Archaeolinguistics and language deciphering in action-adventure video games: *Indiana Jones,* *Tomb Raider* and *Uncharted*

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Popular action-adventure video game franchises have long captured audiences with their mix of ancient mysteries and lost treasures. These stories often feature protagonists busy exploring ancient ruins as a way to discover forgotten civilisations. At the heart of these narratives lies a crucial component: language. In these media, languages play an indispensable role in story progression via the deciphering of ancient texts and cryptic symbols. However, this is an aspect that has been largely overlooked in scholarly works within linguistics and video game studies.

For the purpose of this paper, we will use the term "archaeolinguistics" to refer to the study and deciphering of language data, either spoken or written, as found in archaeological artifacts and evidence, as a way to uncover the languages and cultures of past civilisations (Carling, 2024). The term "action-adventure video game" refers to games that combine action-oriented gameplay—such as controlling a character through various biomes and navigating environmental obstacles (through jumping, crouching or running, for instance)—with adventure mechanics, which involve actively exploring surroundings by searching for items, clues, artifacts, and solving puzzles. Here, we are interested in examining cases where protagonists in these media encounter historical artefacts, often discov-

ered at the end of exploratory journeys in various game environments, such as caves, tombs, mazes, forests and similar. These artefacts are frequently coveted remnants of long-lost civilisations and sometimes include inscriptions in foreign, occasionally dead, languages. Poignant video sequences often depict protagonists gazing at these artefacts with bright eyes, eager to uncover the history behind their discovery. However, the linguistic aspect of these artefacts is not always the central focus, as the wealth and/ or fame gained from their discovery often takes precedence. As such, the representation of language and archaeolinguistics in action-adventure franchises often prioritises entertainment over accuracy, reducing the complex realities of archaeolinguistics to superficial narrative devices, something that also applies to the representation of history in video games in more general terms (Kapell & Elliott, 2013). Indeed, similar inaccuracies have been observed in the broader depiction of archaeology in popular culture as well, which is frequently oversimplified and presented as a treasure-hunting endeavour designed to advance the plot rather than as a time-consuming process, as it is in reality (McGeough, 2006; Marwick, 2010; Reinhard, 2018). Holtorf (2007) adds that archaeology is often reimagined as a "brand," capitalising on its adventurous aspects while ne-

glecting its practical complexities. This oversimplification extends to the portrayal of ancient languages in video games, where linguistic challenges are often reduced to convenient narrative tools rather than reflecting the depth of real-world language study.

Real-world archaeolinguistics is a meticulous field, rooted in the study of ancient scripts and language change and the cultural contexts of these (Carling, 2024). The process of deciphering inscriptions or reconstructing lost languages often spans years. In contrast, adventure media often portrays linguistic challenges as puzzles to be solved as part of the video game plot, with very little space sometimes dedicated to the historical significance of language itself. As a result, this simplification, while engaging, risks perpetuating misconceptions about the intellectual dimensions of archaeology and linguistics.

This paper examines three action-adventure video game franchises: (1) *Tomb Raider*, (2) *Indiana Jones* and (3) *Uncharted*, to explore how they construct the role of language in archaeological discovery. Rather than focusing on the "language of gaming" (Ensslin, 2015) or language learning through gaming (Ryu, 2013), this paper shifts its attention to the *representation* of language learning and deciphering *in* gaming, an aspect that has been fairly neglected in game studies. I propose calling this phenomenon a "meta-language dynamic," as it examines how language itself is framed within these narratives. The franchises were chosen for their widespread popularity and for their key role in introducing archaeological practices to a broad audience. As such, they play a key role in shaping audiences' perceptions of what it means to be an archaeologist, or an explorer engaged in language deciphering. Lara Croft's explicit, skill-based journey in the *Tomb Raider* reboot trilogy, where she gains linguistic proficiency through deliberate effort, offers a rare example of a video game protagonist actively engaging with language acquisition. In contrast, Indiana Jones and Nathan Drake, iconic male adventurers, are often depicted as effortlessly fluent in ancient languages, embodying the image of a hyper-competent Western scholar-adventurer, as already noted by McGeough (2006, p. 176). The analysis has a threefold aim: (1) to examine how the narratives of the three franchises, particularly their plots, incorporate language learning and deciphering; (2) to investigate how, and to what extent, these elements are integrated into gameplay mechanics; and (3) to explore broader processes at play, including the gendered dynamics of these portrayals. Through this analysis, I argue that the representation of language in these franchises mirrors their broader treatment of archaeology in popular culture—visually spectacular, yet reductive.

LITERATURE REVIEW

The intersection of linguistics, media studies and archaeology within action-adventure video games remains an underexplored area of academic inquiry. While there has been substantial work on the representation of archaeology in popular media and culture (McGeough, 2006; Holtorf, 2007; Reinhard, 2018) and on the language of videogames (Ensslin, 2015; Hsu, 2020), the role of language learning and archaeolinguistics as a gameplay device has received comparatively little attention, with scattered mentions present but mostly in non-academic platforms, such as game reviews, or academic dissertations (Dennis, 2019; Casimir, 2021).

Academic research on language learning through video games has grown in recent years. For example, studies in digital game-based language learning (DGBLL) demonstrate that gaming can facilitate vocabulary acquisition and engagement with new languages (Ryu, 2013). Such studies have found that gaming culture and online gameplay provide informal environments where players pick up new words and phrases, effectively learning through play. However, the majority of this sort of research focuses on players learning real lan-

guages (e.g. English as a second language) rather than on how games depict characters *within* the game learning or deciphering languages. Thus, scholarship on the 'language of video games' certainly exists, yet the representation of language learning as a gameplay mechanic definitely remains under-examined.

Scholarly critiques of archaeology in popular media often highlight the romanticised portrayals of the discipline, where complex research processes are reduced to treasure-hunting expeditions, reflecting broader trends in video games where simplification of historical narratives is often preferred. McGeough's (2006) study on *Indiana Jones* critiques the franchise for perpetuating colonial narratives, presenting Western adventurers as the rightful interpreters of ancient artefacts. Similarly, Reinhard (2018) explores the ethical implications of archaeological representation in video games, discussing how these portrayals can reflect broader issues of historical bias. As a result, the public's understanding of archaeology often skews toward the fantastical. Reinhard (2018) notes that video games blur the boundary between archaeology and looting, letting players engage in illicit treasure hunting with few repercussions, calling the process as a form of digital "cultural appropriation". This can reinforce the idea that archaeology is solely about grabbing artifacts for personal gain and prestige. Crucially, languages and inscriptions, which are central to real archaeological research, tend to be treated in games as mere steppingstones to the next plot point. Ancient scripts are usually presented as *puzzles* solved instantly by the hero, thereby underplaying the years of study real decipherment requires. The result is a potential misconception about linguistic work: players may assume that decoding a dead language is quick and straightforward rather than a painstaking collaborative process. On the other hand, incorporating languages can also pique player curiosity about ancient cultures. DaCosta (2024) argues that commercial games *can* foster cultural heritage awareness if handled thoughtfully. His case study on *Shadow of the Tomb Raider*

suggests that when developers collaborate with historians, archaeologists, and indigenous communities, games may portray archaeology (and by extension epigraphy and linguistics) with more respect for accuracy and local context. In short, these popular games have a double-edged influence: they spark interest in archaeology and ancient languages on a broad scale, but they also risk entrenching simplistic or mistaken ideas about how those fields work.

In terms of video games that are centred on language decipherment, on top of the ones that are the focus of this study, there are a few media that essentially offer a *gamified* experience of linguistics, namely, *Heaven's Vault* (Inkle, 2019) and *Chants of Sennaar* (Rundisc, 2023). The first one is a narrative sci-fi archaeology game where the central gameplay mechanic is attempting to decipher a lost writing system by an ancient civilisation while the second one has players decode ancient languages as core gameplay. These examples show the potential of interactive media to engage players in language learning as part of the narrative. By turning translation and linguistic analysis into puzzles, such games effectively "gamify" the decipherment process—making the player learn the language in order to progress. This trend has attracted some academic attention; for example, the CREWS project examined how Heaven's Vault handles invented scripts, applauding the authentic epigraphic methods used in gameplay (Boyes, 2019).

The representation of gender in adventure media, particularly regarding protagonists' intellectual and physical abilities in video games, has been widely studied (Schleiner, 2001; Kennedy, 2002; Consalvo, 2004; Jansz & Martis, 2007; McInnes, 2016; Engelbrecht, 2020;). A significant body of research has examined *Tomb Raider*, often as a case study for the ways female protagonists are framed in terms of competence within adventure games. This scholarship will provide a critical foundation for my own analysis in the discussion section. In this sense, scholars have examined how gender dynamics play out in the portrayal

of knowledge within adventure games. Historically, media often depicted male characters as natural intellectual authorities—the professors, explorers, and code-breakers—while female characters were sidekicks or love interests, valued for loyalty or beauty over expertise. Even in games, this trend persisted for years. In early adventure titles (and their film inspirations), it is typically a male hero who effortlessly deciphers clues and ancient texts. For example, the iconic *Indiana Jones* is a professor of archaeology who can read multiple dead languages on the fly; the audience simply accepts Dr. Jones's erudition as part of his heroic persona. Likewise, *Uncharted*'s Nathan Drake is portrayed as a globetrotting polyglot who never struggles with a translation—ancient symbols conveniently "make sense" to him, reinforcing the trope of the *effortlessly educated* adventurer. This *effortless fluency* is a form of gendered framing, aligning with broader media patterns where men are assumed to possess authoritative knowledge by default. By contrast, when Lara Croft debuted in *Tomb Raider* (Core Design, 1996), she was one of the few female leads in the genre—a highly educated archaeologist in her own right. Schleiner (2001) highlights how Lara Croft's character embodies a clear paradox: she challenges traditional gender roles by being tough, resourceful, and intellectually capable, yet simultaneously appears hypersexualised, almost as a digital pin-up. Despite this tension, Lara's emergence marked a significant turning point. In the rebooted *Tomb Raider* games (2013–2018), the developers emphasise Lara's academic and linguistic abilities even further, a point I will return to later in this paper.

Another critical lens in recent scholarship is the postcolonial critique of how adventure games frame Western heroes as cultural and linguistic authorities in non-Western settings. These games often draw on colonial-era adventure stereotypes: a Western explorer penetrates the "mysterious Orient" or remote indigenous lands, decodes the secrets, and claims the treasures (or knowledge) for humanity—implicitly, for the West. Edward Said's concept of *Orientalism* (1978) is frequently invoked to explain this dynamic, wherein the East is portrayed as passive, its knowledge and heritage waiting for a Westerner to interpret and valorise. In *Tomb Raider* and *Uncharted*, the protagonist is typically a white European or American who handily outsmarts local people about *their own* past. This has led scholars to criticise the "white saviour" narrative prevalent in such games. Villahermosa Serrano (2023), writing on *Shadow of the Tomb Raider*, points out that Lara Croft (despite her good intentions) embodies a familiar pattern: *she* takes custody of indigenous artifacts "in order to protect and preserve them," on the presumption that only someone like her can properly care for or comprehend these items. The game thus implies that the original Indigenous owners or descendants "*cannot*" understand or safeguard their own cultural heritage, requiring a Western hero to do it for them.

Beyond narrative framing, scholars have critiqued specific instances of cultural and linguistic representation in these games. Maya, Inca, and Aztec cultures are often mishmashed into a generic "ancient civilisation" for a Western hero to discover. This kind of simplification, though done for game convenience, can be seen as erasing the real diversity of Indigenous cultures. Even when games try to be respectful, they sometimes fall into the trap of exoticising locals as primitive or mystical while the Western hero is the rational saviour. For instance, Lara Croft in *Shadow of the Tomb Raider* is portrayed as the one who must intervene and protect the inhabitants of Paititi from an apocalypse, effectively a white saviour protecting the natives. Such imagery carries the baggage of what Villahermosa Serrano (2023) calls the "*neocolonial imaginary*" in video games. It caters to Western audiences by using exotic settings as playgrounds and positioning Western characters as benevolent conquerors of knowledge and power. Champion (2017) playfully coins the term "Single White Looter" to describe this recurring pattern—the solitary white adventurer who casually raids foreign tombs—and points out how wide-

spread this portrayal remains in video games dealing with historical themes.

Theoretical frameworks of ludology and narratology will be essential for understanding how action-adventure games integrate language into their mechanics and storytelling. Ludology, as outlined by Frasca (2004), focuses on "creating typologies and models for explaining the mechanics of gameplay," and will provide tools for analysing how games like *Tomb Raider* and *Indiana Jones* incorporate language learning as a player-driven process. Linguistic challenges in action-adventure games sometimes require nontrivial player interaction, aligning with Aarseth's concept of "ergodic literature" (1997), where the audience must actively engage with the text to interpret its meaning. In video games, this concept is often balanced with a design intent to avoid overwhelming the player, focusing instead on maintaining gameplay accessibility. Gee (2003) expands on this by emphasising how games function as "situated learning environments" where players acquire knowledge through immersive experiences. This work will be instrumental in analysing how linguistic problem-solving is framed in adventure media, particularly how *Tomb Raider* encourages players to develop linguistic proficiency as an embodied process. Narratology, on the other hand, examines how linguistic elements serve broader storytelling goals, such as character development and world-building (Chatman, 1980; Genette, 1980; Bal, 1985). Gee's (2003) framework of "projective identity" further reinforces this analysis by demonstrating how players merge their real-world knowledge with their in-game character's evolving expertise.

Much of the existing scholarship tends to focus on either the ethical dimensions of archaeology or on the role of language in world-building. However, little attention has been given to how adventure media frames language learning and decipherment as fundamental to the process of archaeological discovery. The act of decoding ancient scripts and reconstructing lost languages is often central to narratives in this genre, yet its portrayal is rarely examined critically. This gap in the literature suggests the need for a more focused inquiry into how adventure media constructs the relationship between archaeology and linguistics, particularly in shaping public perceptions of linguistic reconstruction.

The following three sections of this paper will explore these issues by examining each of the franchises in turn—*Indiana Jones*, *Tomb Raider* and *Uncharted*—in view of situating their portrayals within the broader theoretical frameworks discussed above.

INDIANA JONES

Indiana Jones video games were most prolific during the 1980s and 1990s, with the franchise seeing a significant decline in major releases over the past two decades. The last notable entry based on the traditional movie format was *Indiana Jones and the Staff of Kings* in 2009. As such, the release of *Indiana Jones and the Great Circle* in 2024, published by Bethesda Softworks, was a highly anticipated and welcome surprise for fans eager to revisit the iconic adventurer in a new gaming format. The game brings a fresh perspective to the adventurer's escapades by focusing on immersive puzzles and stealth gameplay. It tasks players with uncovering the secrets of the *Great Circle*, a legendary network of ancient civilisations, and with guiding Indiana Jones through various archaeological sites, where the protagonist engages with intricate challenges that sometimes involve cryptographic and linguistic puzzles. This instalment stands out by making language learning and deciphering ancient scripts a core part of the gameplay experience. Unlike the movie representations of Indiana Jones, where his linguistic abilities are largely taken for granted, *The Great Circle* places greater emphasis on the process of understanding and interpreting language. One standout example is the "Chamber of Resonance Puzzle," set in the Gizeh (Egypt) section of the game (Fig. 1). Here, players encounter tablets inscribed in ancient languages, which must be

photographed and carefully analysed to determine the correct sequence of words. This puzzle demands an understanding of the linguistic context, requiring players to interpret the meaning of inscriptions rather than simply recognising symbols. The process reflects a more immersive and thoughtful approach to archaeolinguistics, encouraging players to engage with the historical significance of the languages depicted.

cal simulation of historical encryption methods, basing its depiction on real-world cryptographic practices. It also emphasises the collaborative and methodical nature of deciphering, which is often overlooked in adventure media. The "Father and Son Safe Code Puzzle," instead, adds a literary dimension to the linguistic challenges by combining a Polybius Square diagram with an Italian poem. Players are tasked with analysing the poem and using the diagram to convert letter pairs into numbers to unlock a safe.

Figure 1. The "Chamber of Resonance Puzzle" in *Indiana Jones and the Great Circle* (Bethesda Softworks, 2024), set in Gizeh, Egypt. Players analyse ancient tablets by taking pictures of them with the in-game camera tool and interpreting inscriptions to determine the correct sequence of words. Source: screen capture from the game.

Figure 2. The "Kummetz Cipher Puzzle" from *Indiana Jones and the Great Circle* (Bethesda Softworks, 2024), showing the disassembled cipher machine aboard the KMS Kummetz. Players reconstruct the cipher wheels and use code tables, simulating historical cryptographic methods. Source: screen capture from the game.

Another notable challenge is the "Counting Letters Mystery", which presents players with a coded message that must be deciphered using code wheels and frequency analysis tables. This puzzle mirrors real-world cryptographic techniques, requiring players to identify patterns and letter frequencies. The game aligns linguistic problem-solving with the intellectual rigour of archaeological discovery, making language deciphering feel integral to the gameplay. The "Kummetz Cipher Puzzle," encountered aboard the KMS Kummetz, takes this engagement a step further by introducing a disassembled cipher machine (Fig. 2). Players must locate and assemble code wheels, then use a code table to translate letters into a numeric code. This puzzle offers a practi-

There are also other depictions of language-learning moments scattered throughout the plot. The game, for instance, includes mentions of Adamic, a language referenced in some Jewish and Christian texts, which was supposedly used by Adam. It is presented as the first human language ever used and is found on some of the artifacts discovered by Indiana throughout the game, showing as using a logographic script. In one segment, while the crew is traveling to the Himalayas aboard a ship, Indiana is shown reading from his notebook, repeating words in Adamic as a way of revising his vocabulary. The plot also introduces the character of Laura Lombardi, an Italian archaeolinguist renowned for her expertise in ancient languages. She is eventually recruited by the Nazis and

forced to assist in the deciphering of Adamic artifacts at Machu Picchu. The inclusion of Laura Lombardi as a linguist is significant because it highlights the crucial role that language plays in unlocking historical mysteries. Even though Laura is not a playable character, her presence is an important piece of the puzzle that drives the plot, as her sister, Gina, joins Indiana in the search for the Nazi to discover what happened to Laura.

I want to commend the publisher here, as these language-related narratives, together with the linguistic puzzles, promote a deeper engagement with linguistics than the movies' portrayals of Indiana Jones as a hyper-competent individual who effortlessly translates ancient texts. These dynamics invite the players to immerse themselves in the complexities of language learning (even if the language is artificial) and move away from depictions of protagonists whose language fluency is simply assumed.

Another important aspect to consider is that Indiana Jones, across the franchise, frequently interacts with locals during his travels, often relying on first-language speakers to mediate his linguistic experiences. This approach definitely promotes a more inclusive representation of the language (but also cultural) environment.

Critically, this shift has been well-received by both players and reviewers, who praised the game's incorporation of authentic code-deciphering mechanics. Reviews in online gaming magazines and news outlets, although not specifically mentioning the linguistic component, often highlight the puzzles as a refreshing addition that deepens the player's sense of discovery (Lane, 2024; Reilly, 2024; Wald, 2024).

However, while the game's puzzles reflect a commendable effort to engage with linguistic elements, they remain inherently gamified, with predefined solutions that limit the open-endedness of real-world linguistic and archaeological inquiry. Additionally, there are still moments where the polyglot adventurer stereotype is still

shown. A demonstration of Indiana's expected linguistic proficiency occurs during the scene on the KMS Kummetz in the Himalayas, where he narrowly escapes being captured by the Nazis. At one point, a Nazi officer asks him if he has "Höhenangst," and Indiana immediately wittily responds, "Fear of heights?"—showcasing not only his fluency but his ability to respond to such specialised terminology with ease, even in very stressful situations. Similar language fluency is then on display during the subsequent trip to Thailand, with Indiana showing off his Thai skills with the locals. Nonetheless, *Indiana Jones and the Great Circle* marks a significant step forward in the representation of language learning in adventure media, offering a more immersive and respectful portrayal of linguistics as a vital component of archaeological discovery, rather than simply relying on the protagonist's expected linguistic knowledge in passing, inviting the player to reflect on it, creating a meta-language dynamic.
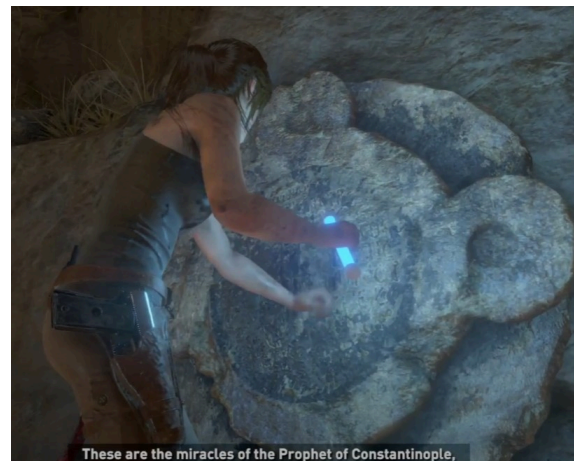
TOMB RAIDER

The *Tomb Raider* reboot trilogy (2013–2018) offers one of the most deliberate and explicit portrayals of language learning and deciphering among adventure franchises. The second game of the trilogy, in particular, features Lara Croft's ability to understand ancient scripts. In this case, language learning is not simply presented as an innate skill but as a process of discovery, tied directly to gameplay. This approach stands out within the genre, highlighting the importance of language acquisition as a tool for archaeological exploration and intellectual growth.

In *Rise of the Tomb Raider* (2015), language learning becomes a core mechanic. Lara encounters inscriptions written in Greek, Mongolian and Russian throughout her journey, each tied to different contexts and environments. Greek inscriptions often relate to Byzantine artefacts and Christian relics (Figs 3, 4), Mongolian texts connect to the Mongol Empire and the Silk Road and

Russian inscriptions reflect Soviet activity and their influence on the game's setting. As Lara gains proficiency in these languages, she can read monoliths that reveal the locations of hidden treasures and resources on the map, adding an exploratory element to the gameplay. To decipher these texts, players must guide Lara through interactions with murals, earning experience points that increase her proficiency in these specific languages. If Lara hasn't achieved the necessary language level, the player is warned that she cannot read the inscription (Fig. 5). These are effectively "early archaeological records and thus […] objects of importance to the local people" (DaCosta, 2024). In a media interview (Kamen, 2015), senior designer Michael Brinker explained that this mechanic was not introduced simply as a language learning endeavour per se but as a way to use language to find "more ancient secrets." Still, from a language acquisition point of view, this mechanic mirrors a real-world learning curve, albeit simplified, where progress is incremental. The language acquisition process is gamified but the publisher has managed to make learning languages feel integral to Lara's development as an adventurer, providing narrative depth and rewarding players for engaging with the linguistic aspects of the gameworld. Narratively, it emphasises Lara's intellectual curiosity, aligning her with the archetype of the scholar-adventurer, but it also reinforces the idea that linguistic competence is an earned skill, challenging the expectation that protagonists should possess pre-existing language fluency.

However, the whole process is not as fleshed out or developed as it could be. The language learning indeed often becomes a matter of "check this inscription" or "find that artefact," reducing language acquisition to a button pressing exercise. This gamification, while effective in maintaining pacing, oversimplifies the often-painstaking process of linguistic proficiency attainment. Indeed, one can finish the main story without fully engaging in this system—and online reviews have indeed mentioned this as a disappointing missed opportunity, saying

that the "crux of the issue is that language learning is not essential to advancing" the game (Andrew, 2020). As a player, it even borders on the comical—as Lara, with the press of a button, instantly acquires substantial knowledge of a language simply by reading a random inscription on a stele. Nevertheless, this mechanic indeed adds a notable layer of intellectual engagement to the game, despite the inscription deciphering feeling overly simplistic, primarily consisting of a straightforward "click on the stone and move on" interaction. Note that the language learning mechanic was kept in the final game of the trilogy, *Shadow of the Tomb Raider* (2018), where Lara deals with Yucatec Maya, Quechua and Mam transcriptions, although the dynamic is somewhat less prominent in this videogame.

Figure 3. Lara Croft examining a Greek inscription in *Rise of the Tomb Raider* (Crystal Dynamics, 2015). Deciphering these inscriptions is tied to a gameplay mechanic, representing incremental language learning as part of the archaeological exploration. Source: screen capture from the game.

Critically, the inclusion of language mechanics in *Rise of the Tomb Raider* received mixed responses. Some reviewers appreciated the attempt to deepen the archaeological experience while others did not think that it merged well with the rest of the gameplay. For instance, a review in the *New Game Network* by Hinke (2015) noted that "there isn't much [a player] can do with this skill." It is clear that the language mechanic

is an overall welcome addition but yet it feels like a superficial one. The sense of intellectual engagement is definitely there, as players unlock secrets through translation. However, its practical impact feels limited, as there are few moments where these skills are genuinely required.

Figure 4. After deciphering a monolith in *Rise of the Tomb Raider* (Crystal Dynamics, 2015), an on-screen icon indicates Lara's current language proficiency and progression level. Interacting with murals grants experience points, incrementally enhancing her ability to interpret ancient languages. Source: screen capture from the game.
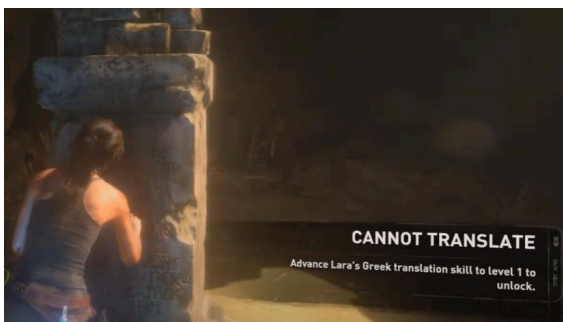
Figure 5. Gameplay screenshot from *Rise of the Tomb Raider* (Crystal Dynamics, 2015) demonstrating a language proficiency warning. If Lara's linguistic skill level is insufficient, players receive a notification that she cannot yet translate certain inscriptions. Source: screen capture from the game.

Overall, the game deserves praise for integrating language learning into its mechanics, even though it ultimately simplifies the complexities of archaeolinguistics. While it is true that the progression system reduces language acquisition to a linear process, omitting the inherent challenges of real-world linguistic study, it remains a rare example of how language learning can be meaningfully incorporated into gameplay centred on archaeological exploration. At the same time, it subtly challenges the genre's reliance on the effortlessly polyglot explorer. In summary, I believe *Tomb Raider* series' effort to incorporate language learning into its mechanics represents a commendable step.

UNCHARTED

The *Uncharted* series, starring Nathan Drake, has become a cultural phenomenon in adventure gaming, combining cinematic storytelling with action. The franchise has also inspired a fairly recent movie (Sony Pictures, 2022) starring Tom Holland as the protagonist. Central to Drake's adventures is the recurring theme of deciphering ancient texts and symbols, often tied to the discovery of legendary treasures. However, unlike other video game franchises such as *Tomb Raider* or *Indiana Jones and the Great Circle*, *Uncharted* treats language as a largely incidental element of its narratives. Nathan Drake's linguistic capabilities are portrayed as inherent and effortless, with little attention given to the process of language learning or the complexities of interpretation.

One of the widely acclaimed entries in the series, *Uncharted 4: A Thief's End* (2016), demonstrates this tension. In his quest to uncover the lost pirate colony of Libertalia, Drake encounters numerous puzzles, including pirate symbols, ancient maps and inscriptions. For instance, players are tasked with solving puzzles based on the symbols of Henry Avery and his pirate crew (Fig. 6). These puzzles often involve matching symbols or interpreting their placement within the environment. While

entertaining, they lean more on visual pattern recognition than linguistic analysis. The symbols function primarily as mechanical tools to advance the plot rather than as artefacts with historical significance. A similar dynamic can be observed in earlier entries. In *Uncharted 2: Among Thieves* (2009), Drake navigates ancient Himalayan temples, where he interprets symbols and artefacts to progress. In *Uncharted 3: Drake's Deception* (2011), the narrative delves into Arabic inscriptions and the lore of the Arabian Peninsula. However, in both cases, Drake's fluency in these languages is assumed, and the texts are conveniently translated with minimal effort. The games rarely explore how Drake acquired his linguistic expertise, presenting it instead as a given aspect of his adventurer persona. This aligns with the genre expectation of the hyper-competent protagonist, whose mastery of languages is just another tool in their repertoire, akin to firing a weapon.

Figure 6. Puzzle sequence from *Uncharted 4: A Thief's End* (Naughty Dog, 2016), featuring pirate symbols associated with Henry Avery's lost colony of Libertalia. Source: screen capture from the game.

This lack of depth extends to how the series portrays the cultural significance of language. Ancient texts and symbols are often stripped of their historical contexts, existing solely as puzzles for the player to solve. For example, in *Uncharted 4*, the pirate artefacts are used to reveal clues about Libertalia's location but are not deeply explored as cultural products of their time. The focus remains on their function within the treasure-hunting narrative, but there is no mention of how these artefacts are key to understanding the societies that produced them.

Critically, the representation of language in *Uncharted* has drawn limited attention in reviews, as the franchise's emphasis on action and cinematic storytelling often eclipses its intellectual elements, reflecting broader trends in gaming culture that prioritise action-oriented narratives. For example, IGN's review of *Uncharted 4* (O'Brien, 2016) highlighted the engaging puzzles as a way to break up the action but did not delve into how language played a role in those sequences. This oversight reflects the broader treatment of language learning in the series as a functional but underdeveloped aspect.

In summary, while *Uncharted* excels in delivering cinematic adventure, its treatment of language remains superficial, prioritising action and accessibility over intellectual complexity. The franchise's reliance on the protagonist's innate linguistic fluency mirrors its broader approach to archaeology as a treasure-hunting endeavour, reinforcing genre conventions that prioritise spectacle over substance.

A COMPARATIVE ANALYSIS ACROSS THE THREE FRANCHISES

The portrayal of archaeolinguistics and language learning in *Tomb Raider*, *Indiana Jones* and *Uncharted* offers a unique opportunity to examine how adventure media engages with the intellectual challenges of deciphering ancient texts. While all three franchises integrate linguistic elements to varying degrees, their approaches reflect distinct priorities.

Rise of the Tomb Raider (2015) stands out for its deliberate focus on language learning as a core gameplay mechanic. Lara Croft's journey to increase her proficiency in ancient languages ties language learning directly to her character development. This creates what Gee calls "situated" learning experiences where players engage with new knowledge through "embodied" interaction (2003, pp. 83–84). In *Tomb Raider*, lan-

guage learning is not an abstract skill but a tool necessary for progressing in the game world—a tool that players have to physically engage with by clicking on objects around them. However, this gamified approach slightly simplifies the complexities of real-world language learning, reducing language to a linear progression of "click-a-stone" mechanic.

In contrast, *Indiana Jones and the Great Circle* strikes a balance between gameplay and intellectual engagement, offering linguistics-driven puzzles that require active problem-solving. Additionally, it also includes a plot that features characters who are actual archaeolinguists and hold a central role in the narrative development. Unlike *Tomb Raider*, where language is tied to progression through a levelling mechanic, *Indiana Jones* presents puzzles that demand context-based interpretation and the application of cryptographic techniques. This creates a "projective identity" (Gee, 2003, p. 98), where players are immersed in a new environment and take the role, and the identity, of the character on the screen—an archaeolinguist in this case—rather than simply acquiring a skill passively. These challenges emphasise the collaborative aspects of language learning, aligning more closely with real-world archaeolinguistic practices, while still adhering to the gamified constraints of the medium. *Uncharted*, however, takes the most superficial approach to language learning. Nathan Drake's fluency in ancient and modern languages is assumed rather than earned, serving as a narrative convenience rather than a focal point of his character.

By making language a central gameplay element, *Indiana Jones and the Great Circle* aligns more closely with *Tomb Raider*'s depiction of linguistics as an intellectual endeavour. In *Tomb Raider*, deciphered inscriptions also often reveal contextual details about the societies Lara explores, thus deepening the player's immersion in the gameworld. This is an example of how video games function as "semiotic domains" (Gee, 2003)—systems of meaning where players must engage with complex interpretative tasks that extend beyond simple mechanics. Aarseth's (1997) concept of ergodic literature further supports this idea, as players must actively navigate linguistic challenges, participating in the meaning-making processes of gaming, which in turn fosters deeper player engagement. This dual function of language—as a gameplay mechanic and a means of engaging with cultural heritage—distinguishes *Tomb Raider* from its counterparts.

Analysed through a ludology lens, the game mechanics across the three franchise show varying tendencies. *Tomb Raider* and *Indiana Jones* integrate linguistic challenges into their interactive systems, encouraging players to actively engage with language. From a narratological perspective, *Uncharted* features language elements primarily as a plot shortcut, while in *Tomb Raider* and *Indiana Jones*, they contribute to world-building and character development.

From a postcolonial theory perspective, Western-centric narratives are still present. The profile of the Western adventurer as the sole interpreter of ancient knowledge is still prevalent, particularly in *Uncharted* and *Indiana Jones* media. Although, in *Indiana Jones*, locals are at times involved in conversation by travelling and exploring together with the protagonist. By contrast, the active learning mechanics in *Tomb Raider* offer a more respectful portrayal of archaeolinguistics and language learning, emphasising the intellectual curiosity involved.

Finally, the depiction of language learning in these franchises raises important questions about the ideological messages embedded in their gameplay, on top of revealing significant gendered dynamics. In *Tomb Raider*, Lara's linguistic abilities are depicted as the result of effort and intellectual curiosity. Her progression reflects the importance of study and growth. This portrayal contrasts sharply with *Uncharted* and *Indiana Jones*, where male protagonists possess pre-existing linguistic fluency. Wood (1994) highlights how media industries reinforce traditional gender norms by portraying male characters as authoritative while depicting female characters in more

subordinate roles. The assumption of linguistic fluency in male protagonists like Indiana Jones and Nathan Drake reinforces these traditional notions. This portrayal contrasts sharply with the depiction of Lara Croft, whose linguistic competence is earned through visible effort. The gendered dynamics of these representations echo broader cultural assumptions about intellectual labour: male characters are presumed to possess mastery, while female characters must prove their abilities through arduous processes. There is to note that *Tomb Raider* has been praised before for being among the first major Western video games to prominently feature a solely female protagonist, and Lara's journey reflects a shift in how female protagonists are portrayed, challenging traditional gendered assumptions in video games. Indeed, this topic has inspired prolific scholarly work across the years (Schleiner, 2001; Kennedy, 2002; McInnes, 2016; Engelbrecht, 2020).

CONCLUSION

The examination of language learning and archaeolinguistics across *Tomb Raider*, *Indiana Jones* and *Uncharted* highlights the diverse ways adventure media engages with the complexities of linguistic study. Each franchise incorporates language as a narrative and/ or gameplay element although their representations vary significantly in depth. *Tomb Raider* emerges as the most deliberate in its approach, portraying language learning as a skill tied to intellectual growth. *Indiana Jones and the Great Circle* bridges intellectual engagement with entertaining gameplay through linguistics-driven puzzles that demand active problem-solving. While these elements remain inherently gamified, the game sets a new standard for how archaeolinguistics can be portrayed in adventure media. *Uncharted* instead offers a more superficial treatment of language, relying on Nathan Drake's presumed fluency. Here language functions primarily as a narrative shortcut, an approach that prioritises the franchise's emphasis on action but sacrifices opportunities for meaningful engagement with linguistic heritage.

The portrayal of archaeologists and ancient languages in adventure games has cultural implications. While these games can spark interest in archaeology, history, and linguistics, they also risk reinforcing misleading stereotypes. Players may come away with the misconception that archaeology is about treasure hunting or that linguistic decipherment is a quick, solitary process, whereas in reality, both fields require rigorous analysis and collaboration. Additionally, the erasure or stereotyping of local cultures perpetuates a Western-centric perspective, influencing how global audiences engage with their own heritage.

These portrayals reflect broader cultural narratives about who holds the right to interpret ancient languages and highlight gendered assumptions about intellectual effort. These differences reveal trends in how adventure media approaches archaeolinguistics. The emphasis on spectacle and accessibility often overshadows the intellectual dimensions of language. However, the increasing integration of language learning mechanics and linguistics-driven puzzles in recent media suggests a growing recognition of the potential for archaeolinguistics to enrich storytelling. Future adventure media could build on these developments by embracing the complexities of language and its role in archaeological discovery. This includes incorporating collaborative elements, contextualising linguistic challenges within broader cultural narratives and challenging the colonial undertones of traditional portraits. Through this analysis, this paper contributes to the broader discourse on the intersections of linguistics, media studies and archaeology, advocating for representations that respect the richness and complexity of language learning.

REFERENCES

Aarseth, E. (1997) Cybertext: Perspectives on Ergodic Literature. Johns Hopkins University

Press, Baltimor.

Andrew. (2020) Lara Croft's natural affinity for learning languages highlights missed opportunities in Rise of the Tomb Raider. Andrew's Gaming Notes. Available from: https://andrewsgamingnotes.wordpress.com/2020/10/22/lara-crofts-natural-affinity-for-learning-languages-highlights-missed-opportunities-in-rise-of-the-tomb-raider/ (Date of access: 18/Mar/2025).

Bal, M. (1985) Narratology: Introduction to the theory of narrative. University of Toronto Press, Toronto.

Bethesda Softworks. (2024) Indiana Jones and the Great Circle. USA.

Boyes, P. (2019) Deciphering invented scripts in computer games: Heaven's Vault and Sethian. CREWS Project Blog. Available from: https://crewsproject.wordpress.com/2019/10/04/deciphering-invented-scripts-in-computer-games-heavens-vault-and-sethian/ (Date of access: 18/Mar/2025).

Carling, G. (2024) Linguistic Archaeology: An introduction and methodological guide. Routledge, London.

Casimir, Z.A. (2021) The adventurous archaeologist and the discovery of the Hellenistic statue: an archaeogaming excavation of the Japanese video game site La Mulana. University of Oregon, Eugene. [Master's thesis.]

Champion, E. (2017) Single white looter: have whip, will travel. In: Mol, A.A.A.; Ariese, C.E.; Boom, K.H.J.; Politopoulos, A. (Eds). The Interactive Past. Archaeology, Heritage, and Video Games. Sidestone Press, Leiden. Pp. 107–122.

Chatman, S. (1980) Story and Discourse: Narrative structure in fiction and film. Cornell University Press, Ithaca.

Columbia Pictures. (2022) Uncharted. Directed by Ruben Fleischer. USA.

Consalvo, M. (2004) Hot dates and fairy-tale romances: studying sexuality in video games. In: Wolf, M.J.P. & Perron, B. (Eds.) The Video Game Theory Reader. Routledge, London. Pp. 171–194.

Crystal Dynamics. (2015) Rise of the Tomb Raider. USA.

Core Design. (1996) Tomb Raider. UK.

Crystal Dynamics. (2018) Shadow of the Tomb Raider. USA.

DaCosta, B. (2024) Historical depictions, archaeological practices, and the construct of cultural heritage in commercial video games: the role of these games in raising awareness. Preservation, Digital Technology & Culture 53(3): 113–132.

Dennis, L.M. (2019) Archaeological ethics, video games, and digital archaeology: a qualitative study on impacts and intersections. University of York, York. [Doctoral dissertation.]

Engelbrecht, J. (2020) The new Lara phenomenon: a postfeminist analysis of Rise of the Tomb Raider. Game Studies 20(3).

Ensslin, A. (2015) The Language of Gaming. Palgrave Macmillan, London.

Frasca, G. (2004) Simulation versus narrative: introduction to ludology. In: Wolf, M.J.P. & Perron, B. (Eds.) The Video Game Theory Reader. Routledge, London. Pp. 221–236.

Gee, J.P. (2003) What Video Games Have to Teach Us About Learning and Literacy. Palgrave Macmillan, London.

Genette, G. (1980) Narrative Discourse: An Essay in Method. Cornell University Press, Ithaca. [J.E. Lewin, Trans.]

Holtorf, C. (2007) Archaeology is a Brand! The meaning of archaeology in contemporary popular culture. Archaeopress Archaeology, Oxford.

Hsu, C. (2020) Gaming language and how it is characterized: a study of gamers' and non-gamers' differences in lexicon. Lund University, Lund. [Bachelor's thesis.]

Inkle. (2019) Heaven's Vault. UK.

Jansz, J. & Martis, R.G. (2007) The Lara phenomenon: powerful female characters in video games. Sex Roles 56(3-4): 141–148.

Kamen, M. (2015) Lara Croft's latest adventure uses new tech to tackle ancient mysteries. Wired. Available from: https://www.wired.com/story/rise-of-the-tomb-raider-interview/ (Date of access: 18/Mar/2025).

Kapell, M.W. & Elliott, A.B.R. (2013) Playing with the Past: Digital Games and the Simulation of History. Bloomsbury Academic, London.

Kennedy, H.W. (2002) Lara Croft: feminist icon or cyberbimbo? On the limits of textual analysis. Game Studies 2(2).

Lane, R. (2024) Indiana Jones and the Great Cir-

cle review. The Guardian. Available from: https://www.theguardian.com/games/2024/dec/09/indiana-jones-and-the-great-circle-review (Date of access: 18/Mar/2025).

LucasArts. (2009) Indiana Jones and the Staff of Kings. USA.

Marwick, B. (2010) Self-image, the long view and archaeological engagement with film: an animated case study. World Archaeology 42(3): 394–404.

McGeough, K.M. (2006) Heroes, mummies, and treasure: near Eastern archaeology in the movies. Near Eastern Archaeology 69(3-4): 174–185.

McInnes, L. (2016) Lara Croft and gaming: feminism in a hyper-masculine industry. PIT Journal. Available from: https://pitjournal.unc.edu/2023/01/06/lara-croft-and-gaming-feminism-in-a-hyper-masculine-industry/ (Date of access: 18/Mar/2025).

Naughty Dog. (2009) Uncharted 2: Among Thieves. USA.

Naughty Dog. (2011) Uncharted 3: Drake's Deception. USA.

Naughty Dog. (2016) Uncharted 4: A Thief's End. USA.

O'Brien, L. (2016) Uncharted 4: A Thief's End review. IGN. Available from: https://www.ign.com/articles/2016/05/11/uncharted-4-a-thiefs-end-review (Date of access: 18/Mar/2025).

Reilly, L. (2024) Indiana Jones and the Great Circle review. IGN. Available from: https://www.ign.com/articles/indiana-jones-and-the-great-circle-review (Date of access: 18/Mar/2025).

Reinhard, A. (2018) Archaeogaming: An Introduction to Archaeology in and of Video Games. Berghahn Books, New York.

Rundisc. (2023) Chants of Sennaar. France.

Ryu, D. (2013) Play to learn, learn to play: language learning through gaming culture. ReCALL 25(2): 286–301.

Said, E.W. (1978) Orientalism. Pantheon Books, New York.

Schleiner, A.M. (2001) Does Lara Croft wear fake polygons? Gender and gender-role subversion in computer adventure games. Leonardo 34(3): 221–226.

Villahermosa Serrano, Y. (2023) Imagining Latin America: indigeneity, erasure and tropicalist neocolonialism in Shadow of the Tomb Raider. Game Studies 23(3).

Wald, H. (2024) Indiana Jones and the Great Circle preview. GamesRadar. Available from: https://www.gamesradar.com/games/adventure/indiana-jones-and-the-great-circle-preview-hands-on-october-2024/ (Date of access: 18/Mar/2025).

Wood, J.T. (1994) Gendered media: the influence of media on views of gender. In: Fixmer-Oraiz, N. & Wood, J.T. (Eds.) Gendered Lives: Communication, Gender, and Culture. Wadsworth Publishing, Belmont. Pp. 231–244.

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