Published by :
https://www.ijert.org/
An International Peer-Reviewed Journal

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

A Comparative Study of Realism and Stylization in Modern Games

How Visual Style Shapes Player Perception

Sahil B. Raut, Dr. Siddhantkumar V. Wadmare
Department of Animation, School Of Design, Dr. D. Y. Patil Vidyapeeth
Pune, India

Abstract ***In modern games, every game can be placed into a distinct style category. So, the real question becomes: how real should a game actually look? I set the two answers to that question side by side. Realism in games tries to replicate real-world properties such as light bounces, reflections, fine details and the movement of any object or character. Stylization, by contrast, goes in the opposite direction. Rather than imitating real-world properties, it simplifies things so the game looks clear and carries a unique style of its own. I picked four games I have played for the comparison: God of War (2018), Ghost of Tsushima (2020), Valorant (2020) and Minecraft (2011). I compared all four games across 5 aspects: immersion, gameplay clarity, performance, production cost and longevity. I drew on my own experience along with research on the uncanny valley, presence and readability. There is no clear winner in this comparison. God of War gave me a powerful sense of realism — when the character walks across snow, he leaves footprints behind. But achieving that level of realism demands powerful hardware, and building such a realistic game is also very expensive. On top of that, the game begins to look dated quickly as rendering technology keeps advancing. Valorant and Minecraft belong in the stylized category. These games are easier to read during fast-paced action. In Valorant, I can easily tell which agent my enemy picked thanks to the body shape and color palette used for that particular agent. In Minecraft, which is heavily stylized, I built a survival house from the wood and dirt I had gathered, and before long I began seeing the cubes as assets. Both of these games run on basic hardware and are cheaper to produce. They also both still look fine after all these years. Ghost of Tsushima is a different case. It is a mixture of elements of both realism and stylization. The environments and characters are visually realistic, but there is no minimap to guide the player; instead, it relies on the 'Guiding Wind' system for guidance, which is more akin to stylization. Considering all the points, I realized that immersion is not simply about looking real; it is about the world adhering to its own rules and styles. As long as it stays consistent, it feels real even if it is blocky. Therefore, a developer should choose a style that the game's story and interaction demand, rather than pursuing photorealism.***

Keywords – realism; stylization; art direction; immersion; gameplay readability

I. INTRODUCTION

Video games have become a major form of visual storytelling than they used to be before. Games are comparable in reach to films. Despite such a huge growth, one decision is crucial for every studio: what should a game look like? Two approaches dominate the answer. Realism in games tries to replicate the real world as much as technology can. Stylization is different from the real world, using simple and exaggerated shapes and elements to create a distinct visual style.

Visual style affects more than just the appearance of a game. It affects how the game plays, how a player can read what is happening, what hardware the game needs, how much it costs to make it and how long it continues to look good after release. Realism in video games depends on elements like detailed textures, characters, believable lighting and real world physics. In God of War, realism is not only in the environment or character's body, it is also seen in a scene in which Kratos (main character) fights Baldur (enemy) for a long time and after that fight he seems to be tired — his movement slows down, breathing gets heavy. The player can feel that Kratos (main character) is tired, and his body is weak now. Stylization puts clarity and expression as priority. In Valorant, I can identify the enemy agent just from a quick glimpse. A green figure, female body shape and dark green costume, this little information tells it was a Viper. The body shape and color palette was enough to identify the enemy agent. Minecraft goes further. Everything in the game is made with blocks. Basically, it is a world of blocks. A tree is made up of blocks but still I can identify that it's a tree. The Minecraft world does not try to replicate realism, yet it clearly depicts everything, it encourages creativity by adding a crafting feature to craft things, it runs almost on any device. Ghost of Tsushima combines both of the styles. The world in the game feels real but the colors are very exaggerated. The red maple leaves, white flowers feel like they are painting, so that each place differentiates from the other. It feels believable and painted at the same time.

This paper compares realism and stylization in terms of immersion, gameplay clarity, performance, production cost and longevity. It is clear that neither approach is superior. Realism is appropriate where immersion and emotional storytelling is important. Stylization works where readability, accessibility and lasting matter most. Hybrid shows that developers are not bounded to choose one approach when they can combine both.

A. How the realism race began - and why it split

The pursuit of realism through increased graphical fidelity has long been an integral part of console development. In marketing, successive generations of consoles have been compared with their predecessors using examples of improved texture, facial detail and lighting, encouraging an assumption that progressing graphical fidelity is synonymous with increasing realism. Furthermore, many large budget games reinforce this perception. It is simple for large studios to communicate quality to a player in 30 seconds by providing near-film quality graphics in game trailers.

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

However, many indie and small scale games have been very successful by taking a completely un-realistic approach to their art style. In many cases this is what makes these games stand out. Although it may be impossible for a small team to match the level of graphical fidelity of large studios, they are able to make strong, clear design decisions. Choosing one dominant color palette, clear shapes and distinctive silhouettes can allow small teams to create an instantly recognizable style. Combined with digital publishing and easily-accessible development tools, and the fact that players respond well to clear and distinctive design choices, we see a divide in game styles between realistic and stylized gameplay. Rather than one approach being unsuccessful, or the other being superior, two distinct strategies have developed within game art design. Each has different economic implications, target audiences, and risks. It is therefore more useful to compare the two based on specific criteria.

B. Why these four games?

These 4 games have been selected due to their variety in realism; ranging from realistic to highly stylized. They have also been selected due to being of varied genres (story based action, open world action, competitive shooting, and sandbox) meaning that the description can be confirmed via watching the trailer, viewing screenshots, or playing the game for yourself. Finally, they have all been played by me meaning that all statements made within these case studies can be verified by personal experience.

Within each case study, the visual style directly correlates to what the gameplay should be feeling like. Whether it is feeling the narrative, seeing a battle, navigating terrain, or freely creating. This correlation can be seen throughout this paper. No prior knowledge of game design is required within this paper. Any complex terminology, such as 'uncanny valley', 'readability' and 'frame rate', will be explained at their first instance.

II. UNDERSTANDING THE TWO APPROACHES

A. Realism

Realism tries to recreate the world in a way very similar to reality. This can be achieved by realistic materials (detailed pores, scratches and fibres), lighting to simulate realistic reflections in the environment, characters with very detailed models (through 3D scanning) and animations (motion capture), and realistic effects with cloth, hair, fluids and destruction. The highest form of realism is photorealism. In this case a screenshot should appear to be a photograph.

Costs are high within realism. Almost every element must be carefully produced, checked and rendered. Due to this, any small mistake in the scene is easily noticeable to the human eye, particularly on characters such as faces. Realistic scenes set a high standard for what is expected in the scene. If individual hairs on beards and dampness on stones are visible in the game, we expect to see this level of detail in all areas of the game. Because of this, costs can be extremely high within realism.

B. Stylization

In stylized art work, not all aspects of reality are considered. Stylized art in games may have flat coloring, large line art, oversized elements, hand painted textures, 'cell shading' (flat shadows and highlights) or minimal polygons. Like in Minecraft, the scene may be entirely composed from cubes.

This should not be seen as the failing to create realistic artwork or poor quality. It is a stylistic choice. By simplifying details within the artwork, artists can create an experience in which players focus on, and take away, certain feelings. Stylized games should not be compared to reality, but to whether they match their own design.

C. A spectrum, not two boxes

It is worth noting that realism in video games is unlikely to be binary within this discussion. Rather, there is a spectrum to consider in this discussion. In this spectrum, Minecraft would be closer to abstract, Valorant stylized, Ghost of Tsushima painterly and God of War realistic (fig 1). Having this in our minds avoids one of the most common mistakes made in this discussion which can be making the assumption that realism = aesthetically pleasing.

III. LITERATURE REVIEW

Five lines of earlier work frame this study: the uncanny valley, identification through simplification, immersion, presence, and visual readability. Together they explain why neither fidelity nor simplification can be judged in the abstract - each changes what the player expects, notices and feels.

A. The uncanny valley

Mori claimed in 1970 that as a character resembles a human more, positive perceptions will increase. However, just before realism is reached, some flaws in the character (such as skin, eye, and motion) may make the character very uncanny [1]. Experimental studies support the practical application of this theory, by showing that if elements within a character have mixed levels of realism (such as realistic facial features and less realistic eyes), uncanniness increases [2].

Implications for Game Design

As more realistic facial designs are used, the threshold for players will be higher. If they do not quite reach perfect realism, characters can be perceived as more uncanny than characters with obviously stylized designs. The uncanny valley is also apparent in all of the case studies. Stylized characters will be compared with their intended art style. Realistic characters however, will be compared with humans in real life, which is the harshest comparison. Therefore, if a character-driven game chooses to have realistic characters, it is accepting of a greater cost in production and a smaller margin for error in facial design, eye design, and lip movement.

B. Identification through simplification

Scott McCloud argues in Understanding Comics that simplifying characters can allow players to relate to them more easily, as they will "identify themselves with the character" [3]. In games, this can help make characters express emotions effectively. By over-exaggerating expressions, it can allow the emotions of characters to be quickly understood by the player. Therefore, although simplifications are not always emotive, it is clear that emotional characters can be achieved in many ways.

This argument can also be applied to characters within games. If a game wishes the player to take on the role of this

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

character, simplifications allow the player to insert their own identity within the game. However, if a game wishes to show the specific sadness or anger of a particular character, the detailed and performative elements of that character in the game will be more effective than simplifications. This corresponds with the differences in emotional expression between Minecraft's simple 'pixelated' character and Kratos in God of War .

C. Immersion: engagement, engrossment and total immersion

The concept of immersion has been shown to be present in games without high fidelity graphics. By collecting interview data to develop a grounded theory, Brown and Cairns [4] defined three levels of immersion. The first level, engagement, refers to the amount of time, effort and attention put into playing the game, and learning how to play. The second level, absorption, refers to emotional effects on the player due to the design of the game (graphics, gameplay and story). Finally, complete immersion describes the rare moments during gaming when, for a short time, everything else seems unimportant. Barriers exist at each level. Engagement may be achieved by many players, however, only well designed games will lead to absorption and complete immersion.

Jennett et al. [5] built upon this work, showing that immersion can be quantified by measuring questionnaire responses, along with objective data such as performance and gaze. This is important in the current research as it shows immersion is a genuine experience, rather than just marketing terminology. It also shows that immersion can occur in games without high fidelity graphics. In this case, immersion is being measured based on how involved the user is in the game and not the number of polygons. Therefore, this supports the distinction made in this paper between coherence and fidelity. In a well coherent world within a game, the rules are applied consistently. However, even if a game has high fidelity (rules match real life) it may still not be coherent if the rules are applied inconsistently. Alternatively, stylized games can have perfect coherence but very little similarity to real life.

D. Presence: the illusion of non-mediation

Closely related is presence. Lombard and Ditton [6] defined presence as the perceptual illusion of non-mediation: the moment when a person stops noticing the screen, controller or technology between them and the experience, and responds as if they were simply there. Presence, on this account, is not produced by realism alone. It can arise from a wide, convincing view, from characters who respond socially, from sound, or from the feeling of being able to act and be acted upon inside a world. A book or a blocky game world can produce forms of it, and a technically stunning scene can destroy it with one glitch, one repeated animation or one loading pause.

For art direction, the implication is practical. Every visual choice should be asked two questions: does it help the player forget the mediation, and does it stay consistent enough not to remind them? Realism helps the first question when it is flawless and hurts the second when it is uneven. Stylization reverses the profile: it never pretends there is no mediation, but its simpler rules are far easier to keep consistent for a hundred hours.

E. Readability and shape language

The use of shape, outline, lightness and color within designs to create readability in a short amount of time has been explored by Solarski [7]. Rounded shapes tend to be perceived as friendly, angular triangular shapes tend to be perceived as dangerous and clear outlines make an object easily identifiable without needing further information. In game design, this feature is used deliberately. Characters can be designed with clear outlines so that they can be identified easily at a distance, in poor lighting conditions and at the edge of the screen. This is useful during combat.

Readability provides some of the most academic backing for styles. By removing redundant detail from designs, readability can be improved. Realistic content contains a large amount of visual noise which is irrelevant to gameplay meaning that players must invest mental effort into differentiating the relevant information. However, stylized content can ensure all mental effort is invested towards the correct elements. Players will be able to identify enemies, dangers, exits and goals quickly. This effect is demonstrated in fairness in Valorant (Section VI-A) and in a hybrid effect in Ghost of Tsushima (Section VII) where guidance is embedded in the world.

The literature shows a gap in current research, which this paper aims to address. While many generalisation have been made regarding realistic and stylized content in games, less comparisons exist between popular games using the same 5 practical considerations. Comparing games in this way allows for greater understanding of the real benefits both styles offer to designers and players.

IV. METHODOLOGY

The methodology employed for this research is a qualitative case study. 4 cases were selected, which represent the different positions along the realism to stylization scale. This methodology was chosen because visual stylization cannot be easily separated in laboratory based research, as factors such as genre, budget, platform and audience must also be taken into account. Using whole games ensures that all of these relationships are maintained. It must be noted however that not all differences between the games may simply be due to visual stylization.

Cases were selected using non-random sampling. Cases were chosen because (a) they represented a clear different position on the scale, (b) they are all widely available to access meaning readers can double-check the information given in this report, and (c) because the researcher has played them extensively. God of War demonstrates cinematic realism, Ghost of Tsushima the blended style, Valorant demonstrates stylization for competitive play, and Minecraft demonstrates extreme stylization.

Criteria. Each game was assessed on five criteria, defined in advance so that the comparison stays fair:

1) Immersion — how strongly the visuals support feeling present in the world and invested in its events, understood in the staged sense of Brown and Cairns [4].

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

2) Gameplay clarity (readability) — how quickly a player can identify enemies, allies, hazards, objectives and interactive objects.

3) Technical performance — the hardware demanded, and how smoothly the game runs on typical devices.

4) Production cost and effort — the relative scale of art, animation and technical work the style requires, discussed qualitatively rather than in currency, because studios do not publish comparable art budgets.

5) Longevity — how well the visuals are likely to hold up as hardware and expectations advance.

How the ratings in Table I were given. Each criterion was rated on a four-step qualitative scale - Low, Moderate, High, Very High - by working through the same questions for every game. For immersion: does the style support performed emotion, place-believability and sustained attention, and what breaks it? For clarity: can the key gameplay information be read at speed and at a distance? For performance: what is the minimum class of device the game is designed for? For cost: how much detail must every asset survive, and how specialised is the labour? For longevity: is the look judged against reality, against a moving rendering benchmark, or against its own rules? A rating was only assigned after the same scene-based check described in the case sections - one combat or action scene, one quiet or exploratory scene, and one guidance or interface moment - had been considered for that game. The ratings are therefore structured judgements, transparent and open to disagreement, not measurements. A second rater would be the obvious way to strengthen them, and this is noted as a limitation.

Procedure. For each game the author (1) replayed or reviewed extended play across story, combat and free exploration; (2) noted how characters, hazards and objectives are visually distinguished; (3) noted moments where the style helped or hindered the immediate task; and (4) checked those notes against published design and system-requirement information. One concrete scene per game is reported in Sections V–VII so that readers can see the evidence behind the general claims, rather than having to take them on trust.

Positionality and limits of the evidence. The author is a single player-analyst, training in graphics, animation and VFX, and therefore likely to notice art-direction choices that a general player would feel without naming. That is an advantage for description and a risk for generalisation. No player survey was conducted for this version, so claims about player experience are presented as reasoned analysis, not as measured population data. A short survey instrument designed for exactly this follow-up is included, as a proposal only, in Appendix A. These limitations are returned to in the Discussion (Section IX-E).

V. REALISM IN PRACTICE: GOD OF WAR

God of War [8] (and God of War Ragnarok [9]) demonstrates realism. The characters of Kratos and Atreus have realistic skin textures, scars, beards and weathered armor. The snow is compressed under the characters' feet. Visible breath is present in the air and realistic lighting has been applied to rock, water and woodland. This game has a very cinematic feel. There are no visible transitions between scenes in this game (2018) meaning combat, exploration and dialogue occur in a single unbroken scene.

The effect of this is to add unusual emotionality to the subtle narrative of this father and son relationship. As described in section III, the lack of cut scenes in this gameplay means that the game successfully uses a presence device. By not reminding the player they are playing a game, immersion [4] can happen uninterrupted.

A. Scene 1: The first Baldur fight

The fight with this unknown man, Baldur, displays the effectiveness of realism. The combat quickly transitions to physical combat. The scene causes trees to break in half and cause fissures in the ground. Throughout the fight, we can see emotion in the characters' expressions, such as exhaustion, disgust and composure. If this scene was stylized, the story would still be presented effectively but in a very different way. As opposed to the sense of realism (with two people physically causing damage to the environment) there would be greater emphasis on exaggeration and symbolism. The strength of this scene comes from players being able to believe in weight, cold and pain within this short period of time. This is a great example of realism in games, and in turn, all of this detail has been placed into the game to create those feelings.

B. Scene 2: The Lake of Nine

Lake of Nine is half of this exchange. The journey on the boat contains dialogue and narrative but is characterised by its slow pace, simply gliding past different landscape features. Realism in lighting and scale makes this feel like you are genuinely in this location, giving realism to the emotional scenes. However, it does mean that environments must be very high quality in order to justify this slow close-up exploration in every place the boat may travel to. If this was stylized instead, the effort required to create this scene (and indeed all scenes) would be greatly reduced. The scene would feel very different however, being charming and clear rather than impressive.

C. Strengths

Engaging Immersive: Subtle expressions on characters' faces allow more emotion to be conveyed than would be possible with dialogue. Realistic graphics allow this. Believable environment: The realistic textures and lighting allow the Norse environment to feel as if it has already been discovered, aiding the exploration and narrative. Attractive: Highly cinematic graphics look impressive in a trailer. This gives a clear indication of quality, suitable for a high budget game.

D. Limits

Performance Requirements – To achieve a high level of realism in visuals, a powerful hardware platform (console/PC) is required. In order to maintain a high frame rate (images per second), optimisation must be very well performed. Resource Cost – Since assets can be viewed from any angle, they must be well detailed. Therefore there is a large increase in art, animations and testing resources. Uncanny valley risk – If facial features appear too real, any lack of fluidity in eye/ lip animation is very noticeable [2]. Ageing – As new technology is developed, games become expected to appear realistic. A game which was once considered very realistic 5 years ago, is quickly seen as only realistic for the standards of its time. This

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

is because although the game is replicating real life, real life has not changed. It is therefore no longer realistic by today's rendering standards.

Readability issues

In complex battle scenarios, realistic elements such as vegetation, weather, particles and similar colored enemies/environments may cause issues in the readability of the scene. However, by using camera angles, sounds and enemy design, readability has been maintained within the complex battle scenes. Again, this supports the argument of the paper; readability must be added to a realistic game. Stylized games have readability as a base.

It is clear in God of War that, in order to achieve the greatest cinematic immersion and emotional performance, realism has the greatest cost attached to it.

It is apparent that realism in games relies on details being in place which support a narrative. Within a fast-paced competitive game, having such a large amount of visual detail in may actually make playing difficult. This is shown in reverse within the following section.

VI. STYLIZATION IN PRACTICE: VALORANT AND MINECRAFT

A. Valorant - stylization for competitive clarity

Valorant In Valorant [10], fast reflexes make a difference between winning and losing a round. To aid reflexes, characters have simple shapes, bright colors and clear forms. The environment is very bright to avoid characters being hidden in shadow, vegetation and debris. Ability effects from each character have unique shapes and colors. This lets players quickly understand the complex situation on screen. Players know where other players are, what threats each player poses, and where they can safely move.

When the action comes to a critical moment in a site battle (for example the central area of Bind or Ascent), many ability effects may be taking place. A colored wall may block the site, there could be a hazardous glowing area on the floor, and/or there could be flashing effects. As each effect keeps the color scheme and shape styles consistent with the character using them [7], experienced players can quickly comprehend the situation in the same way that drivers quickly read signs on the road. This makes Valorant easy to learn, giving players a competitive advantage. By prioritising clean visuals, the match has shifted to reward good aiming, positioning and cooperation rather than finding camouflaged players.

If Valorant were realistic, the competitive aspect of the game would be reduced. Players would be able to hide in messy environments much more easily. However, stylized graphics provide a fair visual for all players. As well as this, Valorant was designed to be efficient to run on a wide variety of PC hardware, including basic laptops. This means many people can play Valorant, which is ideal for esports. In esports it is more important that the game runs smoothly with a high frame rate than having detailed textures.

B. Minecraft - extreme stylization for creativity

Minecraft [11] represents the opposite extreme. Despite using simple blocky voxel models with pixelated textures, and lacking any realism in detail, anatomical accuracy or proportions, it is one of the most successful games of all time and presents a clear contradiction to the assumption made in this study.

It has many advantages in the way it uses stylization. Firstly, the blocky nature provides clarity in how the game works, enabling easy understanding. Anything within the world can be broken, held and placed meaning building objects is very intuitive. Whether building a house, farm or complex redstone circuitry (using switches and basic mechanisms), all objects appear in the same visual style. Secondly, it allows flexibility. As stated by McCloud [3], simple styles allow players to add their own ideas to the game. The same blocks can be used to create a basic shelter for a child, or a large scale copy of a city. Because of these two features Minecraft is often used in education. As it is easy to understand the mechanics of the game, and given that it does not require high specifications, it can be run easily on normal school computers. Finally, it is very lightweight meaning it can be played on phones, laptops, consoles and school computers. Since the graphics are not intended to compete with real-life, they do not change much over time. However, its simplicity means that it cannot effectively create realistic human characters or story-telling. If such elements are desired by a player, another game may need to be considered.

Valorant and Minecraft demonstrate both advantages of stylization. While Valorant demonstrates how style can convey information quickly and accurately, Minecraft demonstrates how style can give the world to the player.

VII. THE HYBRID MIDDLE: GHOST OF TSUSHIMA

Ghost of Tsushima [12] has an authentic environment including realistic clothing and weather. For effect, the game will also manipulate reality. The grass is richer gold and the maple trees have more intense reds. Overall colors and lighting are similarly artistic and share traits with traditional samurai movies. Further, the game's method of directing the player is highly artistic. Rather than showing a complex map, the wind is animated and physically blows grass, foliage and dust towards the intended destination. Thus, the direction mechanism is aesthetically integrated into the game.

A. Scene: Following the wind, and the duel

A player will explore the island to achieve a goal. Rather than a physical line and/or a leading on-screen icon there is a responsive environment. Grass sways, foliage moves and the wind provides direction. Therefore, the player interprets the world as the protagonist would, so maintaining engagement [6] precisely when a standard interface would not. Although the information provided is equivalent to that given by a marker, the experience is distinct.

Alongside, the game utilises the second component of the hybrid approach. Individual combat is set within highly aesthetic, single plane settings including amongst falling leaves, in water and facing a blazing field. Again, sharp figures are shown within minimal, more artistic backdrops. Although realistic in terms of equipment and motion, the design has adopted the compositional element of stylization; non-essential features relating to the two combatants and their rhythm are subdued. Explicitly emphasising this, the game can additionally be played in Kurosawa Mode (after the film director Akira Kurosawa). Thus, although a cinematic aesthetic is applied, gameplay is unaffected. As previously

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

mentioned, legibility was never reliant on hyper-realistic visuals.

In summary, developers do not need to adopt total realism. Ghost of Tsushima applies realism effectively to aspects such as material, weather and environment. However, it is the coloring, mood and even instruction that benefit more greatly from stylization. Consequently, high engagement is maintained without suffering from the visual clutter that can accompany rigid realism, nor becoming too abstract as with a wholly stylized setting. Furthermore, the game ages more favourably. Since the most striking visuals are concerned with color and motion, rather than texture acuity, they are less vulnerable to obsolescence in relation to the next generation of graphics.

VIII. COMPARATIVE ANALYSIS

TABLE I. COMPARATIVE SUMMARY. RATINGS ARE QUALITATIVE JUDGEMENTS FROM THE CASE ANALYSIS IN SECTIONS V–VII, GIVEN BY THE PROCEDURE SET OUT IN SECTION IV. THEY ARE NOT MEASURED BENCHMARKS.

Criterion	God of War	Ghost of Tsushima	Valorant	Minecraft
Immersion	Very high - cinematic, emotional	High - atmospheric, painterly	Moderate - focus is competition	High, of a different kind - creative absorption
Clarity	Moderate - dense detail can clutter fights	High - wind guidance, clean composition	Very high - built for instant reading	Very high - every block is legible
Performance	Demanding - needs powerful hardware	Demanding, but optimised for one platform	Light - runs on modest PCs	Very light - runs almost anywhere
Production cost	Very high	High	Moderate	Low for the core style
Longevity	Ages fastest as rendering advances	Ages slowly - art direction carries it	Ages slowly - style is timeless by design	Ages slowest - never chased realism

Minecraft	Valorant	Ghost of Tsushima	God of War
Extreme stylization	Stylized	Hybrid	Realism

Fig. 1. The four case studies placed on the realism-stylization spectrum, from abstract (left) to realistic (right).

Reading Table I row by row is more instructive than reading it column by column. The immersion row has no single winner once kinds of immersion are distinguished: God of War leads on performed, cinematic engrossment, while Minecraft produces a comparably deep creative absorption by opposite means. The clarity and performance rows move together - the games that edit visual information hardest are also the lightest to run - which suggests readability and accessibility are not two separate benefits of stylization but one benefit seen from two sides. The cost and longevity rows also move together, and in the opposite direction to fidelity: the closer a look is tied to a moment in rendering technology, the more it costs to reach that moment and the faster that moment passes.

No column in Table I wins every row. That pattern - repeated across five independent criteria - is the central finding of this study.

IX. DISCUSSION

A. Style should follow purpose

There appears to be a clear set of design guidelines. When a game aims to tell a narrative through performance (facial expressions, sadness and/or wonder) then realistic graphics add value – for example in God of War. Conversely, if a game is designed for fast, balanced gameplay then stylized graphics are not a concession but essential – such as in Valorant. Similarly, if a game wishes to allow for user-generated content, then abstract visuals can be beneficial – as shown by Minecraft. A combination of styles may therefore be optimal for games which aim to explore a scenic environment (for instance, Ghost of Tsushima).

Misalignment between a game's style and its intent can cause issues. For example, realistic, but superfluous, graphics may be present in a competitive game; or abstract graphics may prevent a gamer from sufficiently immersing themselves in a character's suffering. Identifying the key experience that a game should provide and then analysing whether specific visual elements actively contribute to this or simply replicate the appearance of successful games is a good initial step for any project, including student projects.

B. Accessibility is part of art direction

Whilst common perception is that performance relates solely to technology, it is also highly related to audience. The more realistic a game is, the higher the specification required of its player. Both Valorant and Minecraft successfully appeal to a wide array of players (including those at school, on old PCs and on phones) due to their simplicity. Thus, when a game is developed to be more realistic it is also being created for a less high-end, yet more affluent, audience. Such an exchange should be considered intentionally, notably for games which have educational, social and/or competitive aims.

Alongside financial considerations, legibility is also key for accessibility. New, young or re-starting players all benefit from easily interpretable games as these can rapidly be 'scanned'. Therefore, creating a style which is both instantly legible and suitable for small screens, limited bandwidth and for both group and/or sporadic playing scenarios, is ideal for the majority of global gamers; again not just for trailer viewing.

C. What this means for student and independent developers

This advice has particular relevance for both students and small studios. It applies to those who may lack the resources of a large studio – for example, neither art staff nor motion capture facilities and also often lacking the budget. Within this study, realism was found to be the most costly option in terms of game assets, character faces (which can easily fall into the uncanny valley), optimisation and finally, comparison to the latest large studio title. Typically, small teams then make a sub-standard version of another game.

Stylization works in the opposing way. By using a restricted color range, enforcing good linearity and re-usable geometric forms, one or two artists can create a game which

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

can be played on the predominantly owned low and medium spec PCs and mobiles and maintains a sense of design in five years' time. As well as applying the principle of scaling up, Ghost of Tsushima also shows how small teams can scale down. Although they cannot match the money available for landscape design within the game, they can match its approach. Allocate the restricted quality resources to the key part of your game (for example, a character, weapon and/or distinctive location) and consciously reduce or even omit non-key areas, rather than trying (and often failing) to apply a veneer of realism to all aspects. Both in a portfolio and for initial commercial work, a well functioning stylized game effectively showcases an artist's direction more so than an incomplete photorealistic one. This is because judges and potential employers can analyse the design choices made.

Whilst this is not saying that small teams should never try to make realistic games, it does suggest that if they do so they should do so with awareness and restraint. Apply realism to a specific area such as one character, room or brief sequence so that the associated costs can be fully met. Rather than making realism the default for an entire game, therefore.

D. Industry direction

Whilst the industry is influenced by high quality visuals and movie-length advertising, at the same time greater expenditure and extended timeframes are required to develop games. Moreover, successful live and indie games provide further incentive to produce original, cost-effective and enduring games. Rather than one approach prevailing, there appears to be an increasing trend towards conscientiously combining both methods. Realism can therefore be applied in a targeted manner within a highly directed visual style which is happy to generalise, emphasise and/or leave things out. Ghost of Tsushima provides a notably refined early example of such an approach. Players are likely to retain a more enduring impression of its distinctive visual style, rather than specific textures.

E. Limitations

There are four areas of limitation. Firstly, whilst in-depth analysis has been carried out on four games, only indicative generalisations can be made about the industry as a whole. The games analysed also cover different genres and costs therefore factors other than just visual style will always affect them. Secondly, this is qualitative analysis and relies upon my own gaming experience and available information. Better results could be gained if a second person carried out the rating process and inter-rater reliability established. Thirdly, although reference is made to the relative cost of art creation, game development companies rarely state exactly how much they spend on this area. Finally, neither a questionnaire nor experimental work was undertaken with gamers. Therefore, although the claims regarding immersion and legibility are supported by literature [4], [5], they have not been specifically quantified in this instance.

There are two possible further areas that this could be applied to. Firstly, a quick 'player questionnaire' can be completed to find out which of the four games was seen to be the most engaging, which was the easiest to follow and which performed best on an individual's device. Participants could also be asked which style of graphics they would prefer for both narrative and competitive games. An example of such a questionnaire can be found in Appendix A. However, this has not yet been carried out and so no data has been analysed. Secondly, and more effectively, a reaction time test can be designed. This involves displaying real and abstracted images of similar situations to participants and analysing their speed and accuracy at recognising key elements (for instance, targets, dangers and goals). This would allow the analysis regarding this paper's legibility to be supported by tangible data.

X. CONCLUSION

An analysis was conducted into realism and stylization within 4 modern games. Evaluation was made in terms of immersion, legibility, functionality, expense and lifespan. Although God of War is highly immersive and functionally expressive, realism is expensive and has both a high level of effort and age related expense. It also suffers from the potential problem of falling into the uncanny valley. By contrast, Valorant and Minecraft are highly legible and have excellent levels of accessibility. They are inexpensive to produce and are age proof. However, stylization sacrifices cinematic realism. As illustrated by Ghost of Tsushima, these options can and should be combined.

The extended literature review supports rather than alters this finding. Firstly, as previously mentioned, the uncanny valley emphasises that there is little room for error in realism. Secondly, McCloud [3] clarifies that stylization facilitates easily transferable expression. Thirdly, Brown and Cairns and Jennett et al [5] highlight that immersion is in fact a quantifiable, multi-level experience and that this is not exclusive to realism. Fourthly, Lombard and Ditton [6] illustrate that a lack of congruence is more likely to disrupt someone's sense of presence than a lack of simplicity. Finally, Solarski [7] identifies that stylization is intentionally skilled in its use of form, significance and hue to enhance legibility. Despite being developed separately, each of these findings advocates that it is not just accuracy but rather congruence and intention which determine the success of an aesthetic.

Whilst the research question cannot therefore be answered through prioritisation, it can be addressed via application. Although a strong option, realism should not automatically be the chosen aesthetic. Typically, successful games have an artwork style (realist, stylized or hybrid) which is so interlinked with their gameplay and the desired player experience that it cannot be divorced from it. For large scale studios this allows for highly aspirational development. Equally, for students and indie teams it allows the creation of a simple, well structured and congruent micro-world.

REFERENCES

[1] M. Mori, K. F. MacDorman, and N. Kageki, "The uncanny valley [From the field]," IEEE Robot. Autom. Mag., vol. 19, no. 2, pp. 98–100, Jun. 2012, doi: 10.1109/MRA.2012.2192811. (Original essay published 1970.)

[2] K. F. MacDorman, R. D. Green, C.-C. Ho, and C. T. Koch, "Too real for comfort? Uncanny responses to computer generated faces," Comput. Hum. Behav., vol. 25, no. 3, pp. 695–710, May 2009, doi: 10.1016/j.chb.2008.12.026.

[3] S. McCloud, Understanding Comics: The Invisible Art. New York, NY, USA: William Morrow, 1993.

[4] E. Brown and P. Cairns, "A grounded investigation of game immersion," in Proc. CHI EA '04 Extended Abstracts on Human Factors in Computing Systems, Vienna, Austria, 2004, pp. 1297–1300, doi: 10.1145/985921.986048.

(This work is licensed under a Creative Commons Attribution 4.0 International License.)

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 11 , November - 2026

[5] C. Jennett et al., “Measuring and defining the experience of immersion in games,” Int. J. Hum.-Comput. Stud., vol. 66, no. 9, pp. 641–661, Sep. 2008, doi: 10.1016/j.ijhcs.2008.04.004.

[6] M. Lombard and T. Ditton, “At the heart of it all: The concept of presence,” J. Comput.-Mediat. Commun., vol. 3, no. 2, 1997, doi: 10.1111/j.1083-6101.1997.tb00072.x.

[7] C. Solarski, Drawing Basics and Video Game Art: Classic to Cutting-Edge Art Techniques for Winning Video Game Design. New York, NY, USA: Watson-Guptill, 2012.

[8] Santa Monica Studio, God of War. Sony Interactive Entertainment, 2018.

[9] Santa Monica Studio, God of War Ragnarok. Sony Interactive Entertainment, 2022.

[10] Riot Games, Valorant. Riot Games, 2020.

[11] Mojang Studios, Minecraft. Mojang Studios, 2011.

[12] Sucker Punch Productions, Ghost of Tsushima. Sony Interactive Entertainment, 2020.

(This work is licensed under a Creative Commons Attribution 4.0 International License.)