

Improving *Shadow of the Tomb Raiders* Movement Beyond a Shadow of Doubt

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Professional Practice for Game Design

Shadow of the Tomb Raider, as a platformer, can be inconsistent and clunky when climbing and jumping. The result is that hooking onto walls feels like a pitiful gamble and jumping feels out of your control. One example is when leaping towards a rock wall: in some cases, the player cannot grapple with it because it requires a level of precision that was not previously communicated to the player. Another example is the player movement. In certain sections the player is forced by the mechanic to unnaturally accelerate, as the gap they are leaping across would otherwise kill the player character. What *Shadow of the Tomb Raider* needs is more dynamic under-the-hood features that act as safety nets to allow players to approach traversing environments with confidence. To avoid awkwardly accelerating the player, objects should be moved closer to Lara. Furthermore, hit boxes for climbable wall segments should be wider, to construct less moments where a player suddenly misses interactions with climbable walls. Fundamentally, *Shadow of the Tomb Raider* fails to embrace the chaos and fallibility of players, attempting to force them into scripted scenes or letting them fail a challenge rather than accounting for players moving in unintended ways.



One example of this problem in *Shadow of the Tomb Raider* takes place after crashing in Peru. There comes a section where you move along the side of a ravine and hop to a branch, as shown here by MKIceAndFire. [The intended path is to jump straight](#)

ahead to a plateau a significant distance away, from crouching still on a branch

(1:07:53). The problem with this jump to the plateau is multi-faceted, being centered around what I call “scripted acceleration”. The developers implemented a unique feature on specific spots where, when jumping, rather than traveling the usual distance, Lara rapidly accelerates to gain more distance. This is a problem for two reasons: the first is that it feels awkward. She is otherwise weighty, feeling like a rough-n-tough gal “clomping” her way through expeditions. A player put it perfectly in their review of *Shadow of the Tomb Raider* on Gear Diary, “Lara moves like she’s just got off a bender, where she feels like there is excess weight and heftiness behind her” (Flint Pickleback, 2023). This inconsistency between a heavy Lara and sudden scripted acceleration makes these sections feel unnatural and look odd. The second problem with scripted accelerations is that they introduce ambiguity as to whether you can reach them. On any given platform, how am I supposed to know whether some far-off destination is reachable through scripted acceleration or if it was never meant to be reached at all? Because of scripted accelerations, half the time I never knew where to go because now, anywhere seems reasonable. If I can’t use the limitations of my characters’ movement as a decent gauge to know where I can move, I have little else to go off of throughout the game. This exacerbates an already existing problem, where “The platforming in this game is built around rules where certain aspects of the environment can be leaped over, climbed up, and climbed under, whereas others cannot. This creates an experience where you think Lara could easily make a jump onto a safe spot, but since that ledge isn’t specifically marked as “grabbable,” you will not be able to” (Flint Pickleback, 2023). The result is that players leap to what appears to be a valid destination, only to plunge to their death because scripted acceleration taught them that anywhere *could* be reachable in an environment where only specific locations are. Every jump in almost any given location becomes a gamble as to whether it’s valid. The solution is amazingly simple (at least in theory), remove scripted acceleration and reduce the distance Lara must jump by increasing the size of the platform or moving it closer. This way, you can use your character’s pre-established abilities to understand what locations are possible to reach, allowing you to jump to grabbable ledges.



Another example of this unnatural scripted acceleration is at a part of the final section of the game. [Lara traverses through Mayan ruins to reach the top of a mountain, where there is a jump from her rope to a platform \(09:13:04\)](#). As she swings and lets go from the rope, she gains a sudden and unprecedented acceleration across a massive gap, being forced into landing on a specific spot on the next platform. It's worth acknowledging that this acceleration is to lead the player to the subsequent platform, as they likely wouldn't be able to otherwise, unless they were incredibly precise with their trajectory. Furthermore, having her land on that specific section of the platform is probably important for activating some trigger for a later event. Unfortunately, this uncovers a third problem with scripted acceleration: the removal of player agency. The game removes the dynamism of running and jumping, tossing Lara through an invisible tube so she goes exactly where the developers want her to go. Player movement is ambiguous (humans are not robots), so scripted accelerations are meant to account for this factor by removing control from players and rocketing Lara to a specific point. A lack of agency is not preferred in this case because it removes complexity; there is no stimulation, no thinking. When it comes to "including more complex movement mechanics...", it "raises the skill ceiling but still allows newer players to play as they like." (Tom and E-vaughn, 2017). Does the movement in scripted acceleration add to the complexity by giving the player agency? No. The solution should not be to remove ambiguous movement, as doing so removes much of the players agency as well. Thus, the answer should be to manipulate the world the player interacts with to accommodate the imprecision of humans, removing scripted accelerations in the process. Now the game will feel consistent, making all movement feel natural, allowing for proper communication as to where the player can go, and giving more agency to players.

However, Lara nonetheless needs to hit certain triggers located on certain parts of platforms, so these should be expanded in size so that they are impossible to miss.



Forced acceleration is not the only source of clunkiness, rock walls are also quite an annoying oddity. [For every jump and proceeding grapple, there is a non-zero chance the game decides that it simply does not want to work and forces you to miss \(25:10\).](#) If you inspect where the grappling hook goes during these misses, such as the one with Picture Perfect here, you can see that it comes incredibly close to touching the climbable wall segment. The person controlling Lara happened to veer slightly to one side at the last moment before jumping, which is part of the ambiguous movement of a human player. We cannot change how humans as a whole work, that we are imperfect in our coordination or that we do not perceive certain minor details. As developers, what we can control is how our systems react to and manipulate players, and that is what the developers of *Shadow of the Tomb Raider* failed to do. Grappling needs to have a wider window of interaction, as you want to avoid game mechanics that require precise control. Going back to that rock wall that our content creator, Picture Perfect, failed to hook onto, the actual hitbox for detecting whether you've hit the climbable wall segment should be wider, steering the grappling hook to the climbable part of the rock wall.



Grappling to rock walls is not just inconsistent, hooking onto them with Lara's climbing axes is as well. After players walk through what appears to be a section of Mayan ruins, they jump to a wall to start climbing on it, as we see in Suzy Lu's video. [However, partway through this climbing section, like with many rock walls in the game, one of them may refuse to allow the player to grab onto it \(24:11\).](#) These rock walls, then, are generally quite finicky, with the only discernible reason being a level of precision that is not communicated and that is difficult with the input lag. This issue is exacerbated by controllers, as the usage of joysticks add variability in movement, increasing the chances that you miss an interaction that you should not have. In the associated clip we can see that the game did not register Lara as being in the correct position to climb, as Lara would have taken out her axes and latched onto the wall if she was. The most likely explanation for this is the input delay: "The controls are laggy, and the inputs are imprecise, meaning I cannot count the times when a prompt should have worked, only for it to simply not and send our lovely protagonist careening into an abyss below." (Flint Pickleback, 2023). That sounds exactly like what is witnessed in Suzy Lu's video: Lara was in range to use her climbing gear, but the input lag messed with the perceived timing. Unfortunately for *Shadow of the Tomb Raider*, "good movement in a game responds instantly to the player's inputs" (Caleb Compton, 2019), sapping the fun from controlling a character by removing agency.

Ultimately, the main issue with *Shadow of the Tomb Raiders* is that it fails to properly embrace the ambiguity and chaos of human players. Scripted acceleration

looks inconsistent, it conditions players to doubt what jumps are possible, and cuts out their agency. Some jumps or grapples to rock walls require a level of precision at moments where it should not exist or is not properly communicated. Compensating for the chaos and unpredictability of players is a core part of being a game designer, and especially making a platformer that takes place in a world that grants the players a multitude of tools to approach challenges. Platforms can be manipulated to allow players to reach them on their own so that scripted acceleration is not necessary. Hit boxes should be changed or implemented to give a wider window for when you can interact with climbable rock walls. “When players press a button, they expect an action to happen. If the action takes too long, or doesn’t always do what they expect, it can break the connection between the player and the character on-screen” (Caleb Compton, 2019).

References

- MKIceAndFire, Sep 13, 2018, *SHADOW OF THE TOMB RAIDER Gameplay Walkthrough Part 1 FULL GAME [1080p HD 60FPS PC] - No Commentary* [Video], YouTube, https://www.youtube.com/watch?v=F_K1PCmga7w
- Tom, E-vaughn, (2017, February, 23), *Movement Mechanics – The First Building Block of Gaming*, Hopeful Homies, <https://hopefulhomies.com/2017/02/18/movement-mechanics/>
- Flint Pickleback, (2023, November 7), *Shadow of the Tomb Raider Review: It's So Jank, It's Almost Impressive!*, Gear Diary, <https://geardiary.com/2023/11/07/shadow-of-the-tomb-raider-review/>
- Caleb Compton, (2019, June 28), *Run, Jump and Climb: Designing Fun Movement in Games*, Rempton Games, <https://remptongames.com/2019/06/29/run-jump-and-climb-designing-fun-movement-in-games/>
- Suzy Lu, Sep 11, 2018, *CROFT MANOR | Shadow of The Tomb Raider Gameplay Walkthrough Part 3* [Video], YouTube, https://www.youtube.com/watch?v=s6fY9F-xTIA&list=PLSawV9_HyJ2e0jKRpt5rz9Ioootz69xuM&index=3