Game Feel Analysis

The FPS Genre

Predictable Results

A handful of things are simple expected at this point when it comes to FPS video games. They are centred around the fantasy of war and firing a weapon. You aim the weapon at a target, you press the trigger and a hole appears in the target. Breaking this down even further in a gameplay context. An enemy enters your line of sights, you hold the trigger, the enemy lets out a gasp and stop moving. In Steve Swinks words “there’s no interference between intent and outcome for the player”.

We can use this methodology in more than just the physical gameplay of killing enemies. There’s more that’s expected from a weapon than putting a hole in a target. I will be using (X) genres to classify these extra predictable results

Animation Effects

An integral component to the power fantasy of firing weapons in a video game is the sheer weight and power from these objects; seeing the damage they inflict upon a target, alongside the Player Characters arms flying backwards from the recoil all sell the power of the weapon you’re holding. When you begin stripping away these components, you start to lose to impact and appeal to the actions. Steve Swink notes a similar sentiment, mentioning that “*if all polish were removed, the essential functionality of the game would be unaltered, but the player would find the experience less perceptually convincing and therefore less appealing*” *- Swink, 2008 p25*

Visual Effects

"One, Visual effects typically wink in and out of existence to serve a short-term need for indication of interaction between two objects... Two, visual effects appear to be caused by another object, but are not the object itself" – Steve Swink, 2008, p158

VFX are an ideal medium to sell the impact of an action and replicate the real world, or sometimes even exaggerate what's already there. In the context of my project, guns don't need the exaggerated metaphor of smoke, fire or bright lights because guns themselves are already this intense. Despite this, replicating the real world as closely as I can is more than enough to make shooting a weapon feel juicy.

Sound Effects

Metaphor

Another element that becomes extremely important within the context of the project becomes apparent when you put two separate games together.

Modern Warfare 2

Bodycam

There’s a lot of similarities between these two games. They both involve a character, holding a pistol and firing the weapon at a target. The two also are very polished experience, not lacking animation or vfx. Considering this, when viewing and playing both games, they couldn’t be more different. Despite having all the same characteristics, the intensity of each of these elements change the experience completely for the player.

While Call of Duty has almost become an arcade like shooter, the Bodycam gameplay is so much more raw and weighty. The recoil animations are harsher, the muzzle flash more blinding, the sound effects deafening; despite not being able to hear them in GIF form, you can imagine just heavy and sharp the gunshot would be. Neither of these analyses are critically faltering either experience but instead works to highlight how polish can shape how the designer desires the consumer to interact with their product. Bodycam will inherently provide a more careful, adrenaline filled experience with Players trying to preserve their lives. While Modern Warfare leans into the arcadelike gameplay with Players running and gunning, jumping through windows and dropping artillery strikes or nukes.

Locomotion

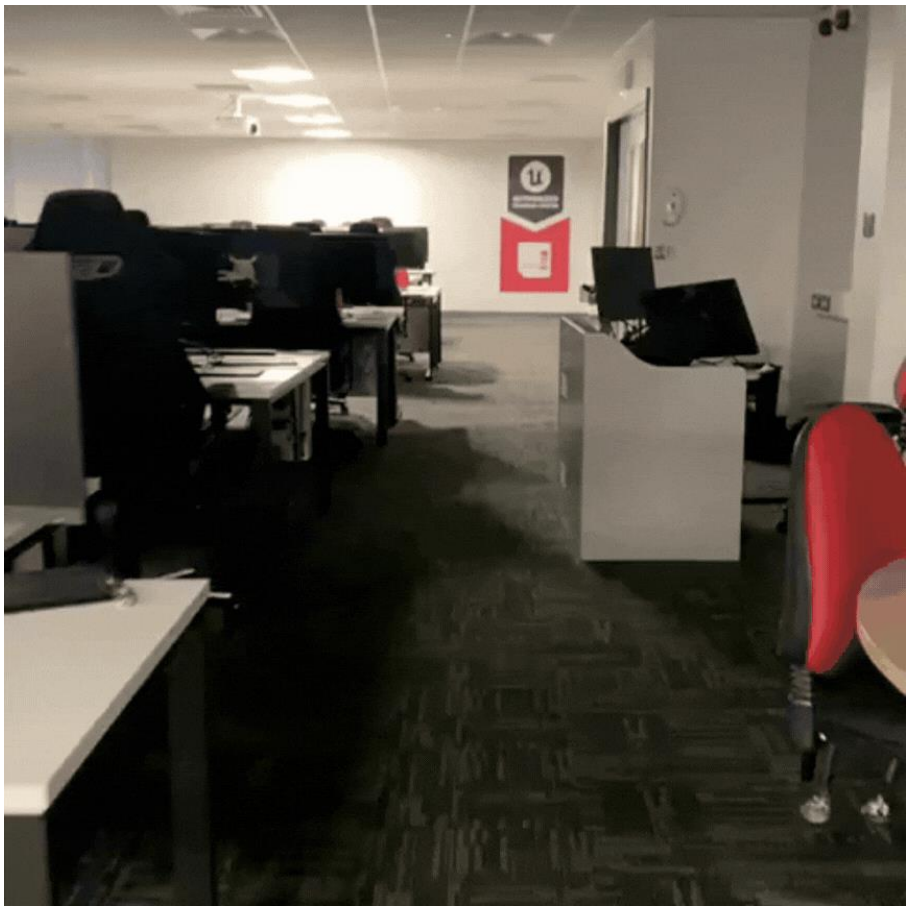
Walking is one of the strangest things to get right within games and especially important when considering game feel. An epidemic within the Gaming community has come from Unreal Engine and each game having the exact same movement. When taking into account game feel, I want to give me players the best chance to appreciate each detail within my project; I hypothesised that players would struggle to engage with my project if I kept the base movement style of an Unreal Engine project. To get this feeling right, I wanted to delve into what other games got right, and what they got wrong.

Modern Warfare 2

Escape from Tarkov

Bodycam

Real Life



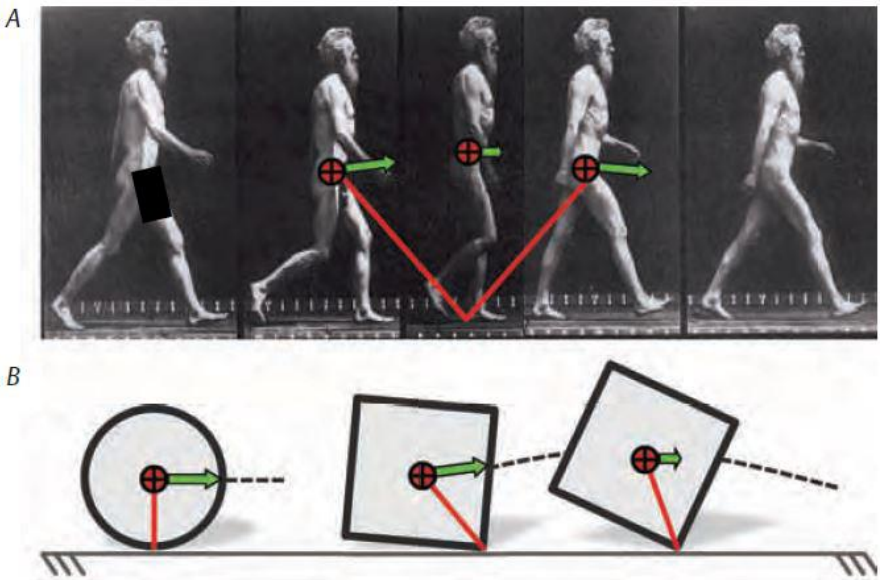


Figure 1. Pendulum-like style of walking. *A*, Sequences by Eadweard Muybridge, the father of the motion picture, of himself walking in 1887. Indeed, by freezing time we can clearly notice his vertical head bobbing (about 3-4 cm at a common walking speed ~4 km h^{-1}) during a step (from left to right foot contact). Sticks represent the inverted pendulum model of his CM displacement (crossed circle), located approximately midway and just above the hip joints. The CM reaches its lowest point when both feet are on the ground then vaults over the supporting leg so as to move forward along a series of arcs of circles. The CM forward velocity (green arrow) slows as he moves upward, and kinetic energy is converted into gravitational potential energy, which is partially recovered as he falls forward and downward after crossing the vertical. *B*, The wheel is considered as the most efficient instrument of motion because its CM remains horizontal. Velocity of the wheel CM can thus be kept constant because it is perpendicular to a line connecting the CM with the ground. The locomotory legged apparatus, as a 'square wheel,' inherently implies vertical displacement and forward speed changes of the CM responsible for much of the mechanical work to walk (adapted from Cavagna,1978).

The Physiological Society. (2020). *Why do we bob up and down while walking? The mystery of Antiquity walking shadow finally deciphered*. [online] Available at: https://www.physoc.org/magazine-articles/why-do-we-bob-up-and-down-while-walking-the-mystery-of-antiquity-walking-shadow-finally-deciphered/ [Accessed 29 Jan. 2026].

https://doi.org/10.36866/pn.71.25

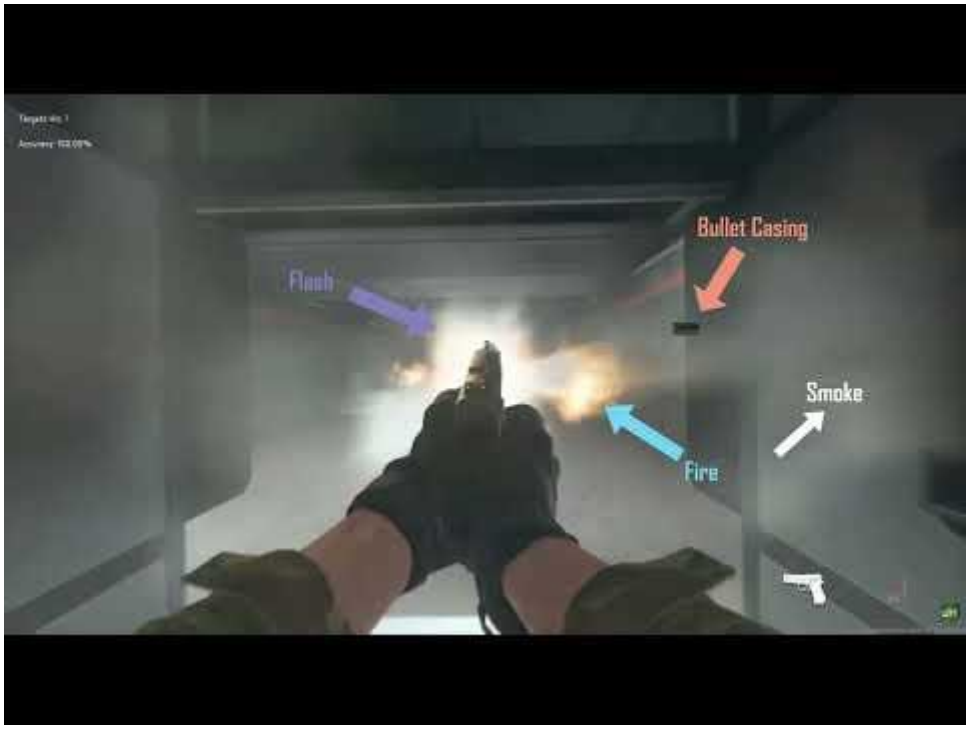
'If a man were to walk parallel to a wall in sunshine, the line described (by the shadow of his head) would be not straight but zigzag, becoming lower as he bends, and higher when he stands and lifts himself up' – 350BC Aristotle

Within each of these examples, they all comprise the characters head swaying slightly side to side, an effect that's became so normal to our every day lives that we hardly notice the 3-4 cm height difference anymore. Despite how integrated this effect is without the Pendulum style of walking players would feel incredibly thrown off. By integrating this, players can easier focus on the intended experience. Focusing on aspects of polish like this allows consumers to immers themselves further within the simulated space.

In Game – Procedural Animations

Visual Effects – Muzzle Flash

Modern Warfare 2



Bodycam

Escape From Tarkov

Real life Demonstration

When comparing muzzle flashes and visual effects within Modern Warfare or Escape From Tarkov to real life examples, you see just how dramatised and exaggerated the experience becomes. Despite the fact I'm trying to make a more realistic military sim style game, there is a reason why I should pay attention to these theatrical examples. Steve Swink puts forth an idea, comparing a user playing a video game to a human having a conversation with a computer. This idea comes together to tackle Real Time Controls within a video game to judge the feel of a game.

I believe that these dramatic uses of flames, flashes and smoke are extreme to further the conversation between human and computer. The human can know they've fired their weapon by a hundred different ways, they can watch their target fall when they've finished firing, they can hear the noise of the weapon shooting, or see their ammo count in their UI, but a conversation has to be clear and concise. By exaggerating the effect of the muzzle flash to such a degree ensures the player won't misunderstand the context of the conversation. Furthermore, if there were players with accessibility limitations, showing that the weapon is firing in multiple ways allows every user to understand the same conversation.

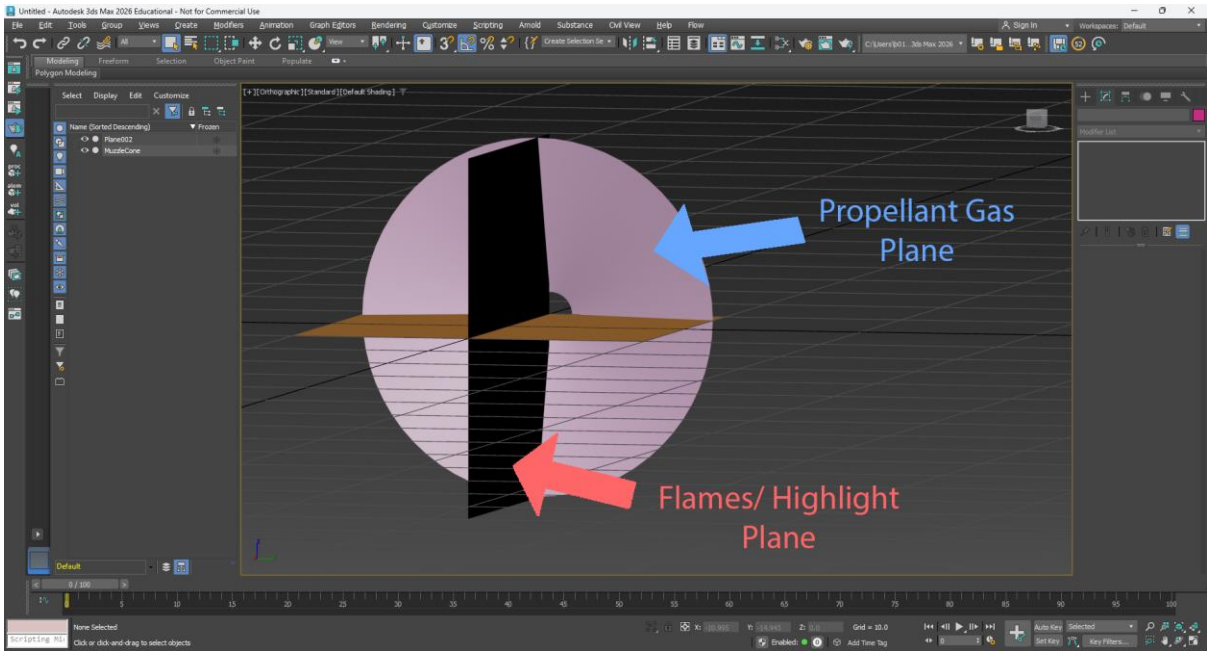
Considering this, I've decided to embrace the over the top muzzle flash, but tried to keep it as accurate as possible by looking at some extreme real world examples that manage to show off a thespian result.

Muzzle Flash from Rifle at Night

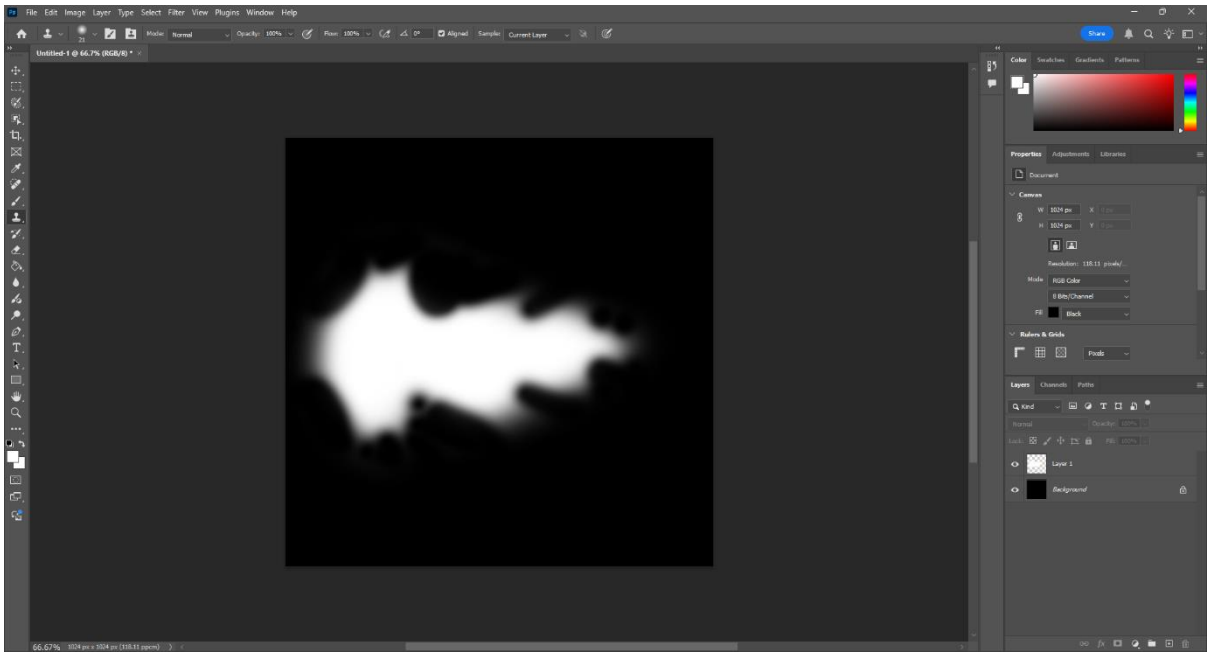
Slow motion – Diagram of Muzzle Flash (Made by Me)

In Game Muzzle Flash Development

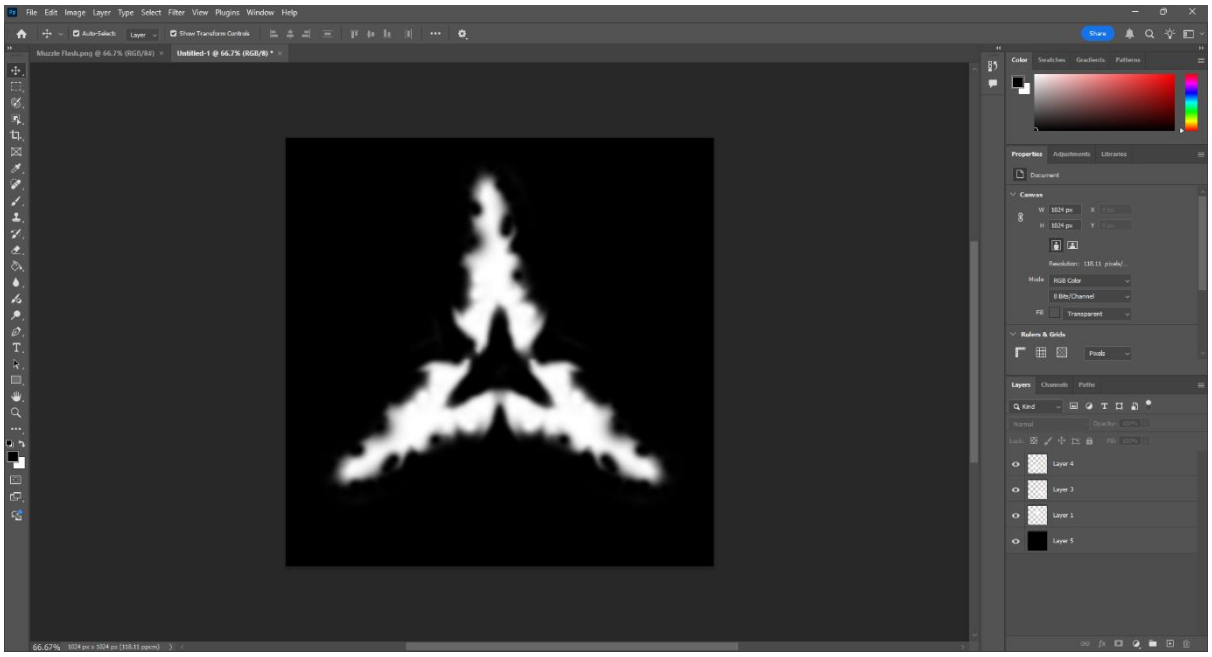
The Base Model



Flame Trail



Propellent Gases



Finished Muzzle Flash

By blending the previous in game examples, alongside some dramatised real life examples, I believe I've created an effective visual effect for the themes of my game. There are enough grounded elements to keeps the effect feeling realistic by incorporating the flames in previous examples, and bringing in the sparks from the night firing example.