

The Violent World Behind Video Games

History, Young People and Military Applications
A Christian Reflection



fellerbooks.com

The Violent World Behind Video Games

History, Young People and Military Applications

A Christian Reflection

Essay and Critical Literature Review

16 October 2026

fellerbooks.com

About this edition

A critical essay on the development of video games, young people and online communities, problematic gaming, military simulation, drones and Christian responsibility.

Digital book edition · fellerbooks.com

16 October 2026

This English edition translates the complete Dutch book, including four tables, three infographics and 35 references. Figures and the source-check date are retained from the original. Pagination differs from the Dutch edition.

Cover image created with AI as a conceptual photographic illustration. It represents the subject and is not a documentary photograph of a specific wartime situation.

Contents

Introduction	5
1 Research methodology	6
2 Revisiting the supplied lectures	7
3 From early computer games to digital worlds	8
4 Violence as narrative and game mechanic	9
5 What aggression research does and does not show	10
6 How many people play and which figures can be compared	11
7 Young people and the circumstances of play	13
8 Online play in large groups	14
9 Addictive mechanisms and the attention economy	15
10 When gaming becomes a disorder	17
11 Sleep, physical wellbeing and treatment	19
12 Money, loot boxes and commercial influence	20
13 Fantasy, imagination and losing touch with reality	21
14 Military simulation and its connections with entertainment	22
15 Drones and the difference between an interface and a game	23
16 Ukraine and the expansion of drone warfare	25
17 The gamification of war and the struggle over images	27
18 Christian objections to violence and dehumanisation	28
19 Christian objections to dependency and escape	29
20 Christian ethics of war and human control	30
21 From Adam to cyborg and the limits of technological salvation	31
22 Future developments and their uncertainties	32
23 Responsibilities of families, schools, churches and businesses	33
24 Conclusion	34
Sources and bibliography	36

Introduction

Video games can offer relaxation, friendship and imagination. The same digital environments can also present violence as normal, hold vulnerable players' attention for long periods and hide commercial interests behind an attractive game. Meanwhile, armed forces use related technologies to train personnel and carry out military operations remotely. The war in Ukraine makes their social significance visible. A screen can be a place for play, but also an instrument through which decisions about life and death are made. That difference calls for careful research and moral judgement.

The central argument of this essay is that the most serious objections to video games are better understood by distinguishing different forms of power. These include power over attention, money and social relationships and, in military applications, over actual physical violence. A sweeping accusation that every gamer is being prepared for murder is scientifically unsustainable. Equally, it is irresponsible to dismiss every concern as an outdated fear of new media. There are concrete problems that do not disappear simply because most players continue to organise their daily lives successfully.

The question, therefore, is under what circumstances games contribute to harm, how those circumstances developed historically and what responsibilities follow. This essay discusses the medium's development, research into aggression and addiction, online group formation, fantasy and reality, military simulation, drones and current events in Ukraine. It then explores Christian objections in terms of human dignity, love of neighbour, freedom, truth and responsibility. Its examination of the future distinguishes existing developments from uncertain scenarios.

The two supplied lectures by Robert Jan Bleeker, from 2008 and 2010, provide a historical and philosophical starting point. Their concerns about militarisation and technological control deserve discussion. Their statements, however, are not automatically accepted as established facts. A cautionary lecture serves a different evidential purpose from a controlled study or a documented annual report. Taking this subject seriously begins with that distinction. [1, 2]

1 Research methodology

This essay is based on a focused, critical literature review, with sources checked on 16 October 2026. The emphasis is on scientific publications and institutional reports from 2020 to 2026 inclusive. Older publications are included where necessary to understand the historical debate. Search terms included gaming disorder, violent video games aggression, adolescent gaming, loot boxes, game transfer phenomena, military simulation, FPV drones, civilian casualties Ukraine and autonomous weapons human control. The public web was searched for scientific articles, PubMed records and original publications from the institutions concerned.

The selection prioritises systematic reviews, meta-analyses, large population studies and primary documentation. A review brings existing research together, but is only as strong as its underlying measurements. Samples, definitions, research designs and differences between measured outcomes were therefore also considered. A questionnaire about irritation after playing measures something different from police records of violent crime. A risk score for gaming problems is not a diagnosis following a clinical interview. These substantive differences can change the conclusion.

This is a narrative literature review, not a fully systematic review following a preregistered protocol. No exhaustive database export was performed and no PRISMA selection flow was calculated. The text therefore makes no claim to completeness and provides no original pooled effect estimates. Where a publication was available only through an abstract, discussion is limited to what could be verified there. The references allow readers to locate the cited data and key conclusions.

For current events, publication dates are distinguished from the periods to which figures refer. A report published in 2026 may contain measurements from 2023. In war data, verified civilian casualties differ from military claims about targets destroyed. In market data, forecasts differ from retrospectively revised estimates. A table that omitted these distinctions would appear more precise than it really was. Every numerical table therefore states the population, period and principal limitation.

Religious and philosophical sources address different questions from medical sources. Biblical texts and church documents clarify moral standards and understandings of humanity; they do not provide epidemiological estimates of addiction. A psychological experiment, in turn, cannot determine whether an action accords with love of neighbour. The essay's strength lies in connecting these questions while maintaining the distinction between empirical findings, interpretation and normative assessment.

2 Revisiting the supplied lectures

According to the document, Bleeker's lecture on violent video games was delivered on 1 November 2008. It connects school shootings, the games industry and military interests. The 2010 lecture on the journey from Adam to the cyborg broadens this discussion to converging technologies and the question of whether technological improvement also means human improvement. Together, they represent an explicitly Christian cultural critique. They challenge a society in which human limitations are viewed solely as technical defects. [1, 2]

An enduring strength is their attention to the institutions behind the screen. A game does not emerge outside economics or politics. Developers, investors, distributors, advertisers and sometimes defence organisations help determine what is produced. Users mainly see the game world, while its conditions are established elsewhere. Research into business models and contracts is therefore more useful than simply asking whether individual parents are strict enough. This institutional focus can be retained without accepting every historical connection suggested in the lectures.

Other passages require correction. The fact that a perpetrator played a popular game does not establish that the game caused the act. The same applies to violent films, music or fantasy literature. When millions of people use a medium, it will also appear in the life histories of some offenders. Demonstrating a specific effect requires comparison groups and consideration of other factors. A succession of shocking examples cannot replace that research.

The lectures also use network connections as explanations. An executive with a defence background, a joint research project or an advisory role may demonstrate a real relationship. This does not establish that an entire industry is directed by a single hidden plan. Evidence must match the scope of the conclusion. A public contract demonstrates cooperation; by itself, it does not demonstrate an overarching scheme to make young people violent. This distinction protects the critique from unnecessary exaggeration.

Updating these texts also requires a different view of internet communities. Online contact can be superficial and humiliating, but can also produce lasting friendships. Questions about isolation must therefore be asked in the context of a player's actual life. Does the person have support, get enough sleep, manage school or work and remain free to stop? A judgement that dismisses all online relationships as unreal from the outset misses precisely why such environments are attractive and sometimes difficult to leave.

The theological insight that greater capability does not guarantee greater goodness remains fruitful. A more sophisticated simulator does not automatically make a decision more just. A more convincing avatar does not automatically make an

encounter more honest. A technologically enhanced person does not automatically become someone who serves their neighbour better. This idea runs critically through the essay without requiring unproven medical or historical claims.

3 From early computer games to digital worlds

The history of video games has multiple origins. Universities, electronics companies, amusement arcades, hobbyist communities and military research programmes each contributed in their own ways to the development of computers, screens and simulation. The claim that the entire medium was invented exclusively by the military does not do justice to that history. The Strong National Museum of Play's overview instead shows how diverse technological and commercial developments converged. The Magnavox Odyssey and Pong mark the breakthrough of the early 1970s. [3]

A specific early example is Spacewar, developed at MIT in 1962 around the PDP-1 computer. It allowed two spaceships to fight each other and emerged from a university programming culture. It shows that technical experimentation, competition and fictional combat came together early on. It does not, however, prove that the subsequent industry has an exclusively military origin. A space theme and simulated combat can arise from curiosity and enjoyment as well as military interest. [34]

Early games were technically limited. A ball, vehicle or simple character could be enough to give a player a sense of control. Their appeal came from the direct connection between action and outcome. Better timing meant more points. This structure made practice visible and encouraged competition. Crucially, this basic form requires no violence. The relationship between play and reward is older and broader than the later rise of realistic war games.

Home computers and consoles changed where play took place. Arcade machines stood in public spaces and often required another payment for each attempt. The home computer moved games into living rooms and bedrooms. This expanded the freedom to play, but also made the time spent playing less visible. Meanwhile, genres centred on building, stories, sport, puzzles and strategy emerged. The term video game remained a single name for an increasingly diverse set of experiences.

Three-dimensional environments later strengthened the feeling of being present somewhere. The perspective shifted from moving a figure to looking through a character's eyes. In shooting games, aiming became a continuous action rather than a single button press. Yet transfer to real-world skills remains limited. An interface abstracts away physical strain, danger, uncertainty and the social consequences of violence. Mastering a game's rules says little about someone's ability to act under real moral pressure.

Internet connections subsequently changed the character of many games. A game no longer had to end when its story was completed. Other players provided new opposition, conversations and expectations. The game world became a meeting place. Later, continuous updates and mobile devices made it possible to offer games as ongoing services. Commercial interests consequently shifted in part from a single sale to recurring participation.

This development has a moral consequence. Someone selling a completed product earns mainly from the purchase. Someone dependent on recurring payments and continuous activity has a greater interest in prolonging engagement. This need not lead to abuse, but it does create tension between the provider's interests and the player's. The medium's history is therefore also a history of changing dependencies. Technological progress, cultural expression and commercial influence are intertwined.

4 Violence as narrative and game mechanic

An analysis of violence begins by asking what a game actually rewards. In some games, violence forms the background to a story; in others, it is the main means of progressing. Other games give violence consequences or require players to seek alternatives. A game's moral character therefore cannot be inferred solely from the presence of weapons. Perspective, purpose and the game world's response also matter.

A war game might repeatedly reward speed and accuracy while keeping the consequences for bystanders out of view. This is a form of moral selection. The game need not explicitly say that human lives have little value, but it makes certain questions functionally unnecessary. Someone who only needs to know where a target is learns to ask less often who that target is within that world. The objection then concerns the organisation of attention, even where no demonstrable increase in criminal behaviour follows.

Conversely, a game can portray violence in order to question it. A character may hesitate, a victory may reveal loss and a decision may later produce an uncomfortable consequence. Yet a critical story does not automatically create a critical playing experience. When the narrative condemns violence but the scoring system constantly rewards it, the player receives conflicting messages. A substantive assessment must therefore consider what someone does for dozens of hours, not just a text on the screen.

The distinction between aggression and violence is essential. Aggression may refer to hostile thoughts, feelings, verbal abuse or physical behaviour. Violence generally refers to serious physical harm or its threat. A temporary increase in irritation after frustrating play does not prove a higher likelihood of murder. Conversely, the absence of a proven connection with murder does not rule out a game encouraging unpleasant

ways of treating others. Separating these outcomes can make criticism both sharper and fairer.

Cultural representation deserves its own place alongside psychological effects research. Who is repeatedly depicted as the enemy? Which countries or populations exist only as threats? Which victims are given names, and which appear only as silhouettes? These are questions about imagination and power. Answering them does not require assuming that a player believes everything literally. Even a world recognised as fiction can make certain associations readily available while systematically keeping other experiences invisible.

A player's responsibility therefore goes beyond checking whether a game is legally available. Adults can ask what pleasure they seek and what it does to their attention. Is victory attractive because of cooperation and mastery, or because of others' humiliation and helplessness? This distinction is not always immediately clear. It requires self-examination, conversation and a willingness to change a cherished activity when its character can no longer be defended.

5 What aggression research does and does not show

Research into violent games has a long and sometimes heated history. Some researchers find small associations with later aggression; others point to bias, weak measurement instruments and effects disappearing in more rigorous studies. Prescott, Sargent and Hull brought longitudinal studies together in 2018 and reported a positive association with subsequent physical aggression. In a 2020 meta-analysis, Drummond, Sauer and Ferguson reached a much more cautious assessment of the practical significance of such associations. [4, 5]

These differences are not simply matters of conviction. Researchers must decide which studies are comparable, how to define aggression and which background factors to account for. If participants' prior aggression is inadequately considered, games may appear to cause behaviour that partly existed already. Selective publication can inflate a small effect when striking results are more likely to be published. Questionnaires about gaming behaviour may also be inaccurate. These choices affect the outcome of a research synthesis.

Drummond and colleagues' meta-analysis included 28 independent samples involving approximately 21,000 young people. It found no convincing basis for a substantial long-term effect of the kind often assumed in public warnings. This does not prove that every possible effect is exactly zero. It means these data cannot support strong claims about a large general contribution to youth violence. A small average

association may also mean something different from a large effect in a vulnerable minority. [5]

A further difficulty is that a player is not a random recipient. Young people choose games that fit their friends, preferences and mood. Someone who is angry may seek out a competitive game. Someone who struggles to fit in at school may seek recognition online. The game may then reinforce or temporarily relieve those feelings. A simple cause-and-effect arrow therefore often fails to capture the feedback between person, environment and activity.

For school shootings, the evidential threshold is higher still. These are rare events with many possible contributing factors. Retrospective reconstruction is vulnerable to selective attention. When a journalist mentions only a perpetrator's favourite game, other circumstances disappear from the story. Such a case can generate a research question, but not a reliable calculation of general risk. Equally, it is irresponsible to treat young people who play the same game as dangerous in advance.

A balanced public conclusion is that parents and schools should take content, conduct and wellbeing seriously while avoiding sensational explanations. Reducing bullying, supporting people with mental health difficulties and attending to concrete threats are important responsibilities in their own right. The debate about games must not overshadow such signals. Moral objections to enjoying humiliation also remain open to discussion in the absence of a large causal effect on violence. Scientific caution need not lead to moral indifference.

6 How many people play and which figures can be compared

Gaming is no longer a small youth subculture. It includes mobile puzzles, sports games, online role-playing games, building environments and competitive shooters. An overall user figure therefore says little about exposure to violent content. Such a figure is nevertheless useful for understanding social scale. In its 2025 reporting, Newzoo estimated approximately 3.58 billion players worldwide. A revision published in 2026 put 2025 revenue at US\$201.6 billion. The player count from the earlier estimate must remain identifiable as such. [6, 7]

These figures use different units of measurement. A player is an estimated person within a market model; an account is a registration; a daily active user is a unit of activity defined by a platform. One person can use multiple accounts. A monthly total is not the concurrent population of a single game world. A company's report of large numbers of active users therefore cannot be translated into an equal number of people gathering in the same environment at the same moment.

Revenue and economic significance must also be distinguished. Consumer spending is neither publishers' profit nor the total economic activity surrounding games. Depending on the source, equipment, livestreams, advertising and professional competitions may fall outside the count. A number can be correct yet misused when its definition disappears. This particularly applies to comparisons with film, music or the arms industry.

For young people, the denominator is even more important. The Dutch ScholierenMonitor describes pupils aged 12 to 16. The American Pew study covers 13- to 17-year-olds. The international HBSC study focuses on 11-, 13- and 15-year-olds in participating countries and regions. Differences between their percentages therefore do not establish a direct ranking of countries. Age, question wording, measurement year and cultural context change the outcome. [8, 9, 10]

Table 1 Participation and economic scale

Indicator	Result	Population and period	Meaning and limitation
Players worldwide	3.58 billion	Worldwide, 2025	Newzoo estimate from 2025; not a count of violent-game players [6]
Global revenue	US\$201.6 billion	Worldwide, 2025	Revised market estimate published June 2026 [7]
Almost daily gaming	30%	Netherlands, ages 12–16; 2023	All surveyed pupils as denominator [8]
Plays video games	85%	USA, ages 13–17; 2023	Self-report; published 2024 [9]
Daily gaming	41%	USA, ages 13–17; 2023	Same age group; not a diagnosis [9]
Daily gaming	34%	HBSC, ages 11, 13 and 15; 2021/2022	International group of participating countries and regions [10]

Sources 6–10. Countries, age groups and definitions differ. Do not add the percentages together. Market figures are estimates.

The table illustrates scale, not a world map of risks that can be added together. The revenue estimate is an economic figure. The percentage of daily players describes behaviour. The percentage with a problematic screening score indicates possible harm. These data answer three different questions. Readers should therefore resist the temptation to multiply a large player count by a risk percentage from a different population.

There is also no single authoritative current global figure for the proportion of young people playing violent games under exactly the same definition. Age classifications, genres and playing habits vary. This essay therefore does not present a seemingly precise percentage for exposure to violence that the consulted sources cannot support. Reliable knowledge also involves making such limits visible.

7 Young people and the circumstances of play

The Dutch figures show why gaming and problematic gaming must be distinguished. In the 2023 survey, 30 per cent of secondary-school pupils aged 12 to 16 played almost daily. For 2.2 per cent, gaming was problematic according to the questionnaire and threshold used. That threshold was at least six affirmative answers to nine statements. This result is not an individually established clinical diagnosis. [8]

Infographic 1 Daily play and problematic scores

Young people and gaming

Three measurements with different definitions and populations

Netherlands 2023

30%



Ages 12–16 | (almost) daily play | source 8

Netherlands 2023

2.2%



Ages 12–16 | problematic screening score | source 8

HBSC 2021 and 2022

12%



Ages 11, 13 and 15 | risk of problematic gaming | source 10

Not a shared distribution: daily play is not a diagnosis.
Do not add together or interpret as a ranking of countries.

Sources 8 and 10. Original visualisation; the groups overlap and are not directly comparable.

The figure shows why the word addiction should be used carefully. Most daily players do not automatically fall into the problematic category. At the same time, a pupil who plays less frequently can still encounter serious difficulties when gaming is associated with financial problems, deception or neglect of responsibilities. Frequency is a signal that may justify further questions, but not a complete assessment. It remains necessary to ask how life around gaming is functioning.

Adolescence complicates that assessment. Young people practise independence and seek connection with peers. A rule about a game may therefore also be a discussion about trust, freedom and belonging. A parent who speaks only about minutes may overlook the significance of a team commitment. A young person who speaks only

about loyalty to the team may, in turn, conceal the loss of sleep and schoolwork. Both perspectives need discussion without either automatically deciding the matter.

Games can give young people recognition they miss elsewhere. A pupil who feels insecure at school may be the person who solves a difficult task online. This can bring enjoyment and confidence. It becomes precarious when this is the only place where appreciation is experienced. Stopping then means more than missing an activity: it also means temporarily having to be someone else. Prevention that merely blocks access without strengthening other sources of belonging leaves an important part of the problem untreated.

Age suitability concerns more than blood or offensive language. Contact with strangers, commercial temptations and opportunities to move unnoticed to other communication channels also matter. A cheerful visual style says little about the safety of the social environment. Parents therefore need information about what a child actually does: whom they speak to, what purchases are possible and how easily they can seek help when contact becomes unpleasant.

An educational approach can begin with watching and listening together. Let a young person explain what makes a game attractive, how a round ends and what happens when someone is excluded. This makes the adult a better-informed conversation partner. It does not remove boundaries; it clarifies their justification. A rule protecting sleep, school and safety is easier to defend than a general judgement that all players are wasting their time.

8 Online play in large groups

Online gaming is a social process operating at different scales. A small team may cooperate closely through voice chat. A guild or clan may have dozens of members who do not all meet simultaneously. A large online world may distribute thousands of users across different servers. Communities also emerge around games on chat platforms and video channels. A player's social network is consequently larger than the group appearing on screen at any one moment.

Competitive teams create mutual dependence. If one player stops unexpectedly, this can disrupt others' experience. A player may therefore feel morally obliged to continue. This is understandable: keeping commitments is a good habit in itself. But the obligation becomes distorted when there is no reasonable room for illness, family, work or rest. A leisure activity then takes on the character of an arrangement whose terms are determined unilaterally by the group.

Peer pressure need not be openly hostile. A notification that friends are online again, an event available only briefly and a constantly changing ranking can combine to create a sense of falling behind. The player need not literally believe danger is

imminent. It may be enough that absence repeatedly entails a small loss. Returning thus becomes a habit that is not consciously chosen afresh each time. Design and social environment reinforce one another.

Some familiar names make these differences tangible. World of Warcraft exemplifies a persistent role-playing world to which players return with a character. Fortnite illustrates how competition can connect with a wider social environment. Minecraft can be used for building and collaborative design, whereas a competitive shooter demands different skills and forms of interaction. These illustrate types of play, not fixed classifications for every mode or user. The content and settings of a particular game must be examined individually.

Online friendships, meanwhile, can offer support. People share humour, cooperate and maintain contact across great distances. This can matter to someone with a disability or a small local network. A serious discussion of gaming problems must acknowledge these benefits. Otherwise, a player has reason to suspect that the other person understands nothing of what is at stake. Acknowledgement, however, does not mean that every contact is safe or every group norm healthy.

Abuse can arise where age, identity and responsibility are unclear. Verbal abuse can become normalised as a joke, with protest interpreted as weakness. A child may be persuaded to share personal information or continue a conversation outside the game. These risks do not require assuming that every stranger is dangerous. They do require clear reporting options, accessible adults and rules that protect victims rather than forcing them to leave the group.

A community's moral test is therefore how it treats its most vulnerable participant. Can someone refuse? Are mistakes forgiven? May players rest? Can exclusion be scrutinised, and is there room to report abuse? These questions also apply to sports clubs, schools and churches. The digital setting changes the technical conditions, but does not remove responsibility for how others are treated.

9 Addictive mechanisms and the attention economy

Games can be attractive because they offer clear goals, rapid feedback and visible progress. A difficult task is divided into manageable steps. Players immediately notice that practice makes a difference. This explains some of the enjoyment without requiring the language of addiction. Problems arise when such mechanisms are linked to sustained pressure to stay longer or pay again, while the ability to maintain personal boundaries diminishes.

Rewards may appear at fixed or varying intervals. Social appreciation can also be unpredictable: an exceptional victory, a rare item or recognition from a teammate.

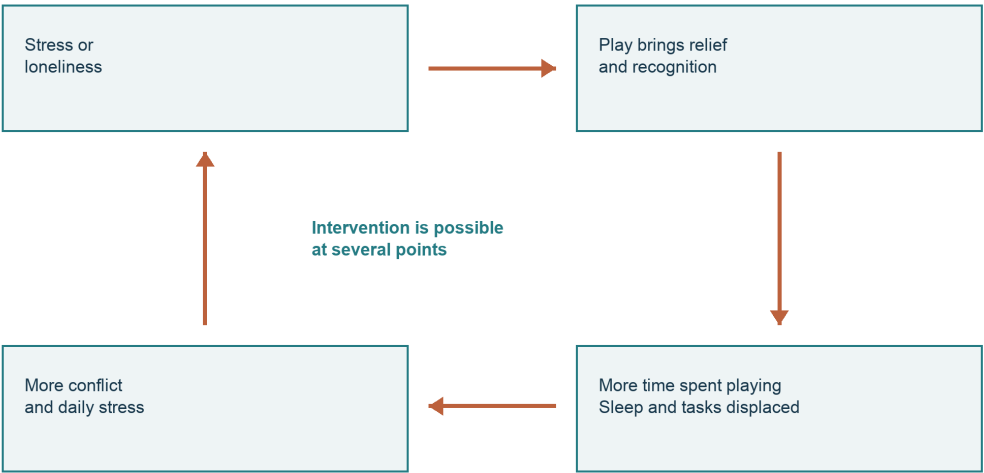
This very variability can make another attempt appealing. The outcome remains just uncertain enough to hold attention. A player may consequently continue longer than planned. This is a plausible mechanism of habit formation, not proof that every engaged player develops a disorder.

A second mechanism is the feeling that previous effort will be wasted if one stops. Limited-time challenges, growing streaks and seasonal rewards can reinforce this experience. Players then defend not only future enjoyment but also the value of time or money already spent. The moral issue for providers is whether they deliberately exploit this vulnerability. A design that makes success possible only through constant availability puts pressure on free time.

Infographic 2 A possible cycle of dependency

How a problematic pattern can develop

Explanatory feedback model | not an inevitable pathway



Possible ways to interrupt the cycle

Regular rest · other sources of support · clear boundaries
Help for lasting impairment | synthesis of sources 11, 13, 14 and 15

Original explanatory synthesis. Arrows show a possible pattern, not a measured effect size or a diagnosis.

This cycle is an explanatory model, not an individual diagnosis or a proven inevitable chain. A player may have a stressful week and temporarily play more without becoming trapped in lasting difficulties. The model shows where problems can reinforce themselves. If gaming displaces schoolwork, school-related stress may increase; if gaming then offers the easiest escape, returning becomes more attractive. Interrupting this pattern requires more than an appeal to willpower. Conditions outside the game must also change.

The popular explanation that dopamine automatically makes someone addicted is too simple. Reward and learning play a part in all sorts of everyday activities. The relevant distinction is not whether an activity feels pleasurable, but whether behaviour remains controllable and how it affects daily life. A neurobiological term can create the impression of an explanation while leaving the main questions unanswered. Which needs are being met, which responsibilities are disappearing and which alternatives remain accessible?

Companies bear responsibility because they possess more information about usage patterns than many families. They can see which incentives encourage return visits and spending. A careful ethical approach requires using that knowledge to limit harm as well. A voluntary pause button loses credibility when the same environment constantly presents new reasons to return. Assessing a platform must therefore encompass its entire design, including commercial incentives and how easy it is to stop.

10 When gaming becomes a disorder

The World Health Organization describes gaming disorder as a pattern of impaired control, increasing priority given to gaming over other activities, and continuation despite harmful consequences. Diagnosis requires significant impairment in functioning. The pattern is normally evident for at least 12 months. The definition addresses a serious problem, rather than labelling every enthusiastic player. Assessment requires considering behaviour, duration and consequences together. [11]

This boundary prevents two mistakes. The first is underestimation: someone may experience serious difficulties while others insist it is merely a hobby. The second is overdiagnosis: an intensive holiday of play or a strong interest is treated as illness. Within families especially, the word addiction can become a means of exercising power that closes down discussion. Careful assessment therefore asks about concrete impairments rather than only how much annoyance the behaviour causes others.

Stevens and colleagues combined 53 studies involving 226,247 participants from 17 countries. The pooled prevalence estimate was 3.05 per cent; with stricter sampling requirements it was 1.96 per cent, with considerable uncertainty and heterogeneity. Different measurement instruments contributed substantially to the variation. This 2021 research is useful as a methodological warning, but is not an exact count of people with a disorder in 2026. The underlying studies date from earlier years. [12]

Table 2 Prevalence of problems and differences in definitions

Measure	Percentage	Denominator and period	Interpretation
Problematic screening score	2.2%	Dutch pupils aged 12–16; 2023	At least 6 of 9 items; not a clinical diagnosis [8]
Risk of problematic gaming	12%	International HBSC; 2021/2022	Risk according to measurement instrument; not a diagnosis [10]
Pooled gaming disorder	3.05%	53 studies; data collected 2009–2019	95% interval 2.38–3.91; varied measurement methods [12]
Stricter sampling criteria	1.96%	Subset of the same meta-analysis	Very wide interval 0.19–17.12; considerable uncertainty [12]

Sources 8, 10 and 12. These represent different constructs and populations, not a ranking or a time trend.

The table shows why an international risk score of 12 per cent must not be presented as 12 per cent of young people being clinically addicted. Definitions and measurement procedures differ. Equally, a Dutch screening percentage cannot be used directly as a diagnostic percentage for all adults. A reliable discussion of addiction makes both severity and uncertainty visible. Precisely because the problem can be so serious for an affected family, careless use of research terminology is harmful.

Associations with other problems deserve attention. A player may already be depressed, sleeping poorly or struggling socially before gaming escalates. Playing may then be a way of managing tension. Subsequently, sleep deprivation, conflict and procrastination can create new tension. Treatment that merely removes the computer may therefore leave an existing vulnerability intact. Conversely, a practitioner need not wait until every possible background factor is fully resolved before addressing harmful gaming behaviour.

The most useful question is whether someone regains room to act. Can they make commitments they generally keep? Can they cope with disappointment without immediately needing to play? Are sleep, school, work and relationships being restored? These are functional goals. They prevent success being defined solely as fewer hours or complete abstinence. Temporarily stopping may help in some situations; in others, a sustainable balance is the priority. This requires individual assessment.

11 Sleep, physical wellbeing and treatment

Sleep provides a clear meeting point between screen and body. A game can postpone the end of an evening, while a team commitment adds pressure to continue. Fatigue may subsequently make schoolwork, exercise and social commitments harder to maintain. A 2021 systematic review and meta-analysis by Kristensen and colleagues found associations between problematic gaming and several adverse sleep outcomes. The predominantly observational data do not permit a simple one-directional explanation. [13]

The physical side of gaming is easily overlooked in discussions of fantasy. Even a player who knows perfectly well that a world is fictional has a body that needs rest and movement. A sound assessment therefore considers the whole daily routine. When someone sits for long periods, eats late and remains constantly available to fellow players, several habits may reinforce one another. The problem then extends beyond the content of a single game and cannot be solved through age labels alone.

Psychological strain should likewise not be measured solely by screen time. An hour of play may be relaxing when the player feels free. A shorter session may be stressful when it involves humiliation, performance pressure or financial loss. Asking about wellbeing must therefore go beyond a weekly total. What happens during play? How does the person feel afterwards? What are they avoiding? What can they no longer manage? These questions help distinguish an activity that offers support from one that narrows a person's life.

Recent treatment reviews from 2025 discuss psychological interventions and family-focused approaches, among others, while emphasising the need for stronger research designs and longer follow-up. Cognitive behavioural therapy is a frequently studied approach. The available studies do not justify promising a single universal solution. Particularly in young people, differences in definitions, outcome measures and study duration are limitations. Treatment should match the severity of the problem and any accompanying difficulties. [14, 15]

For parents, it is useful to focus agreements on daily functioning: getting up on time, doing schoolwork, exercising, eating together and having room for other relationships. Boundaries are stronger when predictable and when adults also examine their own digital habits. An unexpected punishment in the middle of a group activity can cause unnecessary conflict. An agreed finishing time that allows a round to be completed makes responsible behaviour more practicable, provided this allowance is not repeatedly stretched.

Where there is prolonged disruption of everyday functioning, severe sleep deprivation, financial trouble or major tension, assessment by a general practitioner or an appropriate support service is advisable. This is not a call to treat every enthusiastic

player. It acknowledges that demonstrable impairments need not be addressed through admonishment alone. Shame can delay help. Pastoral or educational support may help, but does not replace professional assessment when a young person or adult is experiencing serious difficulties.

12 Money, loot boxes and commercial influence

Not every in-game purchase is problematic. Players may knowingly pay for an expansion or cosmetic item and be satisfied with it. Objections become stronger when costs are obscured, social pressure is exploited or the outcome of payment is uncertain. A loot box is a virtual package whose contents become known only after purchase or opening. This uncertainty must be distinguished from an ordinary purchase in which the product is specified in advance.

Research links loot box purchases with problematic gambling and problematic gaming. A 2023 scoping review examined various digital gambling-like activities. A preregistered 2023 study by Close and colleagues compared, among others, loot box purchasers with players buying other game content. This literature supports concern about associations, but does not establish a causal route from loot boxes to gambling addiction for every player. Selection and shared vulnerabilities may also contribute. [16, 17]

Virtual currencies can obscure the relationship between payment and actual cost. A child first buys coins, points or crystals and then uses them for an item. When bundles and prices do not align, credit remains unused or another purchase seems necessary to make earlier credit useful. The moral question is whether the system helps users make informed choices. This also applies when the game looks friendly and is aimed at children.

In March 2025, the European Commission and the network of consumer authorities published principles for virtual currencies in games. They emphasise, among other things, transparent prices, avoiding hidden costs and protecting vulnerable consumers, particularly children. These principles should not be presented as a general European ban on virtual currencies or loot boxes. They clarify how consumer protection should apply to existing commercial practices. [18]

Families nevertheless need practical tools. It helps when purchases are visible, payment methods are not available without limits and children understand in advance what digital spending means. A budget can be educational, but works less well when the platform constantly tries to elicit exceptions. It is therefore wrong to place all responsibility on parents. A provider deliberately targeting young people must also be able to justify its design to them.

From a Christian perspective, this concerns honesty and protection of the vulnerable. Profit is not inherently unjust, but the buyer's freedom must not become a legal fiction. A child who cannot understand the cost is not an equal contracting party in a moral sense. The same applies to an adult player experiencing a serious loss of control. A just market takes predictable vulnerability into account rather than turning it into a business model.

13 Fantasy, imagination and losing touch with reality

Fantasy is a normal human capacity. Stories, theatre, novels and play allow people to explore situations that do not literally exist. A child playing a knight need not believe they really are a knight. An adult player can also become deeply absorbed in a fictional world and then return to daily responsibilities without difficulty. The term unreal world is therefore too crude when it labels every form of imagination harmful.

Several phenomena must be distinguished. Immersion is deep absorption in an experience. Escapism means using that experience to gain temporary distance from tension or worries. Functional displacement occurs when playing pushes important tasks and relationships aside. Impaired reality testing means insufficiently distinguishing inner or fictional experiences from events outside that experience. These concepts do not automatically overlap and require different responses.

A player may know a game is invented yet behave in ways that damage their actual life. They may forget commitments, accumulate debts or find meaning only in digital achievements. The problem is then not literally believing that a dragon exists. It is that attention and appreciation have shifted so far that daily life becomes increasingly difficult to sustain. For education and ethics, this form of alienation is often more relevant than sensational accounts of confusing games with reality.

Researchers also describe game transfer phenomena: temporary carry-over of images, thoughts or automatic tendencies after intensive play. A recent 2025 study examined the transfer of gaming behaviour and emotions into experiences outside the game. This field relies partly on self-report and is still developing. It provides no basis for equating temporary after-images with psychosis or claiming that every intensive player loses contact with reality. [19]

Fantasy role-playing also takes different forms. A tabletop role-playing game, a digital role-playing game and a competitive online combat game organise attention differently. Role-playing can allow participants to create a story together and discuss moral choices. A strongly performance-oriented system may instead emphasise optimisation and status. A responsible judgement considers content, conduct, voluntary participation and the place the game occupies in life.

A counterweight to an exclusively negative interpretation comes from Egami and colleagues' 2024 research. They used Japanese console lotteries as a natural experiment and analysed survey data from 97,602 participants from 2020 to 2022. They found beneficial effects on psychological wellbeing, with differences between devices and groups. The pandemic context and specific research design limit generalisability. The study does not prove that every game or any amount of playing time is healthy. It does show that sweeping claims of inevitable psychological decline fail to reflect all recent findings. [33]

Ultimately, the boundary question is whether imagination permits a return. Good recreation leaves room to leave the game and meet the world with greater patience or energy. Problematic escape makes that return increasingly difficult. This distinction also allows a Christian appreciation of art and storytelling. Imagination need not be an enemy of truth; it becomes problematic when it evades truth, pushes one's neighbour out of view or continually estranges the player from themselves.

14 Military simulation and its connections with entertainment

Armed forces use simulations to practise decision-making and cooperation without using real equipment for every exercise. A virtual environment can reproduce logistics, communication, medical care or action under uncertainty. This makes the technology broader than shooting practice. Moral assessment depends partly on what is being trained. A simulator can rehearse care and restraint, but can also teach a narrowed perspective in which only speed and accuracy count.

A historical example of reuse is Marine Doom. A US Army historical overview describes how a commercial game was adapted in the 1990s for training in teamwork, coordination and decision-making. The direction of transfer matters. This example concerns adapting an existing entertainment product for military use. That differs from the general claim that every commercial shooter was originally developed as military training. The connection is concrete, but the conclusion must remain equally specific. [35]

Cooperation between defence and entertainment is concretely documented. The Institute for Creative Technologies at the University of Southern California was founded in 1999 with support from the US defence sector. The institute itself describes its work in simulation, artificial intelligence and interactive storytelling as supporting military training. This is a demonstrable institutional connection. No hidden conspiracy is needed to examine that intertwining critically. [20]

Another example is America's Army, released on 4 July 2002 according to US Army historical documentation. The Army Game Studio later explicitly described how

education, public outreach and training came together. A game can thus be both a playing experience and a communication tool. Players learn more than actions: they encounter a particular representation of military identity and values. The choices about what is shown and omitted deserve public debate. [21, 22]

The difference between training and recruitment is important. Training should demonstrably contribute to the competence of people who will perform a task. Recruitment aims to generate interest and make an institution attractive. A product may serve both purposes, but they are not identical. An enthusiastic player may not recognise the communication objective behind an attractive experience. Transparency about the commissioning organisation and intended audience is therefore a minimum moral requirement, particularly when minors are reached.

Modern training environments go beyond individual shooting games. A 2025 US Army report, for example, describes testing VBS4 for varied training environments. Such systems can combine terrain, vehicles and scenarios. Yet a simulation remains a selection from reality. It may represent important factors convincingly while modelling others poorly. Translating training results too directly into confidence about actual operations risks forgetting the model's limitations. [23]

For Christian ethics, the relevant question is not solely whether a simulator is realistic. We must ask what kind of conduct it forms. Is civilian protection practised? Can scenarios accommodate refusing an unlawful order? Are errors discussed as moral events or merely technical shortcomings? Well-designed training can support responsibility. The same visual technology can also narrow it. Assessment must therefore focus on purpose, context and accountability.

15 Drones and the difference between an interface and a game

A drone is not automatically a weapon. Uncrewed aircraft are also used for inspection, agriculture, research and rescue. In armed forces, they may conduct reconnaissance, communicate, deliver supplies or carry out attacks. A small drone near a front line differs greatly from a large long-range system. The word drone therefore says little by itself about range, autonomy or the nature of human involvement. Clear debate requires naming these properties separately.

With an FPV drone, an operator sees images from the aircraft. The letters stand for first-person view. This perspective resembles that of some games, but similarity of interface does not turn the action into play. When the aircraft is used in a military operation, the people and consequences beyond the screen are real. Comparing it with video games can help explain the controls; the comparison becomes misleading when it erases the moral difference between fictional damage and physical suffering.

There are several levels of automation. An aircraft may automatically remain stable or follow a preset route. Another system may use image recognition to mark an object. Still another may, under certain conditions, independently select and attack targets. The first does not imply the last. A radio-controlled FPV drone is therefore not necessarily an autonomous weapon system. This distinction matters for oversight, liability and assessment of human control. [24]

Infographic 3 Play, simulation and the use of weapons

From game imagery to real violence

Compare functions and responsibility | not a technological timeline

VIDEOGAME

A player acts within fiction

Treatment of real fellow players remains morally relevant

MILITARY SIMULATION

Military personnel practise a task

Purpose, scenario and transfer to practice require assessment

REMOTELY CONTROLLED WEAPON

A human operates a real system

Civilians and consequences are real | the laws of war apply

AUTONOMOUS WEAPON SYSTEM

Selection and attack are automated

Human control and responsibility are central

A similar controller does not turn an attack into a game.
A drone is not automatically autonomous. | sources 20–24

Original comparison drawing on sources 20–24. Differences in function matter more than a similar screen.

The figure arranges functions, not an inevitable technological path. Armed forces can use different systems alongside one another. A system can also be technically advanced while operating under strict human constraints. The essential question is whether the people involved retain sufficient information, time and authority to assess and abort an attack. The mere presence of a person somewhere in the organisation is not a sufficient answer.

Physical distance is sometimes assumed to cause moral distance. This is possible, but not inevitable. An operator may observe an area for extended periods and see more of people before and after an attack. Another may mainly see objects because of time pressure, small images and organisational routines. Without specific research, these

experiences must not be reduced to a single psychology of the drone pilot. System design and organisational culture also help determine them.

Normative responsibility remains clearer than many technical details. Military action requires distinguishing civilians from combatants, assessing expected civilian casualties and taking precautions. An interface can support that judgement through reliable information. It can also conceal it by displaying only a marker, score or success notification. The question of who sees the consequences and who must account for them should therefore form part of the system from the design stage onwards.

16 Ukraine and the expansion of drone warfare

Russia's full-scale invasion of Ukraine began on 24 February 2022. The war has visibly increased the importance of uncrewed systems. Small aircraft, large attack drones, observation and countermeasures form part of a broader military and industrial development. Yet caution remains necessary towards confident accounts claiming that one technology has completely changed the war. Operations still depend on people, logistics, communications, maintenance, air defence and political choices.

In late December 2025, Ukraine's Ministry of Defence reported that its armed forces had received three million FPV drones that year. This is an official statement by a party to the war, not an independent inventory. Its magnitude illustrates the industrial scale on which these systems are deployed. The number must not be translated into three million successful attacks or an equal number of casualties. Delivery, deployment, loss and military outcome are separate quantities. [25]

On 4 June 2025, the United Kingdom announced plans to scale up support towards a target of 100,000 drones, with an investment of £350 million. Here too, the figure was a delivery target announced at that time. A policy announcement does not automatically prove all subsequent deliveries. The example nevertheless shows how drone production has become part of international defence cooperation and industrial policy. Costs and capacity thus become politically significant figures. [26]

Table 3 Drones and civilian casualties in the war in Ukraine

Indicator	Number	Period and status	Source and limitation
FPV drones received	3 million	Ukraine, 2025	Ministry statement; not an independent inventory [25]
UK delivery target	100,000	Announced June 2025	Target in policy announcement; not proof of all deliveries [26]
All civilians killed	328	September 2026	Minimum documented by HRMMU [28]
All civilians injured	2,105	September 2026	All weapon categories combined [28]
Deaths from short-range drones	87	September 2026	Part of the total; do not add again [28]
Injuries from short-range drones	475	September 2026	Part of the total; do not add again [28]

Sources 25, 26 and 28. Production and delivery do not measure casualties. UN figures are verified minimums, not a complete count of the war's toll.

Human consequences must be placed alongside production. In a thematic report from June 2025, the UN human rights mission documented serious risks to civilians from short-range drones. It emphasises that improved precision has not automatically led to better protection. Most casualties described in that report resulted from Russian attacks in Ukrainian-controlled territory. This is an important corrective to the idea that a camera guarantees an attack's moral quality. [27]

A current update is available in the UN overview of September 2026, published on 15 October 2026. It documents at least 328 civilians killed and 2,105 injured. Short-range drones accounted for 87 deaths and 475 injuries, together representing 23 per cent of recorded casualties that month. Long-range weapons, including both missiles and drones, formed another category. The entire long-range percentage must therefore not be attributed to drones alone. [28]

The moral significance of these figures extends beyond the totals. A technology can make an area dangerous for everyday activities: going to work, bringing aid or using a vehicle. When civilians know they are constantly observed and threatened, social life is also damaged. An essay that merely admires operators' skill misses this reality. Players in a war game often see the centre of the action; civilians experience the impossibility of escaping its consequences.

17 The gamification of war and the struggle over images

Connections between games and war involve more than controllers or simulations. Ways of presenting performance may also resemble game structures. Scores, rankings and rewards make activity measurable and comparable. Within organisations, this can help record effort. It becomes morally risky when a measure reduces complex conduct to quantities and pushes questions of legality or human consequences into the background.

In January 2026, Ukraine's Ministry of Defence reported on the Army of Drones Bonus programme, which links results to support and rewards. Its reported numbers of targets hit are claims by the government concerned and cannot be treated here as independently verified losses. For this essay, the organisational form is particularly relevant: measured performance can provide access to resources. This makes the recording and assessment of targets especially important. [29]

A reward system can encourage either care or carelessness. If only the number of reported hits counts, there is an incentive to double-count or bypass difficult judgements. If verification, civilian protection and accountability carry substantial weight, the system can support different behaviour. The existence of points therefore does not automatically mean that war has become a game. It does justify examining exactly what counts as success and who can correct inaccurate records.

War images also circulate in an environment of short videos, commentary and repetition. Drone footage can reveal realities that were previously difficult to see. Editing and music can turn the same recording into sensational entertainment. The loss of context makes it harder to assess what is shown. Who were the people involved? What happened beforehand? Is the date correct? Was a failed or unlawful action omitted? Images do not answer these questions by themselves.

For young people, the distinction between a stylised gaming video and real war footage can become less clear when both appear in the same feed. This does not necessarily mean they no longer know what is real. It may, however, mean that the habitual way of viewing becomes the same: fast, repeatable and focused on a striking result. The ethical question then shifts from belief to attention. Is the viewer still invited to see the person depicted as a human being?

A Christian approach to war images requires restraint towards suffering as entertainment. Bearing witness may be necessary to expose abuses. Sensationalism may use the same images without responsibility towards victims. The difference lies partly in purpose, context, dignity and room for mourning. Not every striking recording needs to be forwarded. Sometimes love of truth means first verifying an image or deciding not to spread a humiliating one further.

18 Christian objections to violence and dehumanisation

Christian criticism of games begins with human worth. Genesis 1 connects human dignity with being created in God's image. It follows that another person is more than an obstacle, target or means of personal satisfaction. Characters in a digital world are fictional, but the attitudes cultivated by a player may be real. The question is therefore whether an activity supports respect, compassion and self-control or normalises pleasure in humiliation. This is a theological assessment, not a clinical diagnosis. [30]

The commandment against murder cannot be applied without explanation to every game in which a character dies. An invented event is not an actual murder. Nevertheless, the commandment can prompt critical examination of how violence is imagined. Why is an act presented as attractive? Which emotions are cultivated? Is the player invited to delight in cruelty? A careful Christian assessment avoids both mechanically equating fiction with reality and assuming that fiction has no moral significance.

The Sermon on the Mount emphasises peacemaking, breaking cycles of revenge and love of enemies. This raises questions about forms of play in which every encounter is merely a choice between dominating and being dominated. A game need not be a catechism, but may offer a one-sided understanding of humanity. When a world is populated exclusively by rivals and disposable objects, concern for others receives little imaginative space. The objection concerns the direction in which people are formed. [30]

There is no completely uniform Christian position on every form of violence in games. Some believers will refrain from shooting games as a matter of conscience. Others distinguish according to context, realism and moral intention. This difference need not be resolved through mutual accusation. Everyone may, however, be asked to examine their choices honestly. Freedom to do something is not the only measure; whether it benefits others and one's own way of life also matters.

Language towards real fellow players belongs within this assessment too. A game without visible blood can be an environment of hatred and humiliation. Conversely, fictional conflict can take place between people who treat one another respectfully. Moral judgements about content and conduct must therefore stand alongside one another. A Christian player cannot hide behind a game's rules while turning another person into a target beyond the game.

The implication is assessment at several levels. Content must be examined, personal motivation questioned and the social environment considered. Young people need guidance that explains rather than merely prohibits. Where a boundary is set, the good it protects should be clear: human dignity, spiritual peace, honest interaction or

protection from an overwhelming experience. This makes the objection understandable without diminishing its seriousness.

19 Christian objections to dependency and escape

In 1 Corinthians 6, Christian freedom is not described as allowing oneself to be ruled without limit by desire. Paul connects freedom with not coming under the power of anything. Applied to gaming, the question is whether a player can still truly choose. An activity that initially offered relaxation may later determine the schedule. The moral concern then focuses on bondage and the disappearance of responsibility, rather than the existence of pleasure itself. [30]

Rest has its own value within Christian life. A person need not constantly perform or improve themselves. Play can have a place here. The objection to an endless series of tasks is that even relaxation becomes another production system. Progress must be made every evening; every streak must be maintained. A Christian appreciation of rest may therefore be particularly critical of designs that allow no meaningful ending.

Our neighbour also appears as the person asking for attention outside the screen. A meal, conversation or caring task cannot be postponed indefinitely because a digital group always has new expectations. At the same time, love of neighbour asks parents not to reduce a child to a disobedient player. Grief, loneliness or shame may lie behind the behaviour. Truth and mercy belong together: harmful behaviour is named while the person remains more than their problem.

The objection to escaping reality is therefore not a prohibition of every temporary escape. A novel, walk or game can help someone return with greater attention. The boundary is reached when escape becomes a lasting refusal to shoulder one's own life. This may concern school, work, relationships or spiritual life. A pastoral approach asks what reality has become so difficult that someone constantly needs to flee it.

Fantasy and religious imagery also require distinction. A fictional wizard is not automatically an actual religious practice. Christian communities nevertheless have different boundaries of conscience concerning magic and the occult. Deuteronomy 18 is often cited as a warning against divination and seeking forbidden spiritual power. Applying it to a particular story requires interpretation. It is irresponsible to label a psychological problem demonic influence without investigation. [30]

Mature Christian media education makes room for questions, discusses specific content and teaches responsibility. It avoids the idea that a filter alone forms the heart. Technical restrictions can be useful, but do not automatically change what someone desires or why they withdraw. Shared practices of rest, attention and encounter make

another way of life possible in concrete terms. Criticism of dependency is thereby connected with a positive offer of freedom.

20 Christian ethics of war and human control

Christian tradition includes both principled nonviolence and theories of just war. Peace churches emphasise following Christ by renouncing armed violence. Other traditions recognise the possibility of armed defence under strict conditions. Catholic catechesis names, among other requirements, the gravity of the threat, exhaustion of peaceful means, a reasonable prospect of success and prevention of greater harm. These conditions make military necessity a moral question, not a blank cheque. [31]

For assessing drones, this means technology does not independently determine justice. A system may reduce danger to one's own forces yet still be used unlawfully. It may also contribute to defence under strict conditions. The justice of the objective must be distinguished from the permissibility of particular means and attacks. An appeal to self-defence does not remove responsibility towards civilians.

The International Committee of the Red Cross advocates meaningful human control and new binding rules for autonomous weapons. It recommends prohibiting unpredictable autonomous systems and systems designed or used to apply force autonomously against people, with restrictions on other systems. This is the ICRC's position and must not be presented as an already universally applicable comprehensive treaty. The debate concerns precisely which additional limits states should establish. [24]

The 2025 Vatican document *Antiqua et nova* addresses artificial intelligence in terms of human dignity and responsibility. Its discussion of war warns against delegating lethal decisions and obscuring responsibility. This Catholic reflection connects with a broader moral problem: a machine can process data without itself bearing the duty to do justice to a human being. That duty remains with responsible people and institutions. [32]

Human control must have substance. A person given only seconds to approve an opaque recommendation may be formally present without being able to exercise real judgement. A commander may invoke an algorithm while the designer invokes the user. A chain can thus emerge in which nobody feels ownership of the decision. A responsible system therefore requires clear authority, verifiable limits and room not to carry out an uncertain attack.

From a Christian perspective, refusing to reduce people to scores is central. Even an opponent remains human. This awareness does not rule out defence in every tradition, but it does oppose cruelty and triumph over suffering. A controller does not make this

standard less binding. Ultimately, the rightness of a military decision cannot be read from a technically successful hit.

21 From Adam to cyborg and the limits of technological salvation

The second supplied lecture asks whether technology is turning humanity into a different kind of being. For this essay, its underlying question is especially relevant: what happens when improvement is understood exclusively as greater control, speed and capability? A game character can be continually strengthened. A military system can process information ever faster. But whether a person acts more honestly, caringly or justly does not follow automatically. [2]

In digital game worlds, progress often appears as a measurable increase. A character gains strength, better equipment or access to a higher level. This makes achievements clear and can be motivating. Outside games, human growth is harder to measure. Learning to listen may mean speaking less. Responsibility may mean foregoing victory. An understanding of humanity that sees improvement only as expanded capability struggles to recognise such forms of maturity.

Technological aids do not inherently deserve suspicion. An aid can reduce dependency, enable communication or improve medical care. It is therefore wrong to treat every connection between humans and technology as dehumanisation. Ethical assessment must consider purpose, voluntary participation, access and power relationships. An aid that gives someone greater agency differs from a system that reduces their ability to refuse.

The same question applies to avatars and digital identity. Players may safely try another role and discover new aspects of themselves. It may become problematic, however, when the adjustable digital self becomes the standard against which embodied life appears only deficient. Reality contains dependency, ageing, failure and relationships that cannot be programmed to order. Human life requires learning to bear these limitations.

Christian anthropology offers a counterweight here. Human beings receive dignity before achieving anything. They need not be continually optimised to have worth. From this conviction, technology can be appreciated without elevating it into a path to salvation. Violence is not solved merely by better interfaces. Dependency does not disappear merely through more accurate measurement of behaviour. Questions of desire, responsibility and community remain.

This line of thought brings the lecture up to date without treating its predictions as facts. Some technological visions remain speculative. The critical question of a one-sided understanding of humanity is relevant today. It helps explain the

relationship between gaming culture and military technology as more than a technological story. Both domains require asking what counts as success and which human goods disappear from the calculation.

22 Future developments and their uncertainties

The most likely further development is closer integration of games, social platforms and automated personalisation. An environment can adapt to a player's preferences and behaviour. This may improve accessibility and enjoyment. It may also make commercial influence harder to recognise. This is a reasoned scenario based on existing capabilities, not a prediction that every platform will take the same path.

Generative artificial intelligence can make characters, conversations and game content more varied. Players may consequently feel that an environment knows them personally. A digital character may seem available when real people are absent. The risk is that attachment is used to retain attention or money. The potential benefit is greater creative scope for players. The social outcome depends partly on transparency, design choices and protection of minors.

Virtual and mixed reality can increase bodily involvement. An experience becomes more spatial and may demand more sensory attention. This makes the boundary between play and the physical environment more important, but does not prove that players will lose their reality testing en masse. The relevant research questions are more specific: which users experience strain, how are breaks organised and how does social contact change? Such questions deserve investigation before firm general conclusions are drawn.

Further human-machine cooperation seems likely in military applications. Automated observation can increase the volume of information, while interference and countermeasures create new limitations. Judging speed alone is therefore insufficient. More information can also bring more doubt, errors or false certainty. A system that rapidly marks objects does not thereby possess moral understanding of a situation. Pressure to act faster may actually reduce the ability to assess carefully.

Table 4 Future scenarios and assessment criteria

Development	Potential benefit	Risk	What to assess
Personal AI in games	Variety and accessibility	Emotional and commercial influence	Transparency and protection of young people
Virtual and mixed reality	Spatial learning and creativity	Strain and displacement of daily life	Wellbeing and freedom to stop
Automated military observation	Faster processing	Errors and excessive confidence	Verifiability and time for judgement
Autonomous weapons	Less direct deployment of personnel	Loss of human control	Lawfulness and responsibility

Original scenario analysis. These are not predicted quantities or established outcomes. Normative framework in sources 24 and 32.

An adverse scenario involves acceleration on two fronts. Commercial environments teach users to remain constantly available, while military environments allow less and less time for human judgement. A more favourable scenario would see designers strengthen deliberate stopping points, verifiable boundaries and human oversight. Both are conceivable. The future is shaped partly by procurement, regulation, professional standards and the choices of users, families and communities.

It is therefore more useful to ask concrete questions than announce inevitable digital collapse. Can a child leave an environment without financial or social punishment? Can an operator stop an uncertain military action? Can researchers measure harm independently? Do civilian casualties and vulnerable players remain visible in assessments of success? These questions translate general concern into responsibilities that can actually be examined.

23 Responsibilities of families, schools, churches and businesses

Families need shared practices, not merely a maximum number of minutes. It helps to give sleep, meals, schoolwork, exercise and relationships established places in the day. The space for gaming can then be discussed within that pattern. A boundary must be workable and suited to the game. Young people should also learn to give advance notice when an activity will take longer. Responsibility grows through practice and predictability, rather than repeated unexpected conflicts.

Schools can connect media literacy with economic and social questions. Pupils can investigate how a game makes money, how a virtual price is constructed and how peer pressure works. Critical evaluation of war images also deserves attention. A striking video is not automatically a reliable explanation of a war. Pupils should be able to ask

about origin, date and context. Digital education thus becomes more than operating devices or avoiding unwanted websites.

Churches can make room for conversations that do not immediately end in condemnation or defence. Some young people feel that adults see only the negative sides of their online lives. Others need permission to acknowledge pressure and exhaustion. A faith community can ask about the fruits of a habit: is someone becoming freer, more honest and more attentive? This conversation gains credibility when adults ask the same questions about their own news consumption, social media and work.

Businesses have capabilities that individual families lack. They determine default settings, purchase structures, reporting procedures and the visibility of group norms. Responsible design makes costs understandable and protects users against foreseeable harm. It offers accessible support and treats stopping as a normal choice. When a business model becomes dependent on a small group losing control, external scrutiny and a different distribution of responsibility are needed.

Governments have a role in consumer protection, transparency and research. Regulation should focus on verifiable practices. A general ban on all games containing conflict would treat many different cultural forms alike. Targeted requirements concerning misleading prices, treatment of minors and access to data for independent research connect more directly with demonstrable problems. The precise legal form requires current assessment in each case.

Defence institutions and political leaders face a parallel duty. Procuring a technical system must be accompanied by scrutiny of human oversight, civilian protection and accountability. It is insufficient that a system appears efficient or that an opponent also uses it. Especially under pressure, it must remain clear who decides, what uncertainty is acceptable and who investigates mistakes. Otherwise, technological possibility quietly becomes the standard for what ought to happen.

24 Conclusion

There is no single world behind video games. There are artists, programmers, player communities, commercial platforms and military organisations with different interests. Violence is a central means in some games, a critically examined theme in others and entirely absent from many. A responsible essay therefore cannot begin by assuming that all games have the same effect. It must examine what a particular environment does, rewards and makes invisible.

Scientific research justifies serious attention to problematic gaming, sleep, commercial influence and social circumstances. It does not justify a general explanation in which violent games automatically lead to serious violent crime. The aggression debate

remains methodologically contested, and effects do not match the strongest public accusations. Existing problems become clearer when concepts are used precisely. Enthusiasm, intensive use, a risk score and a clinical disorder are different things.

Online group formation shows why the medium cannot be assessed as an isolated stimulus. Players maintain commitments and friendships, but can also become dependent on recognition and constantly recurring obligations. Fantasy need not mean losing touch with reality. Concern arises when attention to physical, social and moral life is systematically displaced. The best assessment therefore considers freedom and functioning without denying the significance of digital relationships.

Military applications raise the stakes of using this technological family. Simulation can provide useful training; recruitment games can portray an institution attractively; drones can enable actual military operations at a distance. Similarities of imagery and control do not erase differences in purpose and consequence. Ukraine shows that technical precision and greater production capacity do not automatically protect civilians. Current casualty reporting calls for attention to people who easily disappear from images of success and production figures.

Christian objections are strongest when they make human dignity, love of neighbour, truth and freedom concrete. They need not rely on unproven claims about every player or an all-encompassing hidden plan. They can ask what pleasure is sought, who pays the price, what dependency emerges and whether one's neighbour remains visible. These questions apply to a young player, a platform business and a military organisation, each at its own level of responsibility.

The desired future is therefore not solely a matter of better technology. It requires people and institutions capable of setting limits, giving account and sometimes foregoing what is technically possible. A game deserves space when it enriches life and permits a return to reality. A military system deserves trust only within a demonstrable practice of lawfulness and human oversight. Where attention, money or violence escape responsibility, the world behind the screen begins to become truly violent.

Sources and bibliography

Numbered citations in the text refer to the sources below. Online sources checked on 16 October 2026. Where a source was used through an abstract, conclusions are limited to the information available there.

[1] Bleeker R J 2008. The Violent World Behind Video Games [English translation of the Dutch lecture title]. KNP lecture, Gorinchem, 1 November 2008. Supplied document.

[2] Bleeker R J 2010. From Adam to Cyborg [English translation of the Dutch lecture title]. KNP lecture, Kesteren, 27 November 2010. Supplied document.

[3] The Strong National Museum of Play. International Center for the History of Electronic Games and historical collection.

<https://www.museumofplay.org/collections/icheg/>

[4] Prescott A T, Sargent J D and Hull J G 2018. Metaanalysis of the relationship between violent video game play and physical aggression over time. PNAS.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC6176643/>

[5] Drummond A, Sauer J D and Ferguson C J 2020. Do longitudinal studies support long-term relationships between aggressive game play and youth aggressive behaviour? A meta-analytic examination. Royal Society Open Science 7, 200373.

<https://doi.org/10.1098/rsos.200373>

[6] Newzoo 2025. Global games market to hit \$189 billion in 2025 as growth shifts to console. Preliminary market and player estimate for 2025.

<https://newzoo.com/articles/global-games-market-189-billion-2025>

[7] Buijsman M, Newzoo 2026. Global games revenue cracked \$200 billion in 2025. 18 June 2026. Revised revenue estimate for 2025.

<https://newzoo.com/articles/global-games-market-2025>

[8] Rombouts M and colleagues, Trimbos Institute. School Survey 2023. Digital Media and Gambling: Gaming [English translation of Dutch report and section titles]. Web page updated 1 October 2026.

<https://cijfers.trimbos.nl/scholierenmonitor/digitale-media-en-gokken/gamen/>

[9] Gottfried J and Sidoti O, Pew Research Center 2024. Teens and Video Games Today. 9 May 2024. Survey conducted in September and October 2023.

<https://www.pewresearch.org/internet/2024/05/09/teens-and-video-games-today/>

[10] WHO Regional Office for Europe 2024. A focus on adolescent social media use and gaming in Europe, central Asia and Canada. HBSC international report from the 2021/2022 survey, volume 6.

<https://www.who.int/europe/publications/i/item/9789289061322>

[11] World Health Organization. Gaming disorder. Explanation of the ICD-11 definition and diagnostic boundaries.

<https://www.who.int/standards/classifications/frequently-asked-questions/gaming-disorder>

[12] Stevens M W R, Dorstyn D, Delfabbro P H and King D L 2021. Global prevalence of gaming disorder: A systematic review and meta-analysis. Australian and New Zealand Journal of Psychiatry 55, 553–568.

<https://doi.org/10.1177/0004867420962851>

[13] Kristensen J H and colleagues 2021. Problematic Gaming and Sleep: A Systematic Review and Meta-Analysis. Frontiers in Psychiatry. PubMed 34163386.

<https://pubmed.ncbi.nlm.nih.gov/34163386/>

- [14] Park J J, Stryjewski A, Chen B and Potenza M N 2025. Treatment of Gaming Disorder in Children and Adolescents: A Systematic Review. PubMed 40631626.
<https://pubmed.ncbi.nlm.nih.gov/40631626/>
- [15] Ock C M, Lee H S, Chae J and Kim H 2025. Effectiveness of Non-Pharmacological Interventions on Gaming Disorder: A Systematic Review and Meta-Analysis. PubMed 40404379.
<https://pubmed.ncbi.nlm.nih.gov/40404379/>
- [16] Kim H S and colleagues 2023. A scoping review of the association between loot boxes, esports, skin betting, and token wagering with gambling and video gaming behaviors. PubMed 37159337.
<https://pubmed.ncbi.nlm.nih.gov/37159337/>
- [17] Close J and colleagues 2023. Exploring the relationships between psychological variables and loot box engagement, part 1: pre-registered hypotheses. Published online December 2023. PubMed 38126068.
<https://pubmed.ncbi.nlm.nih.gov/38126068/>
- [18] European Commission and CPC Network 2025. Key principles on in-game virtual currencies. 21 March 2025.
https://commission.europa.eu/document/download/8af13e88-6540-436c-b137-9853e7fe866a_en?filename=Key+principles+on+in-game+virtual+currencies.pdf
- [19] Diao Z, Meng P, Meng X and Zhang L 2025. The Transfer of In-Game Behaviors and Emotions to Real-World Experiences in Game World. PMC12466803.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC12466803/>
- [20] USC Institute for Creative Technologies. About Us and institutional history since 1999.
<https://ict.usc.edu/about-us/>
- [21] US Army Center of Military History. Department of the Army Historical Summary, Fiscal Year 2002. Passage on the introduction of America's Army.
<https://history.army.mil/portals/143/Images/Publications/catalog/101-33-1.pdf>
- [22] US Army NCO Journal 2017. Game studio helps keep Army. January 2017.
<https://www.armyupress.army.mil/Journals/NCO-Journal/Archives/2017/January/Game-studio-helps-keep-Army/>
- [23] US Army 2025. First Army OC/T Academy tests technology that can simulate any training environment. 17 March 2025.
<https://innovation.army.mil/News/Article-View/Article/4122182/first-army-oct-academy-tests-technology-that-can-simulate-any-training-environment/>
- [24] International Committee of the Red Cross. Autonomous weapons. Position on human control and proposed new international rules.
<https://www.icrc.org/en/law-and-policy/autonomous-weapons>
- [25] Ministry of Defence of Ukraine 2025. \$45 billion from partners, over 3 million strike drones, more Ukrainian weapons: key Ministry of Defence highlights. 27 December 2025.
<https://mod.gov.ua/en/news/45-billion-from-partners-over-3-million-strike-drones-more-ukrainian-weapons-key-ministry-of-defence-highlights>
- [26] UK Ministry of Defence 2025. Tenfold increase in UK drone deliveries for Ukraine at 50-nation Ukraine summit. 4 June 2025.
<https://www.gov.uk/government/news/tenfold-increase-in-uk-drone-deliveries-for-ukraine-at-50-nation-ukraine-summit>

[27] OHCHR HRMMU 2025. Deadly drones: Civilians at risk from short-range drones in frontline areas of Ukraine, 24 February 2022 to 30 April 2025. Published 26 June 2025.
<https://ukraine.ohchr.org/en/Deadly-drones-Civilians-at-risk-from-short-range-drones-in-frontline-areas-of-Ukraine-24-February-2022-30-April-2025>

[28] OHCHR HRMMU 2026. Protection of Civilians in Armed Conflict September 2026. Published 15 October 2026.
<https://ukraine.ohchr.org/en/Protection-of-Civilians-in-Armed-Conflict-September-2026>

[29] Ministry of Defence of Ukraine 2026. Army of Drones Bonus program delivers results: nearly 820,000 russian targets hit in 2025, says Mykhailo Fedorov. 26 January 2026. Official claims.
<https://mod.gov.ua/en/news/army-of-drones-bonus-program-delivers-results-nearly-820-000-russian-targets-hit-in-2025-says-mykhailo-fedorov>

[30] The Bible. Passages informing the theological interpretation: Genesis 1:26–27; Exodus 20:13; Deuteronomy 18:9–14; Matthew 5:9 and 5:38–48; Romans 12:17–21; 1 Corinthians 6:12 and 10:23–24. References without verbatim quotations from a particular translation.

[31] Catholic Church 2005. Compendium of the Catechism of the Catholic Church. References to the criteria for legitimate defence and the underlying Catechism paragraphs 2307–2310.
https://www.vatican.va/archive/compendium_ccc/documents/archive_2005_compendium-ccc_en.html

[32] Dicastery for the Doctrine of the Faith and Dicastery for Culture and Education 2025. Antiqua et nova. Note on the Relationship Between Artificial Intelligence and Human Intelligence. 28 January 2025.
https://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_dcf_doc_20250128_antiqua-et-nova_en.html

[33] Egami H, Rahman M S, Yamamoto T, Egami C and Wakabayashi T 2024. Causal effect of video gaming on mental well-being in Japan 2020–2022. *Nature Human Behaviour* 8, 1943–1956.
<https://doi.org/10.1038/s41562-024-01948-y>

[34] MIT Libraries 2011. Year 121 1981 The Origin of Spacewar. History of Spacewar and its development in 1962.
<https://libraries.mit.edu/150books/2011/05/07/1981/>

[35] US Army 2008. History of Military gaming. Historical overview including a passage on Marine Doom and training in the 1990s.
https://www.army.mil/article-amp/11936/history_of_military_gaming