly resembles a first-person combat video game session.	2 – Extensive use of video game-style editing: subjective cameras, visual effects, edited sequences as 'best moments', often with music and rhythm similar to those of a video game recording.	1 – Some content on social media emulates the aesthetics of video games or series (music, editing, visual references), but in a more scattered and less systematic way.
5. Explicit gamer terminology ('headshot', 'kill', 'level up', etc.)	1 – Occasional use of terms such as 'kill', 'frag', 'clip', and comparisons with video games is documented, but they do not constitute the core of the official discourse.	2 – Beyond religious vocabulary, playful expressions and gaming metaphors (missions, challenges, 'levels', rewards) are incorporated to structure the appeal to followers, sometimes even using expressions such as 'headshot' or 'kill streaks'.	1 – Isolated references to video games, 'Call of Duty mode', challenges or trials appear, but as rhetorical nods on social media, not as systematic language for mobilisation.

Observable indicator	Russian-Ukrainian conflict	Transnational jihadist actors	Latin American organised crime
6. Apps, bots or platforms with feedback	2 – Tools such as the state app Diia and the chatbot eVorog allow users to send information, receive confirmations and, in some cases, messages of recognition or reward, structuring citizen participation as a series of 'missions' with feedback.	1 – Use of channels, bots and groups (e.g. on Telegram) to disseminate tasks and content; they can assign simple missions or give automated responses, but the playful logic is not as developed or visible as in the Ukrainian case.	0 – No apps or bots with 'mission' logic and 'gamified' feedback are identified; coordination is done through messaging channels without their own playful interface.
7. Public rankings and comparison between participants	2 – There are explicit comparisons between units and operators (more drones shot down, more targets destroyed, etc.), sometimes with lists and public recognition that function as de facto rankings.	1 – There are lists of martyrs, exemplary combatants or 'most successful' attacks, but no quantified and updated rankings such as competitive tables.	1 – Symbolic rivalry ('the most feared cartel', 'the most famous hitman'), but based on narratives and reputation, not formal rankings; it can be coded as a rhetorical presence of comparison, without a structured system.

Note. 0: absence; 1: occasional/symbolic presence; 2: systematic/formalised presence.

As can be seen in table 1, the Ukrainian case accumulates most of the indicators at level 2, which justifies talking about formalised 'gamification'; jihadist actors combine indicators at levels 1 and 2, forming a predominantly symbolic model with some semi-formalised elements; while Latin American organised crime is mainly at levels 0-1, associated with informal and unstructured uses of playful repertoires.

Likewise, the ultimate goal of each model also differs considerably: gamification in Ukraine seeks to increase effectiveness on the battlefield, strengthen social resilience and encourage civilian participation; in the case of jihadism, the aim is total surrender through ideological-religious conviction; while in the case of Latin American organised crime, the aim is to improve the recruitment of new members and increase symbolic power at both the territorial and transnational levels.

Finally, the main effects observed in each model are different: in Ukraine, gamification enhances national cohesion and resilience; in jihadism, it encourages the fanaticisation of combatants and a predisposition to total sacrifice; and in organised crime, it promotes an increase in personal status and the glorification of criminal life.

5.3 Transnational projection and global dissemination of gamification

Each model derives specific benefits from the transnationalisation of its narratives. In the Ukrainian case, it generates international sympathy and solidarity, extending the gamer aesthetic to global audiences through social media. The jihadist case is the most pronounced, with effective radicalisation of young people around the world, combining 'gamified' elements that are attractive to this segment and a logic of legitimisation superior to any state or international authority. In the case of Latin American organised crime, the narco-aesthetic has been replicated in Europe and Africa, and not always within migrant communities, demonstrating its growing capacity for cultural penetration.

One of the most visible goals—if not the main one—is to improve recruitment capabilities for each cause. The Ukrainian case favours the targeted recruitment of

young foreigners but, above all, it boosts donations and the generation of logistical support from global sympathisers. The jihadist case encourages the creation of 'lone wolves', radicalised individuals capable of acting even within their local communities or in territories to which they have easy access. For its part, Latin American organised crime mainly targets young people in contexts of exclusion, becoming a model of status and social validation. It should be noted that gamification alone does not explain the dynamics of these conflicts, but interacts with broader social, economic and ideological factors.

5.4 Trivialisation and normalisation of violence

The use of elements from the world of video games turns violent acts into audiovisual content that is entertaining or even motivational. When this content becomes repetitive and banal, it ends up reducing the psychological barriers that have traditionally protected societies. The viralisation of violent content not only facilitates its normalisation through visual repetition, but also reaffirms its social acceptance by perceiving that it enjoys widespread following and digital legitimacy. This effect not only nullifies moral barriers, but also contributes to turning these practices into replicable models for other causes or armed groups.

In certain contexts, this trivialisation is exacerbated by structural impunity. Criminal groups can publish and disseminate violent content without legal consequences, reinforcing their image of power and dominance and projecting the impression that not even the state can impose itself on their informal authority.

The use of 'gamification' and digital aesthetics also contributes to the aesthetic idealisation of violent or aggressive lifestyles. In the case of Latin American organised crime, it is associated with wealth, social status and territorial control; in jihadism, it is linked to religious purity and spiritual transcendence; while in Ukraine it is articulated around a narrative of heroism and collective resistance, where achieving the status of decorated hero or national martyr represents a desirable goal.

Overall, violence is no longer hidden: it is displayed, legitimised and becomes a means of gaining social recognition, aided by interfaces and audiovisual formats that have already been internalised by younger generations.

5.5 Strategic and public policy implications

It is a mistake to consider 'gamification' solely as a narrative or symbolic resource. It should be approached as a tool of power, with tangible effects on recruitment, cohesion and ideological dissemination. Ignoring its potential is therefore a strategic error.

It is essential that defence ministries and national security agencies understand the phenomenon and learn to anticipate its use by hostile actors. In turn, they must develop effective 'gamified' counter-narratives capable of capturing the attention of the same audiences and competing in the digital spaces where battles for perception and social support are fought.

Among the proactive measures, the need to use automated bots capable of amplifying preventive and delegitimising narratives stands out, as well as reinforcing positive content through controlled mass interactions that counteract the bias of viralisation algorithms. Similarly, states could encourage the development of themed video games, apparently neutral or linked to topics of general interest—such as social resilience, cooperation, or national history—with the aim of channelling young people's interest towards narratives aligned with democratic values and respect for human rights. Collaboration with content creators and influencers is another tool that can be used to integrate messages rejecting violence and demystifying crime into the playful and viral formats most consumed by young people, normalising normality in digital spaces.

Given that gamification clearly facilitates the recruitment of younger audiences, it is essential to counteract its effect through public policies aimed at offering attractive alternatives, such as employment, training and social integration options. It is also essential to implement extremism prevention programmes from an early age and to actively combat the social normalisation of violence on social media and in digital environments.

Furthermore, intelligence aimed at preventing radicalisation is becoming a mass phenomenon, supported by digital data analysis and the use of artificial intelligence, which forces states to pay attention not only to external threats, but also to possible recruitment processes within their own societies.

Taken together, a comparison of the three cases allows us to draw some general conclusions about 'gamification' as an emerging way of waging war and narrating it. Firstly, it shows that this is not a marginal phenomenon limited to specific cultural contexts, but rather an adaptable repertoire that cuts across conventional conflicts, jihadist violence and organised crime, with different combinations of formalised, symbolic gamification and specific uses of playful elements. Secondly, it highlights that gamification not only stylises violence, but also introduces incentives and metrics that can influence the behaviour of combatants and sympathisers, affecting target selection, risk appetite and the way 'success' is understood on the battlefield. Thirdly, it suggests that these dynamics open up a new front for security and prevention policies: both the regulation of tools that facilitate the gamification of violence and the development of counter-narratives and communicative responses capable of deactivating the logic of the game around the conflict.

These implications should be interpreted taking into account the methodological limitations outlined in section 3.4, especially the dependence on open sources and the difficulty of measuring the real psychological impact without ethnographic fieldwork.

6 Conclusions

Gamification has established itself as a strategic dimension in contemporary armed conflicts, acting as a multiplier of combatants' morale, recruitment capacity, internal cohesion and propaganda projection. Its flexibility allows it to adapt to contexts as

diverse as those analysed in this study: from a conventional modern warfare scenario such as Ukraine, to transnational and diffuse environments such as jihadism, to Latin American criminal violence, where staging a digital spectacle predominates.

Each model responds to specific needs and objectives: in Ukraine, gamification helps to maximise operational effectiveness and strengthen social resilience; in jihadism, gamification facilitates indoctrination, ideological cohesion and the total dedication of combatants, to the point of encouraging suicidal actions; while in organised crime, it becomes a tool for recruiting young people in contexts of exclusion, offering them immediate prestige and status through the digital display of violence.

The phenomenon is not limited to the local level, but transcends physical and digital borders. The transnational circulation of gamified narratives encourages the imitation of practices and the reinforcement of violent ideologies in distant contexts, thereby increasing the global threat posed by heterogeneous armed actors.

Furthermore, 'gamification' contributes to trivialising violence and idealising criminal or extremist lifestyles, reducing the moral barriers of societies and increasing the risk that young people will normalise violence or even embrace it as a means of prestige and social recognition.

From an analytical point of view, the article has shown that the typology of formalised, symbolic and specific uses of playful elements, together with the comparative rubric applied to the three cases, constitutes a useful tool for organising a phenomenon that, until now, had been described in a fragmentary manner. This proposal makes it possible, on the one hand, to distinguish more precisely between the superficial aestheticisation of conflict and the introduction of structured incentives that affect the behaviour of combatants and sympathisers and, on the other hand, facilitates systematic comparison between armed actors of different natures.

Finally, this study opens up a future research agenda that should address the limitations identified here. It is a priority to extend the analysis to the defensive 'gamification' employed by the Russian Federation, which is absent from this work, in order to contrast authoritarian state models with the Ukrainian model. Likewise, future research should apply quantitative designs that measure the reception of these narratives among young audiences, going beyond the purely sender-based approach of this analysis.

Given this scenario, it is essential that states and international organisations integrate an understanding of gamification into their defence and security strategies, adopting preventive and counter-narrative measures. Anticipating the phenomenon requires not only digital surveillance and artificial intelligence mechanisms capable of detecting patterns of radicalisation, but also cultural, educational and communicative initiatives that challenge armed actors in the field of perceptions.

In short, the gamification of armed conflicts is a strategic challenge that goes beyond the symbolic and requires coordinated, multidimensional responses adapted to the digital reality of the new generations. Only through a comprehensive approach will it be possible to mitigate the effects of this phenomenon and guarantee security in an increasingly interconnected global environment mediated by playful dynamics.

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Appendix 1: Document corpus analysis matrix

Representative inventory ($N=50$) of the digital artefacts analysed. The selection is based on criteria of relevance, virality and platform diversity, ensuring data triangulation in all three cases.

TABLE A1. CORPUS ANALYSIS MATRIX

ID	Platform/Medium	Description of the artefact	Identified Game Mechanics	Source / Year
U-01	Government app (Diia)	e-Vorog (e-Enemy): Official chatbot for reporting Russian troop movements.	Crowdsourcing / Rewards: Use of civic gamification; immediate feedback and digital validation of the user as a 'virtual defender'.	Ministry of Digital Transformation (2022-2025)
U-02	Website (Braver)	Army of Drones: Fundraising and training platform.	Points System: Assignment of e-points and rankings for the most effective donors and drone operators.	<i>United24 / Braver</i> (2024)
U-03	YouTube / Telegram	Clips from 'Magyar Birds': videos of drone units with pointers and comical editing.	Interface (HUD): Video game crosshairs overlay, health bars, and <i>Mario Bros</i> sound effects upon impact.	Telegram Channels (2023-2025)
U-04	Social Network (Twitter/X)	NAFO (Fellas): Decentralised 'trolling' movement against Russian propaganda.	Avatars/Customisation: Creation of customisable characters (Shiba Inu dogs); memetic warfare structured as clan 'raids'.	Direct observation (2022-2025)
U-05	Simulators	Civilian FPV training: Homemade software for practising kamikaze piloting.	Immersive simulation: Use of console controllers (Xbox/PS) to control real weapons; blurring of the line between game and war.	<i>The Economist report</i> (2025)
U-06	Video game	CS:GO Maps: Maps created in Counter-Strike to inform Russians about the war.	Virtual Environment: Use of digital leisure spaces as channels for subversive information ('War in the lobby').	<i>Helsingin Sanomat</i> (2023)
Y-01	Video Propaganda	Flames of War series: High-production documentaries by ISIS.	FPS aesthetics: Subjective camera (GoPro on the barrel), slow motion during casualties, 'hero vs. horde' narrative.	<i>Al-Hayat Media</i> (Archived)
Y-02	Mobile App	Huroof (Alphabet): App for children of the 'Caliphate'.	Edutainment: Teaching the alphabet using weapons ('T' for Tank, 'B' for Bomb); gamified pedagogy of violence.	<i>Long War Journal report</i> (2016)
Y-03	Telegram Bot	Theological Quiz: Automatic bots on encrypted channels.	Trivia/Ranking: Questions and answers about Sharia law with scoring systems and status within the chat group.	MEMRI (2017-2020)
Y-04	Video game (Mod)	ARMA 3 / GTA Mods: Game modifications to recreate ISIS battles.	Roleplay: Simulation of military victories in virtual environments to compensate for real territorial losses.	Forum observation (2018-2022)
Y-05	Social media	Infographics of 'Achievements': Visual posters of battle statistics.	Stats/Metrics: Presentation of enemy casualties and destroyed vehicles with 'end-of-game scoreboard' aesthetics.	Amaq News Agency
C-01	TikTok	#CartelTikTok: Viral trend of hitmen showing off their luxurious lifestyles.	Loot: Display of golden weapons (skins) and 'unlockables' (cars, felines) as level trophies.	TikTok (2021-2025)
C-02	Video game (GTA V)	Grand Theft Auto Online: Roleplay servers controlled by cartels.	Virtual Recruitment: Real recruiters contact skilled players within the game to offer real 'work' (lookouts/mules).	<i>Forbes / Insight Crime</i> (2023)

ID	Platform/Medium	Description of the artefact	Identified Game Mechanics	Source / Year
C-03	Instagram/FB	Convoy Challenges: Videos of rows of armoured trucks.	Clan Competition: Demonstration of comparative strength (who has the best ‘guild’); paramilitary military parade aesthetic.	Open Networks (2020-2024)
C-04	YouTube Music	Corridos Tumbados / Bélicos: Music videos.	Hero Narrative: Lyrics that narrate the rise of a ‘character’ from poverty to power (leveling up) through violence.	Peso Pluma / Natanael Cano (2023-2024)
C-05	Messaging	Narco-Culture Emojis and Stickers: Sticker packs on WhatsApp.	Insignia: Use of the ‘pizza’ (Chapitos) or the ‘man in the hat’ (Mayo) as badges of belonging to a faction.	Direct observation (2024)
C-06	Twitch	Narco-Streamers: Hitmen broadcasting patrols or parties live.	Streaming: Real-time interaction with the audience, donations and requests for greetings, trivialising criminal activity.	Local press reports (2023)

Note. U = Russian-Ukrainian conflict; Y = Jihadism; C = Organised crime.

Source: author’s own elaboration based on data collection from open sources and triangulation with reports from security consultancies.

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